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RESPONDING TO DROUGHT THROUGH NON-FOOD INTERVENTIONS

Cyclical droughts, such as those currently affecting the Horn of Africa, negatively impact the humanitarian situation among poor populations. Insufficient access to water is the most commonly identified consequence of drought, resulting in shortages of water for human and animal consumption, agriculture, and pasture rejuvenation. As a drought worsens and these shortages of water become prolonged, alleviating the direct negative impacts of the situation on health, food security, and livelihoods of people living in affected areas becomes a primary objective of humanitarian interventions.



Pastoralists often lead livestock long distances in search of water in drought-affected areas. (Photo by Ngoc Clark)

As conditions deteriorate, affected populations require interventions that address not only access to water but also

related crises including severe and acute malnutrition in children under the age of five, increased mortality from common childhood diseases, poor outcomes for pregnant women and the elderly, threats to longer-term food security, and the depletion of household assets. The following discussion provides illustrative examples of the non-food humanitarian response options in drought situations. These activities should be undertaken in conjunction with appropriate food responses where access or availability of food commodities is problematic.

WATER, SANITATION, AND HYGIENE

Water, sanitation, and hygiene (WASH) programs in drought situations are designed to improve the provision of water for human consumption, help prevent water-borne disease outbreaks such as typhoid and cholera, and boost protection of livelihoods through provision of water for livestock. Examples of these activities are listed below.

Water

Rehabilitation and construction of water sources. During normal times, many communities rely on river systems, water catchments, shallow wells, or scoop holes for their water needs. During droughts, these sources often become unusable or compromised. To address water needs in drought settings, USAID/OFDA supports the rehabilitation of existing water sources or the construction of new water sources in affected communities. These activities may include rehabilitating hand pumps and boreholes, providing spare parts and fuel, digging or drilling new wells and boreholes, digging or rehabilitating traditional water systems, and chlorinating water sources. Any new construction efforts are approached with caution, as consecutive years of drought have often led to decreased water availability that can take several consecutive years of normal rainfall to replenish. Removal of ground water through bore holes and other means can aggravate ongoing environmental degradation and desertification.



A young herder brings livestock to an USAID/OFDA-rehabilitated water catchment in northern Kenya. (Photo by Cara Christie)

Water tankering. Water tankering is extremely expensive, unsustainable, and transfers no capacity to the community. As such, USAID/OFDA supports water tankering only in limited cases, such as to internally displaced person (IDP) camps without adequate access to water through other means.

Community water management activities. USAID/OFDA partners engage communities in the management of new and rehabilitated water systems over the medium and long term. Most often, partners assist communities in establishing volunteer water committees that undertake maintenance of the water system and often address conflict resolution. However, given the limitations of communal management, USAID/OFDA encourages innovative management schemes such as privatization through women's and youth groups.

Sanitation

During droughts, USAID/OFDA promotes the construction and use of family latrines. In limited camp settings, communal latrines have been promoted.

Hygiene Promotion

With any water or sanitation intervention, USAID/OFDA supports the provision of hygiene messages that promote proper transport and storage of water, hand washing, and appropriate sanitation.

Mitigation

During drought conditions, USAID/OFDA supports programming that attempts to mitigate the effects of future droughts while responding to the current crisis.

NUTRITION

As drought conditions become prolonged, food security deteriorates among affected populations. Reduced agricultural yield at the household level or diminished household income results in a decreased food basket, compromising the nutritional intake of all family members and particularly affecting children. When the general food basket of a family becomes insufficient in quantity or nutritional diversity, targeted nutrition interventions are required.

Technical assistance in nutrition. Nutritional surveys are the best way to determine the food security of a population. USAID/OFDA provides technical assistance and may financially support nutrition assessment surveys.

Feeding programs. When a population is not getting enough food, either food is not available to purchase or individuals do not have the money to purchase available food. When food is not available to purchase, feeding programs are crucial to address malnutrition resulting from ongoing drought situations. USAID/OFDA supports selective feeding programs such as supplementary and therapeutic feeding. Supplementary feeding programs provide an extra ration of food, while therapeutic feeding provides special high-energy food for severely malnourished children. These programs are targeted interventions that complement USAID's Office of Food for Peace general ration distributions and supplementary feeding programs. In many drought situations, USAID/OFDA prefers to support community-managed acute malnutrition (CMAM) programs that provide life-saving nutritional support and related medical care to children in their homes, as opposed to hospital or clinic settings. This approach enables USAID/OFDA programs to reach more children and at an earlier stage of malnutrition, allows mothers to remain at home to care for other children, and decreases the risk of transmission of communicable diseases that is likely to occur in clinics or hospitals. However, where appropriate, USAID/OFDA does support traditional therapeutic feeding centers, which provide nutritional and health services in a hospital or clinic environment. In support of all of these activities, USAID/OFDA also



Health staff conduct rapid nutritional assessments to identify children at risk of malnutrition. (Photo courtesy of FSAU)

supports the procurement of therapeutic and supplementary foods such as ready-to-use therapeutic food (RUTF) and high energy milk.

Training and capacity building. In order to ensure that communities are prepared to deal with future nutrition crises, USAID/OFDA emphasizes the need for communities to be able to recognize and respond to increased levels of malnutrition among their children. USAID/OFDA-funded feeding programs often include training for local health staff on the treatment of severe malnutrition, support for federal health officials and relief staff related to CMAM implementation, development or enhancement of surveillance and sentinel site early warning systems, and nutrition education at the health center and community level.

Most of these interventions focus on the treatment of the malnourished, with some programs aimed at prevention through health education. In addition, to improve the diversity of the diet at the household level and to provide a source of income, USAID/OFDA has funded specific agriculture and livelihood programs, including demonstration gardens and seeds and tools for vegetable gardens, for the beneficiaries of nutrition programs.

HEALTH

As children become increasingly malnourished, they are at increased risk of morbidity and mortality associated with common communicable diseases. Children under the age of five, pregnant women, the elderly, and individuals in ongoing nutrition programs, including those with HIV/AIDS, are at particular risk. The lack of water can further aggravate poor hygiene practices, potentially resulting in diseases of epidemic significance such as cholera and typhoid. As a result, health interventions are critical during droughts. In many cases, drought-affected populations suffer from lack of access to basic health services, resulting in low immunization coverage and lack of basic resources such as trained staff and medical supplies. In such instances, excess morbidity and mortality may result from common diseases such as measles, malaria, pneumonia, and diarrhea, as well as maternal and neonatal complications. In the event that drought conditions lead to population movements, additional needs may arise stemming from overcrowding, lack of appropriate shelter, broken down disease control efforts, and reduced access to health, food, water, sanitation, and hygiene services.

Technical Assistance. USAID/OFDA has funded and works closely with the U.N. World Health Organization (WHO) Disease Control in Emergencies (DCE) branch to provide technical assistance for communicable disease control to partners, including governments in the Horn of Africa. WHO has produced a Communicable Diseases Epidemiologic Profile for the Horn of Africa. The purpose of this profile is to provide public health professionals working in the Horn of Africa with up-to-date information on the major communicable disease threats faced by the static and mobile populations within sub-regions.

Surveillance and early warning for communicable disease control. USAID/OFDA supports national disease early warning and surveillance systems for the prevention and control of communicable diseases. Outbreaks of epidemics can significantly increase mortality in a population suffering from malnutrition and lack of access to basic services. To be effective, these systems should link closely with water, sanitation, and hygiene programs and epidemic response activities to control outbreaks.

Prevention and management of common causes of morbidity and mortality. In drought-affected populations, USAID/OFDA supports the local Ministry of Health and additional partners to increase access of the

population to primary health care in order to prevent excess deaths. USAID/OFDA supports the prevention of common communicable diseases such as measles through the provision of vaccines, supplies, and Vitamin A supplements; institution of vector control measures such as the distribution of insecticide-treated nets for malaria prevention; and community education and linkage with water, sanitation, and hygiene programs. USAID/OFDA also supports treatment programs for common communicable diseases and maternal and neonatal complications through training community health workers, traditional birth attendants, midwives, and health educators at the clinic and community level and providing essential medicines to supplement Ministry of Health supplies in affected areas. USAID/OFDA encourages a community-based approach to promote access to health care to the most affected populations.

AGRICULTURE

Subsistence farmers in developing countries are strongly dependent on rainfall to support agricultural activity. Unfortunately, crop yields are not solely determined by the total amount of rainfall received, but also by the timing and distribution of rains. For subsistence farmers, crop production—rather than an income-generation activity—is the primary means of feeding their families throughout the year, so drought conditions of any magnitude can impact household food security. Several consecutive years of drought can lead families to sell assets such as tools and animals in order to purchase basic necessities. Because crop production and long-term food security are so strongly linked, USAID/OFDA supports agricultural interventions for the most vulnerable households.



USAID/OFDA agricultural programs provide vouchers that beneficiaries can use to purchase seeds and tools at local seed fairs. (Photo courtesy of CHF)

Seed distributions, seed fairs, and vouchers. Once USAID/OFDA has determined that vulnerable farmers lack sufficient seeds to plant their fields and are unable to obtain seeds through the market, family connections, or other channels, USAID/OFDA supports seed distributions or seed fair and voucher programs. If seeds are not available on the market, targeted distributions may be used to provide inputs. In many cases, seeds are available on local markets, but the most vulnerable farmers do not have the cash required to access the seeds. For these situations, the seed fair and voucher system is used. This system provides a voucher worth a set amount of money to each beneficiary, who trades it on a specific date for its value in seeds. The farmer is free to choose among different types of crops and seed varieties based on individual household requirements. USAID/OFDA implementing partners assure seed quality.

Agricultural technical assistance. In addition to providing seeds to vulnerable farmers, USAID/OFDA examines the types of crops planted in the affected region, seed quality, and whether any improvements may be made to the varieties offered. For example, if rains are too short for long-cycle sorghum to be planted and harvested prior to the end of the rains, USAID/OFDA might encourage short-cycle varieties to be planted, since such varieties grow to maturity faster, though their yield will be lower. Multiplication of improved drought-resistant varieties is a critical component of mitigation against future droughts.

LIVESTOCK

A significant number of vulnerable households in drought-affected areas of Africa are pastoralists or agro-pastoralists, with a majority of their livelihoods and food security dependent on livestock. As conditions deteriorate in pastoral lands, livestock are unable to find sufficient quantities of fodder and begin to weaken and die from malnutrition or disease. Supplemental grain and fodder decreases in local markets. As a drought

intensifies, families begin selling livestock as a coping mechanism. As a result, livestock prices fall and grain prices rise, leaving pastoralists unable to purchase what they need from the sale of their animals. Much like providing seed for subsistence farmers, protecting livestock assets among pastoralist and agro-pastoralist populations is crucial to maintaining medium- and long-term food security. Humanitarian agencies encounter numerous difficulties in responding to drought-affected pastoralists, since populations are nomadic, infrastructure is poor, and security is often problematic.



Beneficiaries participate in an USAID/OFDA-funded livestock fair in Ethiopia.

The carrying capacity of the land determines the number of animals that a region can support. Unpalatable plant species are encroaching in many pastoral areas, competing with the grasses and shrubs that animals eat and reducing the amount of available food. During drought years, available pasture decreases even further. Carrying capacity is important to consider in drought response, since the success of programs like destocking and restocking are based on this principle.

Destocking. Emergency destocking programs provide for the intentional removal of sick or undernourished animals from a region before they die. The programs provide a fair price to farmers for the livestock, based on animal gender and age but not on health. In some cases, the animals are then slaughtered, and the fresh or dried meat is provided to feeding centers in the region. This program can be used to supplement food aid, increase the availability of high protein foods, and provide some supplementary income to vulnerable families. Destocking is most useful early in a crisis since the removal of some animals may reduce the number of animals competing for resources, allowing for the survival of a core group of reproductive animals.

Animal health programs. Improving animal health care may be most important when animals face serious drought conditions. In some situations, simple health interventions such as de-worming at the start of prolonged drought can significantly increase animals' chances of survival. While herd sizes may dramatically decrease during a drought, significant livestock losses can also follow the first rains after drought, when animals already weakened by malnutrition succumb to parasites, dysentery, and disease. Vaccination programs and primary animal health care may prevent some of these losses associated with the onset of rains.

Restocking. Animal restocking is not generally recommended. Providing inputs of animals to a region where the carrying capacity is low will only lead to increased competition for resources and the likely death of the animals provided, which is a waste of money and effort. Except in some isolated cases, it is better to let nature take care of the restocking process.

Provision of water for livestock. The installation of new boreholes can be disastrous for the surrounding environment and should only be pursued in limited cases and with great caution. Livestock owners try to keep animals close to water sources, and the area 60 to 80 kilometers around a new water source often becomes severely degraded. For this reason, water resources should be kept outside of rangelands. In some grazing areas, water pans or small dams might be useful in extending dry-land grazing by four to eight weeks. These projects can be linked to community development and resource management activities. However, smaller water pans are not always naturally replenished in areas with erratic rainfall.

ECONOMIC ASSET SUPPORT

In drought conditions, USAID/OFDA uses a livelihoods-based approach as a means to improve food security. Vulnerable families undertake a variety of subsistence, economic income-generating, and coping mechanism activities in order to ensure household food security. The combination of these activities and the use of existing social, human, and physical assets is known as the collective livelihood of the household.

USAID/OFDA recognizes that a variety of factors contribute to the inability of a family or community to successfully combine these activities to achieve food security. Family members may spend increased time searching for water in lieu of participating in agriculture or herding activities. Households may lose labor assets as family members become too sick or malnourished to work. Individuals may sell productive assets such as tools, livestock, seed, or kitchen utensils as a result of previous or current drought. Diminished environmental assets, such as decreased grazing pasture, also impact household livelihoods. USAID/OFDA addresses the range of factors that affect livelihoods through multi-sectoral interventions, combining asset protection activities with health, nutrition, and water and sanitation programs. Specialized economic asset support interventions include livelihood fairs and alternative income activities.

Livelihood fairs. Much like the seed fair programs, livelihood fairs provide a voucher worth a set amount of money to each beneficiary, who may trade it on a specific date for its value in seeds, tools, livestock, fishing equipment, insecticide-treated nets, or diversified food commodities. This intervention allows the beneficiary to choose his or her own inputs, and fosters diversification of livelihoods. For example, one farmer may choose seeds, a hoe, a chicken, and a bundle of enset, while another may choose a goat and a machete. In some cases, USAID/OFDA partners have reported beneficiaries combining their vouchers to acquire community assets, such as an ox for plowing fields.

Alternative income activities. In drought-prone areas, USAID/OFDA recognizes that subsistence farming is becoming a less viable livelihood strategy over time. This is especially true in the Horn of Africa, where desertification, population increases, and decreasing plot sizes are leaving most subsistence farmers reliant on food assistance for some portion of their annual food consumption. In response, USAID/OFDA supports alternative income-generating activities as one component of an overall livelihood response. Poultry production, bee-keeping, enset production, and raising of small animals are examples of USAID/OFDA pilot alternative income activities implemented in drought situations. Communities identify the most vulnerable households, who in turn receive basic inputs and training in the technical, financial, and management aspects of the specific activity.



USAID/OFDA drought response programs address food security, water, and livelihood needs through multi-sectoral interventions, such as this community project to build a new water catchment area. (Photo by Ian Moise)