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care®

THE GLOBAL WATER CRISIS

CARE's Portfolio of Water Programs Worldwide



CARE's water programs have directly affected 10 million people in 20,000 communities worldwide. However, our real influence is immeasurable since the impact of accessible water affects multiple generations.

CARE'S IMPACT ON THE WATER AND SANITATION SECTOR

Water is critical to maintaining livelihoods and reducing poverty, and has been an important part of CARE's work for many years. CARE is well known and respected for its drinking water programming, water management at the farm level, and maintenance of wetlands and ecosystems within integrated conservation and development projects. Currently, CARE has about 150 projects in 45 countries

with water or water-related activities.

Over five decades, CARE's programming in community water supply has evolved substantially. CARE's first water and sanitation project was in 1957 in San Mateo Atenco, Mexico. During the 1980s, CARE gradually introduced other components, including health and hygiene education and sanitation through the provision of latrines. Our projects began to incorporate watershed protection as more holistic approaches to resource management were adopted. Since the 1990s, CARE has focused on sustainability issues. This resulted in greater emphasis on people making decisions about their own water and sanitation systems and water management, specifically regarding the formation of water user associations, the training of system caretakers, and cost recovery contributing to capital investment as well as operation and maintenance. The strategic goal of CARE's water programming is to "Enhance the livelihood security of poor rural and urban communities through equitable access, efficient use and sustainable management of limited and dwindling water resources."



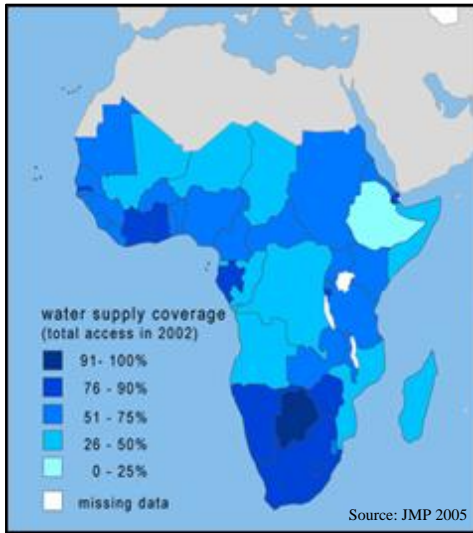
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A group of Eritrean farmers rests around their hand-dug drinking source. Many communities around the world depend on water from these improvised sources.

Water is a basic human right. CARE promotes a rights-based approach to integrated water resource management by involving communities and local organizations. CARE's programs include:

- Domestic water supply through pumps, wells, and household storage containers;
- Hygiene education in communities and schools;
- Point of use water treatment and storage in schools, health clinics and homes;
- Microfinance programs for water and sanitation facilities;
- Equitable distribution of water amongst households and farming communities;
- Efficient use of water for irrigation, livestock rearing and other non-farm uses;
- Legal rights to water, particularly for marginal farmers and the landless;
- Environmental conservation practices;
- Rehabilitation and maintenance of upstream watersheds for sustainable use;
- Local capacity building;
- Solid waste management and garbage collection;
- Appropriate technology for water and sanitation;
- Emergency supply; and
- Drainage and erosion control.

SUB-SAHARAN AFRICA



Sub-Saharan Africa faces debilitating water and sanitation problems. Forty-two percent of the population in this region lacks access to safe water and sanitation, the greatest proportion of any region worldwide. The large majority of those without access live in resource-poor rural areas, where low population densities discourage major infrastructure development. In urban areas, aging infrastructure and poor management practices leave many people without access and lead to high rates of water loss. Lack of access to water in Africa is a major contributing factor to economic underdevelopment, gender

inequality, low education levels, delayed child development and high infant mortality rates. Of the most water-scarce countries worldwide, 25 out of 30 are located in sub-Saharan Africa (Water Poverty Index, 2002). CARE works in many of the hardest hit countries, including Ethiopia, Niger and Chad.

CARE's work in the region focuses on rural water supply and sanitation, specifically in integrated water resource management programs. Through collaboration with local and national governments, infrastructure development programs in rural areas have provided access to potable water for thousands of Africans. Through community empowerment and capacity building, local solutions using appropriate technology are implemented, increasing sustainability. Paired with infrastructure development, hygiene education and sanitation promotion programs aim to improve the health of communities.



Women carry water back to their houses from a distant water point in rural Niger. Multiple trips with heavy clay pots burn scarce calories and consume hours of time.

CARE has implemented water programs in countries such as Angola, Ethiopia, Kenya, Malawi, Mali, Mozambique, Rwanda, Sierra Leone, Somalia, Sudan, Tanzania, Togo, Uganda, and Zambia.

KENYA



A young boy drinks water from a new spigot in his community. CARE programs in Kenya provide children with access to clean water at school.

Despite years of development assistance in Kenya, disparities persist between rural and urban areas in the rate of access to water and sanitation. In Kenya, 89% of urban households and 46% of rural households have access to potable water. Sanitation coverage shows lower coverage with less disparity, with nearly 56% of urban dwellers and 43% of rural dwellers having access to improved sanitation. Rapid population growth coupled with weak infrastructure creates challenges for the water sector in Kenya. In the past 30 years, the population of Kenya has tripled, while renewable freshwater availability has decreased by more than 60%. Pollution of drinking water sources has led to high incidences of malaria, typhoid, cholera and other diarrheal diseases. Poor cultivation practices, deforestation, and overgrazing on river banks have taken their toll on the environment. Kenya is classified as a water-scarce country;

however, only 15% of the safe yield of renewable fresh water resources has been developed so far. There remains an opportunity to exploit the balance.

CARE Kenya has been implementing household livelihood security programs in Kenya since 1995, providing development and humanitarian assistance to communities in all sectors. As such, it has strong relations country-wide with communities, community-based organizations, the Kenyan Government and key international organizations. CARE Kenya has operated a series of emergency relief projects, particularly in refugee camps in the Garissa region. Although the immediate goal of these programs is provision of safe water for household consumption, there is also a focus on hygiene and sanitation education. *Dak Achana*, or Healthy Households, includes sanitation and hygiene education, as well as a food-for-work component for flood mitigation in low-lying areas. **Current initiatives in Kenyan schools involve substantial collaboration with international and corporate partners, including Coca-Cola, the Millennium Water Alliance, and The Center for Global Safe Water.** CARE Kenya is also exploring the idea of an adopt-a-school program where schools or organizations in the US could sponsor a Kenyan school.

CARE's strong points of intervention in Kenya include a collaborative project with the CDC that focuses on water treatment and storage through Safe Water Systems in households, health clinics, and schools. By locally manufacturing water storage containers that reduce the introduction of contaminants, the program hopes to improve uptake of safe water storage practices and thus improve household health. Initial evaluations have shown substantial reductions in household morbidity, especially diarrhea.



Kenyan women gather around a tap to collect water for their households. Water scarcity adversely affects women and girls, who sometimes travel miles to obtain water. Community sources give women more time to take care of their families and participate in income-generating activities.

MOZAMBIQUE



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People in many areas continue to collect and store water in open buckets such as this one. This provides greater opportunity for contamination.

As in many sub-Saharan African countries, rural water coverage in Mozambique is low, measured as 24% in 2002 by the Joint Monitoring Program. However, a baseline survey conducted by CARE in 2004 in Cabo Delgado district showed coverage could be as low as 18%. In some rural areas, people used to walk up to 20 kilometers to fetch water, which was mostly unsafe. Many people who lack access to improved sources obtain their water from alternative sources such as rivers and streams or traditional wells in rural areas. Some major barriers to improved water access include deep water tables in some areas, which make it difficult to reach potable water with standard boreholes, in addition to easy access to unprotected sources in coastal areas, which make people unwilling to pay for protected sources. Poor quality of construction, high maintenance of current technologies and lack of management and availability of spare parts lead to long down-time periods in many improved water sources. Currently, there are few national or provincial programs to promote sanitation and hygiene behavior change for the rural population.

CARE began working in the water and sanitation sector in Mozambique in 1992. Initially, projects focused mainly on infrastructure development and service delivery as part of emergency programs. As overall development work began shifting to a rights-based approach, CARE focused on developing capacity of local communities who fully participated in programs that increase rural water supply and provide health and hygiene education and sanitation. **The water and sanitation projects in Inhambane and Manica provinces involved the installation and rehabilitation of 150 boreholes, which provided access to safe water to more than 100,000 people.** These water points were established primarily near schools to help reduce the burden on girls who

may not be able to attend school due to domestic chores such as fetching water. Many of the conventional improved water sources are inappropriate for the poorest areas of both provinces, which have extremely deep water tables (60-120 meters). Currently, the Govuro Water and Sanitation Project is continuing the efforts in the most remote areas of northern Inhambane.

Other current major initiatives include the *HAUPA* project (Higiene Ambiental e Uso Productivo de Agua), which aims to improve water and sanitation access for 138,000 people in seven districts in Cabo Delgado and Nampula provinces in northern Mozambique. In collaboration with the local government, private sector and local NGOs, HAUPA seeks to develop cost-effective technology and innovative approaches that will benefit large numbers of people. Beyond simple installation of infrastructure, the project encompasses construction of small earth dams and small-scale irrigation for the promotion of other income generating activities. As the perceived value of water increases, communities are thus motivated to sustain water points and reduce waste. CARE is working hard to find suitable technological options for Mozambique, while at the same time addressing the sustainability issues of the existing and future water supplies.



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A Mozambican man tends his cabbage. Small-scale irrigation projects allow farmers to increase production and generate more income for their families.

ETHIOPIA



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An Ethiopian woman collects water from the only available source in the area—a river.

Water supply services in Ethiopia are among the lowest in Africa. Water sources are not evenly distributed between rural and urban areas, or even among different urban centers. According to the Ministry of Water Resource, 19% of the rural and 80% of the urban population has access to safe water, and the total coverage for the country is 26%.

Most potable water sources are wells and protected springs, although many people obtain drinking water from surface level sources such as rivers and ponds. These surface level sources are of poor quality due to contamination from humans and animals, which contributes to the high level of diarrheal diseases. Distribution of these natural sources is uneven—some areas

have water in abundance and other areas may have none. The daily task of fetching water is a huge burden on women and girls, who must sometimes travel many kilometers and several hours and climb steep slopes in order to obtain their daily supply.

CARE's work in water and sanitation in Ethiopia dates back to the 1984 drought, when interventions aimed to save lives and prevent massive migration. Much of the early work in Ethiopia was related directly to relief, such as providing clean water by tanker truck to Somali refugees living in the Ethiopian Ogaden region, a project which began in 1988. CARE Ethiopia's work in emergency water supply focuses on immediate need, but enables them to support long-term sustainable solutions.

Current programming addresses the livelihood security of poor populations by increasing access to safe water and subsequently reducing disease through hygiene education using a community development approach. Interventions include training of community committees in disaster early warning and mitigation, farmer training and technology dissemination for improved agricultural productivity, and the development of small-scale irrigation schemes. Currently, the state-of-the-art hygiene and sanitation promotion project seeks to develop a culturally appropriate strategy for hygiene education in Ethiopia. Examples of past projects include a development assistance program, implemented in 2001, which constructed 2,500 latrines while teaching 20,000 households about reducing risks to health through proper hygiene and sanitation.

In the past few years, CARE has collaborated with other organizations under the auspices of the Millennium Water Alliance on the Farta Water Supply and Sanitation Promotion Project in the South Gondar Zone of Amhara Regional State.



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Women and children in Ethiopia travel long distances to reach unsafe drinking water sources.

TANZANIA



Nearly half of all households in Tanzania depend on unprotected sources of drinking water such as rivers, dams, springs, wells, or lakes. Those that have access to piped water may still be at risk for disease, since that water is often untreated and considered

unsafe at the point of consumption. Fifty-one percent of rural households travel more than one kilometer to their drinking water source in the dry season. Lack of access to safe water and sanitation services in many parts of Dar es Salaam is a chronic problem, especially for people living in unplanned areas. Fourteen percent of households have no access to safe, clean water, even through community water points. People living in poorly served neighborhoods walk considerable distances to collect water from private household connections, where they pay up to three times more per liter than those connected to the formal water supply system.

CARE began working in Tanzania in 1994 to assist in the response to the massive influx of Rwandan refugees following the genocide of 1994. In addition to camp management and programs in water and sanitation for the refugee population, CARE also conducted health, HIV/AIDS, environmental protection and food distribution activities. Since then, CARE's work in Tanzania has evolved to address development needs of the poor and marginalized communities in 11 geographical regions in Tanzania. CARE's work focuses on the health, education and natural resource and environment sectors. Programs take a holistic approach that actively promotes good governance, policy analysis, advocacy and empowerment of civil society for active citizenship.



Since 1999, CARE has been implementing a joint initiative with communities and municipal councils in Dar es Salaam called *Huduma za Jamii Kwa Maendeleo* (HUIJAKWAMA) which means Community Services for Development. HUIJAKWAMA is focused on improving access to and quality of community-based services related to water and sanitation, health and education by public and private suppliers. The program facilitates effective management and sustainability of community development process by local and community leaders. Over 40,000 women from low income households have benefited from the program.

In an effort to reduce disease related to lack of water and poor sanitation in rural areas, CARE began the Community Water Supply and Sanitation Project (CWSSP) in 2004 through partnership with the Kinondoni Municipal Council, the public water utility and various community groups. CWSSP establishes a mechanism for providing water and sanitation services to the poor through the construction of infrastructure such as deep boreholes, bulk supply connections and domestic water points, as well as through the formation and strengthening of



Water User Associations. The program strengthens community participation in local planning and development, while enforcing collaboration between various agencies in providing affordable services to the poor. CWSSP is implemented in 12 out of the 25 communities where CARE works and benefits approximately 30,000 people from poor households.

In the next five years, CARE will be implementing an empowerment program targeting women and girls in urban Dar es Salaam, by focusing on addressing gender inequality and unequal power-relation that limits women's access, utilization and management of water and sanitation services.

GHANA



Approximately half of all households in Ghana lack access to an improved water source. In urban areas, high leakage rates, staffing problems and financial difficulties due to lack of investment have crippled the national water utility's capacity to provide enough water to residents. An acute water shortage has caused extensive water rationing in most urban areas. Most slums are not connected to the piped system, forcing residents to drink unsafe water or pay prohibitively high prices to buy it from connected households.

In rural areas, improved water sources include boreholes and hand-dug wells with hand pumps, or small piped systems in larger towns. Many rural residents, however, still depend on unsafe water sources such as rivers and lakes or open wells. Sanitation coverage for both rural and urban areas is less than 40%. In major cities like Accra and Kumasi open storm gutters are often full of garbage and human waste, and many urban streams look like large waste water drains. Flooding occurs in major urban areas because of choked storm drains and unplanned settlements. Poor sanitation and lack of access to safe water has led to Ghana's high rates of water-related disease, including diarrhea, guinea worm and trachoma.



The task of collecting water often falls to young girls.

CARE has been working in Ghana since 1996. In addition to HIV/AIDS prevention, CARE Ghana has programs in agriculture, economic development, governance, health care and basic and girls' education. CARE Ghana has extensive experience implementing programs in sustainable forestry and natural resource management—areas that are essential to helping farm families and community members implement sustainable land use practices that improve livelihoods and maintain environmental quality.

Through the Urban Basic Social Services Program (UBASS), CARE works with the Government of Ghana in the city of Kumasi to strengthen access to basic social services for some of the most deprived areas. The UBASS Program enables community-based organizations to identify needs of the most vulnerable members of the community and to develop community-driven plans to advocate for and address those needs. In addition, the program is strengthening the capacity of local governance structures to be more responsive and accountable to their constituencies, as well as to provide support when local authorities are inappropriately re-sourced or inadequately trained in providing the necessary services to the population. As part of the UBASS Program, CARE Ghana involves civil society in the planning, design and implementation of water and sanitation components that provide safe water supply, sanitation facilities and hygiene education to schools and communities in Kumasi.



CARE Ghana water programming addresses not only drinking water supply, but also natural resource management through agroforestry training activities.

About 70% of health problems in Ghana are related to unsafe water and lack of access to sanitation, and malaria is the leading cause of morbidity and mortality in Ghana. CARE Ghana is looking for funding to initiate a malaria control program, which will serve as an entry point to solve water and sanitation problems in poor urban areas.

RWANDA



The 1994 civil war and genocide in Rwanda resulted in the destruction of most of the pre-existing water and sanitation infrastructure in the country. Currently 69% of rural households and 92% of urban households have access to improved water sources.

At the end of the war, displaced populations often resettled along hilltops or near roads which were far from existing water facilities. Emergency restoration interventions placed little emphasis on the sustainability of water infrastructure, leading to frequent breakdowns. The average distance to a water point in Rwanda is eight kilometers. Due to the lengthy hours it takes to collect water, girls are often unable to attend school and women lack the time needed to earn additional money for their families. Sanitation coverage is abysmal, with only 38% of rural households and 56% of urban households having access to improved sanitation. Low levels of improved hygiene practice and environmental sanitation knowledge lead to high rates of diarrheal disease, particularly in children under five.

From 1984 to 1994, CARE implemented a range of development projects in Rwanda, addressing maternal health, forestry, water and sanitation. During the civil war, CARE closed its Kigali office from April to July 1994 while conducting cross-border relief from Uganda. Emergency operations included the distribution of food, shelter, basic domestic survival items, water, seeds and tools. At the height of the emergency efforts, CARE Rwanda assisted an estimated 1.5 million internally displaced people, refugee returnees and impoverished local residents. CARE has since built a significant rehabilitation and development program. Early activities included the distribution of seeds, tools and food in five prefectures, reaching over a million people, as well as the distribution of food and non-food items to returning refugees passing through the transit centers in Butare and Gisenyi. CARE is currently working in six prefectures with programs in STD/AIDS prevention, health education, agroforestry and sustainable land use management, community-assisted shelter projects and women's agricultural production. Water programming in Rwanda has historically focused on sustainable water access in rural areas, community based water management systems, and hygiene education. In recent years, budget restrictions have limited water interventions in the country.



Much of the water infrastructure in Rwanda was destroyed during the war.

CARE's current environmental programming in Rwanda has a positive impact on water resources. For example in Umutara prefecture, the Trees for the Future program increased agroforestry and environmental knowledge in



Rwandan girls walk several kilometers up steep hills to bring water to their families.

10 primary schools and 15 women's associations. By the end of the project, the schools and associations planted 930,000 trees in the participating communities, dramatically improving the local environment which helps protect watersheds. CARE's Gisenyi Land and Environment Rehabilitation Project (GLER) is helping 25,000 rural families to diversify their land use management skills and promote restoration and protection of the Gishwati forest as well as reduce chronic vulnerability of surrounding communities. The Gishwati forest area has been inundated with displaced people following the Goma volcano emergency. CARE is strengthening the capacity of local authorities and organizations to prevent environmental crises and develop response strategies in the event of soil erosion, floods and land slides.

ZAMBIA



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Zambia is a large, sparsely populated country known for its spectacular scenery, including the Victoria Falls. Although it is a landlocked country, it is home to some of the greatest freshwater resources in southern Africa, such as the Zambezi River. It is also one of the region's poorest countries, marked by water access problems exacerbated by decades of drought. High rates of migration from rural to urban areas from people seeking greater economic opportunity have led to rapid growth of unplanned illegal settlements which lack service infrastructure for water supply, sewerage removal and disposal and street drainage.

Depleting groundwater resources increase the distance women walk to collect water for drinking and household use.

CARE began operating in Zambia in January 1992 at the invitation of the Zambian government. Activities initially focused on emergency relief in response to the severe drought of the early 1990s, and on interventions to mitigate the effects of escalating inflation and

extreme poverty in urban areas. Emphasis has gradually shifted to long-term, community-based development, with programs in agriculture and natural resources, education, health, infrastructure, small business and water and sanitation. Water programming includes provision of water supply systems and sanitation facilities as well as hygiene education and capacity building for local organizations.

The recently completed Program of Support for Poverty Elimination and Community Transformation (PROSPECT) provided an innovative multi-sectoral community-based management model for alleviating poverty in 14 settlements in Lusaka and Livingstone, with a total of 600,000 beneficiaries. PROSPECT worked with local organizations to develop, manage and maintain basic water infrastructure and other services with particular emphasis on vulnerable individuals, especially women and children. The four key interventions within the program were: 1) institution building of area-based organizations, 2) infrastructure improvement, 3) environmental health, and 4) micro-finance. Based on the lessons learned through collaboration with key stakeholders on a pilot project in Chipata settlement, PROSPECT developed and implemented an innovative community management model commonly known as the 'Water Trust Management Model', currently operational in 6 settlements in Lusaka. The Trust Model is now being replicated in other parts of Zambia.

CARE's Moyo Wa Bana project reduces mortality and morbidity attributable to malaria, diarrhea and respiratory infections among children under five in Lusaka, Ndola and Kasama districts. Among the project services, Moyo Wa Bana grants insecticide-treated mosquito nets and chlorine to organized Neighborhood Health Committees (NHC), which sell the commodities to households and manage the proceeds as community revolving funds. The sale of the nets and chlorine becomes an income generating activity for the NHC to sustain future child health programming, while the products themselves enable community members to improve the quality of their drinking water in the home as well as decrease their risk for malaria.

Northern Province Peri Urban Water Supply and Sanitation (PUWSS) project in Northern Zambia targets 60,000 people of the peri urban population dwelling in the high density and low-income areas. The specific objective for the project is to improve access to sustainable water supply and sanitation services among households in the peri-urban areas of the selected six district local authorities by mid 2006. Although PUWSS is directly implemented through local government authorities and the commercial water and sewerage utility company, CARE provides technical assistance in infrastructure and social institution building and strengthening among the key partners and stakeholders.



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Women and children are most severely affected by the recurrent drought in Zambia.



MADAGASCAR

Despite ecological richness and geographical diversity, Madagascar lacks adequate access to clean water and sanitation for the majority of its people. In the rural areas where three quarters of the population live, only one third has access to clean water. When devastating cyclones strike Madagascar, strong winds and heavy rains destroy buildings, bridges, crops and water points. Many villagers are forced to live in flooded conditions for weeks at a time, and entire communities are subject to cholera outbreaks. This combination of factors has a disastrous effect on both the health and the economic status of the population, particularly among the poor. Madagascar has the most diverse marine and coastal ecosystems of any country on the western Indian Ocean. This biological diversity is threatened, however, by serious ecological problems including deforestation and soil erosion.



Despite the abundance of surface water sources, women still travel far to obtain safe drinking water for their families.

CARE began working in Madagascar in 1992 at a time when the country was experiencing a severe economic crisis. Currently, CARE's rural development programs focus on sustainable natural resource management, food, household livelihood security, and risk and disaster management. CARE also implements urban programs that focus on health, environmental sanitation, social empowerment, and income generation. Water programming integrates infrastructure development with capacity building and good governance support.

CARE's ATSIANANA Program in Tamatave Province provides technical assistance and training to promote sustainable farming practices, more productive and diversified farming systems and improved post-harvest management. Using food-for-work, the project rehabilitates small-scale irrigation and drainage systems and soil and water conservation infrastructure to enhance agricultural potential. CARE improves community management of water and sanitation resources and builds up key water and sanitation infrastructures, expanding access to safe water for participating communities.

Since 1998, CARE's Urban Governance Improvement Program, called Mahavita, has helped 80 local councils in the capital city of Antananarivo to holistically analyze their community situation and plan for their development.



CARE staff members encourage community participation in the creation of development plans.

CARE plays the role of facilitator between municipal government and the communities to design and implement development plans, primarily focusing on safe water and social infrastructure. Through this program, CARE has rehabilitated or constructed 77 water and sanitation systems, benefiting more than 25,000 people.

On the Masoala Coral Coast, CARE works to preserve the biodiversity of critical ecosystems through building capacity for community management. This area contains some of the world's most precious coral reefs that are threatened by natural disasters and human exploitation – specifically, tropical cyclones and destructive fishing practices. Through the Vatoharana project, CARE helps communities manage these coastal and marine-based resources, helping prevent extinction of highly exploited species such as sea cucumbers while providing alternative methods of earning livelihoods that have a gentler impact on the environment.



CAMEROON

Cameroon is a geographically and ethnically diverse country, blessed with political stability in a tumultuous region. Despite this peaceful political atmosphere, many people still lack access to safe water and adequate sanitation, particularly in rural areas. Three in five rural inhabitants lack access to safe water, while two out of three lack sanitation. The sparsely populated northern provinces are especially dry, causing people and animals to share the same water holes which leads to a high incidence of preventable diseases. Access to potable water is cited as a top three priority for men, women and children in rural areas where CARE works.



A Mozambican man tends his cabbage. Small-scale irrigation projects allow farmers to increase production and generate more income for their families.

CARE has been in Cameroon since 1978, implementing water, health, nutrition, HIV/AIDS, family planning and environment management projects. Through encouraging local participation in development projects, CARE helps communities identify their own needs and develop appropriate solutions. Water programming in Cameroon generally involves three types of interventions: construction and rehabilitation of water and sanitation infrastructure, capacity building for managing and maintaining local water systems, and hygiene promotion and education at the community and household level.

CARE finances rural development activities in the North and far North Provinces to alleviate poverty, promote agricultural development and create employment. This multi-sector program focuses on four main components: 1) rehabilitation of the Ladgo valley irrigation system; 2) support to private sector initiatives in agriculture; 3) community development and health, including HIV/AIDS interventions; and 4) micro-credit. The program supports gender equality by enhancing women's access to credit and agricultural extension services through community development projects. General community development programs such as this support CARE's work in integrated water resource management.

Since 2000, CARE has worked to provide potable water to health centers and rural villages in Adamawa province and to strengthen good practices in community hygiene and sanitation. Many villages and health centers in this province have no access to potable water, resulting in an extremely high incidence of preventable disease, especially among children under the age of five. The Adamawa Potable Water and Community Health Project targets 60,000 beneficiaries and includes the construction of 70 new boreholes, the rehabilitation of 42 pumps and hand dug wells, one spring catchment, and three motorized water systems. CARE is developing the capacity of village water committees to manage and maintain their water systems. CARE works with a variety of partners, including over 90 village water committees, village health committees, local leaders, national Ministry staff, and international partners. Perhaps most notably, the project's emphasis on the participation of women has increased the number of women who are decision-makers in the groups and committees, thus helping to ensure their needs with respect to water and health issues are better met.



Rwandan girls walk several kilometers up steep hills to bring water to their families.

SIERRA LEONE



© CARE/Alex Keimble

Many of the wells in Sierra Leone were contaminated during the civil war. CARE works to rehabilitate them and return people to their homes.

After eleven years of civil war, most of Sierra Leone's water infrastructure has been destroyed or contaminated. Sanitation coverage is dismal, particularly in rural areas where only 30% of inhabitants have access to improved sanitation. Some major obstacles remain, including weak government support, a lack of qualified technicians to maintain infrastructure, and heavy reliance on NGOs for financial support. Since 2002 CARE Sierra Leone managed to rehabilitate or construct over 300 wells serving the most vulnerable communities in the northern and southern parts of the country. Despite this intervention, access to safe drinking water has been identified as one of the top national development priorities.

CARE established an office in Sierra Leone in 1961, initially focusing on improving child nutritional status through school feeding programs

and later implementing basic infrastructure projects. After the onset of the war in 1991, CARE successfully implemented a range of relief activities and undertook transitional rehabilitation programs where possible. More recently, CARE has embarked on a number of long-term recovery and development initiatives aimed to solidify peace and restore productive and economic livelihoods, while maintaining an emergency response capacity. Rehabilitation work has included components in agriculture, micro enterprise development, education and skills training, water, sanitation and hygiene education and local governance. CARE has used issues around access to safe drinking water as an entry point for addressing the underlying causes of poverty, for discussing human rights and to introduce messages around health and HIV/AIDS. Water and sanitation components are wholly integrated into the sustainable development programs implemented by CARE in Sierra Leone. For example, the Northern Province Rehabilitation and Development Initiative (NPRDI) is a three-year transitional development program designed to promote peace and stability, support economic recovery and nurture sustainable economic and social development. NPRDI will increase community-wide access to and optimization of available agricultural and water resources in targeted areas of Bombali and Koinadugu Districts. By working with local partners to build programmatic and administrative skills, 120 communities will gain access to clean water and improved sanitation facilities.

CARE collaborates with other international NGOs and partners to implement the Development Relief Program (DRP). As a transitional assistance program, **DRP supports Sierra Leone's continuing recovery from the war by improving health status and re-establishing productive agricultural activities for approximately 37,400 rural households in 410 villages in five of the most badly affected districts in the country.**

The ProFARM program (Promoting Food Access, Rights, and Community Mobilization) helps farmers in marginalized villages of Bo, Moyamba and Tonkolili districts to become increasingly self-reliant in food production, thus improving food security. ProFARM's activities include promoting more appropriate crop production and harvesting techniques through trainings at Farmer Field Schools, supporting women's groups to grow and consume healthier food, and building capacities of farmer groups and community organizations in equitable planning and mobilization of resources. Nearly 10,000 people have benefited directly from this program.



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Many communities in Sierra Leone still use surface water for drinking as well as cooling off.

ASIA



A boy from India cups his hands to drink clean water.

Nearly two-thirds of the 1.1 billion people without access to safe water and 80% of those without access to sanitation live in Asia. From the war-torn regions of Afghanistan, to the near sea-level floodplains of Bangladesh, to the mega-cities in the south and southeast, Asia faces great challenges in delivering safe water and sanitation to its people. The seasonality of rains throughout much of the region makes managing water quantity of important value. Rapid population growth, particularly in urban areas,

weighs heavily on existing infrastructure. Urban populations in East Asia are expected to double by 2030, and service providers lack the resources to improve service delivery accordingly. Sanitation in particular is the most neglected major policy issue in the sector. Poor sanitation services seriously impact water quality, and the resulting conditions are the main cause of the region's high burden of waterborne disease.

CARE works in many of the countries in Asia in water resource management, emergency drinking supply, infrastructure development, and sanitation. As an expert in relief work, CARE played a significant role in the region after the devastation of the 2004 tsunami, providing clean drinking water and technical expertise for rehabilitation of destroyed sources.



A girl from Bangladesh gets clean water from a newly constructed borehole.

CARE has implemented water programs in countries such as Afghanistan, Bangladesh, East Timor, India, Indonesia, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, and Vietnam.

AFGHANISTAN



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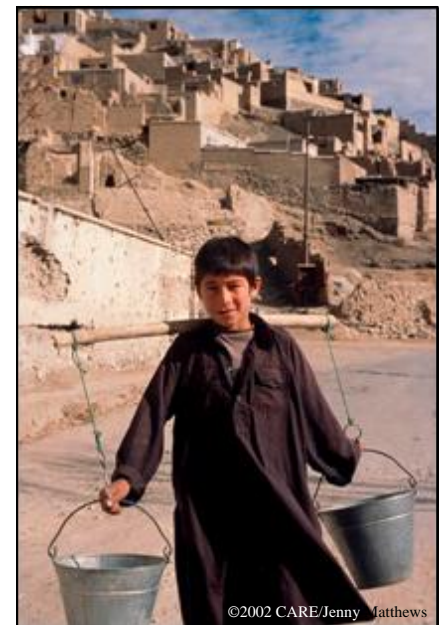
In 2002, access to improved water sources was only 13%.

Afghanistan is a country plagued by war and devastated by environmental degradation and drought in recent decades. Much of the country's infrastructure has been destroyed, leaving many people without access to a safe water supply. Piped water supply coverage is highest in the capital Kabul, but only 30% of residents have access to an intermittent supply. Residents who do have water can expect only 14 liters per person per day, which is considerably less than the WHO recommended 20 liters per person per day for consumption and sanitation purposes. Some areas of Afghanistan experienced severe flooding after heavy snowfalls during winter 2004-2005. Unfortunately, this flood water has not replenished the aquifers, which are still recovering from five years of drought. Distance to water sources varies from 3-10 kilometers throughout much of the country. In rural areas, an estimated four out of five Afghans drink potentially contaminated water from wells, traditional canals, and streams. Much of the urban infrastructure for sewage is in disrepair, leaving two out of three inhabitants without access to safe sanitation. In rural areas 90% of Afghans do not have access to sanitation.

CARE has been actively involved in the Afghan water supply

and sanitation sector since 1994 and currently supplies water to 600,000 people in Kabul through piped networks, water tankers and public stand pipes. With more than 130 staff and 1,400 daily wage workers, the program provides cash-for-work opportunities for vulnerable women and men in Kabul, who have consequently built five hospital incinerators and dug 1,007 meters of drainage ditches. Furthermore, a waste disposal system was established that has resulted in the collection of 26,663 cubic meters of trash within Kabul, which was taken to a dump outside the municipality. CARE Afghanistan has extensive experience in emergency water supply and hygiene education. **An important aspect of CARE's involvement in hygiene and sanitation education has been the training of female educators, who have unique access to the women of Afghanistan.** During house-to-house education sessions, these women teach safe water storage, food hygiene, and proper waste disposal along with general preventative health measures. Other recent projects in Ghazni focused on public sanitation, including the construction of a drainage system, rubbish collection, waste management and garbage bin construction.

CARE Afghanistan is seeking funding to expand their activities in the water and sanitation sector through an Urban Development Program, which will focus on urban governance and community and government capacity building.



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Sixty percent of Kabul residents live in unplanned areas with no water or sanitation facilities.

INDONESIA



Indonesia comprises some 15,000 mountainous islands, a difficult terrain that led to high

urban density throughout most of the country—40% of the population lives in urban areas. *Although the Joint Monitoring Program showed in 2002 that urban areas have an 89% coverage in access to improved drinking water resources, and 69% of rural areas have access, this coverage was reduced dramatically after the tsunami of 2004.* Much of the infrastructure in the Aceh region in particular was destroyed, while many of the wells and surface water sources have been contaminated with salt water. Insufficient access to safe drinking water is a major cause of diarrheal disease, the second leading killer of children under five in Indonesia before the tsunami.

CARE has been involved in the water and sanitation sector in Indonesia since the 1970s. Initially the approach focused on infrastructure development and the provision of access to water for rural poor. In the 1990s, the strategy evolved to a Community Management Approach, in which CARE empowered communities to participate in the design, construction and maintenance of systems. In this way, a substantial portion of water project costs are covered by local and provincial governments. Furthermore, even in emergency projects, CARE Indonesia has established local water management committees to manage water sources.

CARE was the first organization to promote Safe Water Systems (SWS) in collaboration with the CDC. The SWS approach consists of using chlorine-based purification and safe storage containers to avoid contamination. CARE Indonesia piloted this approach in Tangerang and has tested and applied it in emergency settings in West Timor and Aceh. Recent surveys have shown that people use the system if combined with appropriate communication, training and monitoring.

Past programs in Indonesia include those in which data management tools such as Geographic Information Systems (GIS) are used in participatory community development planning, mobilization of local resources and measurement of impact. In Aceh, for example, CARE has developed an integrated monitoring and evaluation system that integrates spatial data with measures of impact on household livelihood recovery and health. The SWASH project in Sulawesi focuses largely on the development of local governmental capacity to improve the management of water and sanitation. **Through this project, more than 6,000 families obtained access to safe water, and 3,000 latrines were constructed for victims of communal violence in 122 rural villages.** Another large portion of CARE's involvement has been in emergency water supply activities in West Timor and Sulawesi, as well as, most recently, in areas affected by the December 2004 tsunami.



The Tsunami of 2004 will have a long-lasting impact on sanitation and water supplies in Indonesia.



A woman in an emergency camp collects water from a well.



VIETNAM

Access to safe water and improved sanitation remains a major challenge for Vietnam despite years of rapid economic growth. An estimated 62% of people have access to safe water and 50% have access to appropriate sanitation facilities. However, these figures hide major regional discrepancies, particularly between rural and urban areas. Poor, remote and sparsely populated areas are the least likely to be adequately serviced. Lack of public investment in infrastructure, limited local management capacity, unclear guidelines for implementation of national policy at a local level and inadequate focus on sanitation all contribute to slow sector development. Communities themselves often misunderstand the linkages between poor water and sanitation and the incidence of illness in their communities, which leads to weak demand for improved facilities.

CARE began work in Vietnam from 1945 to 1975, in the areas of health, vocational training and emergency relief. CARE returned in 1989 and has been working in many of its 64 provinces and cities implementing high quality long term development programs as well as providing relief and rehabilitation assistance in times of emergency. Today CARE focuses on agriculture and natural resources, primary health care, vocational training, small economic activity and on HIV/AIDS. Because water is a cross-cutting issue, water and sanitation components are incorporated into each of these program areas. CARE's community interventions in water and sanitation span a wide range of activities including small scale construction and rehabilitation, water and sanitation in times of emergency, hygiene promotion and social marketing, drought mitigation and capacity building for local water management.

In April 2004, CARE in Vietnam began the initial phase of the Options and Ownership: Water and Sanitation for Rural Poor in the Mekong Delta Program. This five-year program applies an innovative approach to water and sanitation service delivery in poor and remote communities in Ca Mau and Soc Trang Provinces. The program's

goal is to improve the health of rural poor people in the Mekong Delta by reducing the incidence of water-related disease while enhancing the opportunity for remote and marginalized communities to take responsibility for matters affecting their health and prosperity. Options and Ownership will benefit all 12,500 poor households in the target communities by increasing their access to safe water supply and improved sanitation facilities. It also supports communities to establish decentralised and demand responsive water and sanitation markets and focuses on marketing sustainable water and sanitation behaviors and practices.

CARE Vietnam has been implementing the Clean Water for Schools project in Ca Mau and other remote areas for the past several years. Since 2002, CARE has reduced exposure to water-related diseases for students in a total of 65 schools through the provision of toilets, boreholes, small pumping systems, water tanks and ultraviolet light water filters. It is estimated that over 20,000 students have directly benefited from these interventions.



The water filtration system in Cai Nuoc primary school provides students with safe drinking water, reducing the incidence of diarrheal disease.



Community members participate in a mapping activity which helps to develop appropriate water interventions.

INDIA



As home to more than a billion people, or one sixth of the world's population, India's natural resources are strained. Vast numbers of inhabitants lack access to water and sanitation. Ground water is deep and difficult to reach, forcing many families to depend on scarce surface water resources which are often contaminated with sewage and agricultural runoff. Sanitation facilities are nonexistent for many households, particularly in rural areas where just 18% have access to adequate sanitation such as a latrine. Urbanization in combination with natural population growth has led to the establishment of urban slums and settlements, where inhabitants struggle to find safe drinking water or hygienic sanitation facilities.



Surface water resources in India are often highly polluted, causing diarrheal disease and other health problems.

CARE began operations in India in 1950 and today works in ten states with more than 600 staff. Until 1986, the primary objective of CARE's activities was to provide food to vulnerable groups, especially children aged 6 to 11 years. CARE's Food-for-Work program in India was one of the first of its kind in the world, incorporating activities such as water harvesting, flood control and road rehabilitation. Today, CARE helps 6.5 million individuals in over 100,000 villages. CARE's mission in India is to facilitate lasting change in the well-being and social position of vulnerable groups, especially women and girls. CARE currently works in the sectors of health, nutrition, and population, girl's education, small economic activity development, urban development, tribal empowerment, agriculture and natural resources, emergency preparedness and relief and rehabilitation.

After the Gujarat Earthquake of 2001, CARE launched a response that provided immediate relief for basic needs as well as long-term development support. By revitalizing and expanding drinking water sources, constructing rainwater harvesting systems, and developing farm ponds, CARE helped Gujarat residents to access safe drinking water and water for their fields and animals. After the Tsunami of 2004 CARE distributed safe water systems and other emergency relief items such as sanitation items, oral re-hydration salts packets, ready-to-eat meals, plastic sheets, blankets and water bladders. With this quick response, CARE immediately addressed the most urgent needs in order to save lives and prevent the spread of disease.

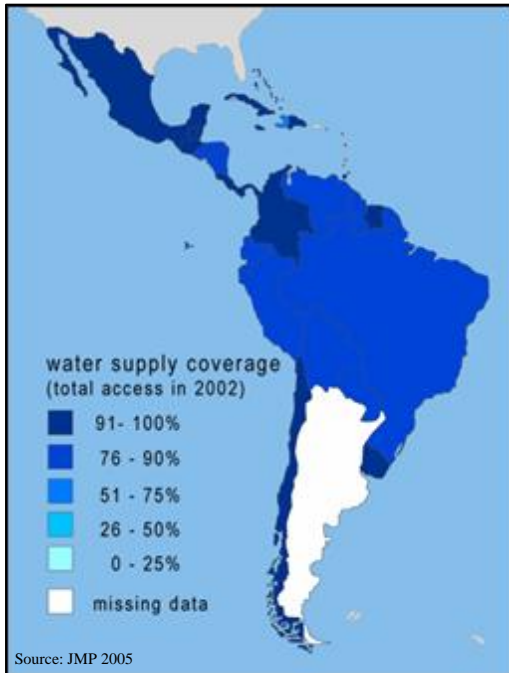
The Sustained Nutrition, Education, Health and Livelihood (SNEHAL) Program is a multi-dimensional project that aims to achieve significant and sustainable improvement in the livelihood security of poor and marginalized



Women are responsible for fetching water and must travel long distances each way to the nearest wells or tapstands.

communities living in ecologically-fragile disaster-prone areas of Gujarat. Universally, the Project focuses on women, children, and adolescent girls, with specific focus on socially excluded communities like salt workers, charcoal makers and pastoral communities. Through SNEHAL, CARE actively involves local residents to create village-level development plans, many of which seek to improve the availability of clean drinking water. CARE is seeking funding to construct or repair water-harvesting systems, such as pipelines, village ponds, rooftop water harvesting structures, wells and storage tanks, in villages where water access has been identified as a high priority. CARE would specifically select remote settlements where government water and sanitation programs have not reached, working through local community based organizations and volunteers to educate communities about the importance of good hygiene and sanitation.

LATIN AMERICA and the CARIBBEAN



From the peaks of the Andes Mountains, to the Amazon Basin, to the coastal areas of Haiti, Latin America and the Caribbean present unique challenges for the provision of water and sanitation. More than 60 million people lack access to safe water in this region, and 132 million people lack adequate sanitation. Although water is not as scarce in this area as in other regions of the world, high rates of waterborne diseases indicate poor water quality and quantity. The people who suffer are those living in rural areas or in the urban slums that have sprouted in most cities. In many urban areas that are not connected to the established infrastructure, people are often forced to pay exorbitant amounts for water delivered by tanker truck. Many countries in this region lack sewers and appropriate waste treatment and disposal facilities.

When wastewater is discharged directly into bodies of water that serve as drinking water for other communities, the impact on the environment and the health of the population is devastating.

CARE's work in the water sector in Latin America and the Caribbean ranges from emergency relief to long-term planning for infrastructure development through micro-credit programs. We have integrated environmental components into many of our programs to address the specific needs of this geographically and culturally diverse region. **CARE is currently organizing a regional water initiative that will evaluate the present situation and develop a long-term water and sanitation strategy for Latin America and the Caribbean.**



A Honduran boy washes his hands at a water point. Hand-washing is an important part of the educational components of CARE programming.

CARE has implemented water programs in countries such as Bolivia, Ecuador, El Salvador, Guatemala, Haiti, Honduras and Peru.

ECUADOR



©2001 CARE/Kim Conger

A young boy stands next to a plastic water container, which allows for safe household storage of drinking water.

Ecuador is geographically split by the Andes mountains, which divide the humid coastal region and the tropical Amazon rainforest in the east. This diverse geographical setting creates challenges for the water and sanitation sector. Access to improved water sources is 90% in urban areas and 72% in rural regions. Very few municipalities have waste treatment centers, leading to 92% of wastewater being discharged from the sewage system without treatment. High water pollution rates negatively impact the health of the rural population in particular, who often depend on these contaminated sources for drinking water.

CARE has been active in the water and sanitation sector in Ecuador since 1969 when an infrastructure development program consisting of hand pump installation was implemented. Since that initial phase, water programming has impacted more than 1.5 million beneficiaries in collaboration with various national and international agencies and governments. **CARE Ecuador has contributed to the implementation of 26% of all water systems completed in rural areas.** CARE has expanded its focus to a more holistic approach, including micro-watershed management and community organization. By emphasizing community planning and management of systems, sustainability of projects is ensured.

Several current programs focus on building local capacity to manage water resources. The *CAPACITAR* program (Regional Unit for Training and Technical Assistance) aims to bring training and technical assistance to selected organizations in water, sanitation and environmental health. The program, which is coordinated by a government body, will develop a strategy for monitoring the selected organizations and enhance technical links between the public and private sectors. Another pilot program implemented by CARE Ecuador aims to develop and test innovative approaches to integrated microwatershed management. Through training and capacity building of community water associations, future water supplies are safeguarded. Finally, the *Programa SUR* (Sustainability and Regional Unity) directly intervenes in districts that border Peru to improve social and economic conditions. This multi-sector program includes the provision of drinking water, sanitation and solid waste disposal services, as well as education in the areas of health, the environment and community management. The first phase has been completed successfully, and CARE Ecuador is seeking funding to continue the program.



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These women pose in front of their new water storage tank, which will provide a reliable supply of water for household consumption for their entire village.

PERU



Peru is a geographically diverse country, with coastal plains, the Amazon basin, and the Andes Mountains each providing their own particular challenges to the water and sanitation sector. Only 66% of rural populations have access to drinking water, and 33%

have sanitation facilities; in small communities with less than 200 inhabitants, where Government figures show that only 7% have access to improved drinking water. Although urban areas have higher coverage of water systems, the slums in many large cities lack piped access, forcing Peru's poorest to pay prohibitive rates for water delivery. Sanitation facilities in many of these settlements are inadequate or non-existent, and only 20% of small and large cities treat their waste water. Many of the water systems built by the Government in previous decades are not proving sustainable and frequently fall into disuse. Sixteen out of 53 major rivers in Peru have significant contamination due to increased mining and industrial activities. River contamination, combined with low levels of domestic water treatment, contributes to the burden of disease, particularly among children.



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Two young boys have fun in a local stream. Contamination threatens the health of river systems and communities in Peru.

CARE Peru has prioritized water programming since the late 1980s and currently features one of CARE's most diverse portfolios for addressing water and sanitation problems. Several major projects are currently underway in both rural and urban areas, integrating infrastructure development, water resource management, hygiene and sanitation education, and institutional capacity building. The PROPILAS project (*Proyecto Piloto para Fortalecer la Gestión Regional y Local en Agua y Saneamiento en el Marco de la Descentralización*) seeks to improve regional and municipal resources for the provision of water services, while stressing economic and social integration to increase community involvement. This program builds the capacity of local and regional governments to implement sustainable water systems throughout Peru's process of decentralization. Using water as an entry point to promoting community organization, the REDESA Food Security Program (*Redes Sostenibles para la Seguridad Alimentaria*) has also built social capital and linked up new community structures to local government planning processes. **The innovative REHASER (*Rehabilitación de Sistemas de Saneamiento Básico Empleando Crédito*) program in Ancash province encourages community involvement by requiring prospective communities to apply for micro loans and obtain credit approval for the construction or rehabilitation of water systems and sanitation facilities.** In this way, sustainability is ensured through the teamwork of creditors, community members, and local administration. CARE Peru's holistic demand-driven model for water and sanitation systems is the basis of the Government's new national rural water program, PRONASAR (*Programa Nacional de Agua y Saneamiento Rural*), which CARE is helping implement in four regions. Other programs include the development of wastewater systems for highland communities in Puno, as well as a pilot program with the World Wildlife Fund to demonstrate the business case for payment for environmental services.



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A Peruvian man washes his hands at his household water spigot.

Overall in Peru, CARE has installed more than 1,300 water systems, 2,800 wells with manual pumps, and 70,000 latrines, benefiting over 100,000 families in more than 1,500 communities. These projects have very significant impacts on rates of diarrheic diseases in children under five years of age, reducing rates by at least 80%.

EL SALVADOR



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A Salvadoran woman drinks from a calabash. When safe water is available within communities, the burden of fetching water for the elderly and children is reduced.

El Salvador is the most densely populated, industrialized nation in Latin America. Fecal matter, pesticides, urban garbage deposits and unregulated industrial waste all contribute to a high level of pollution of ground and surface water, which becomes more concentrated during the dry season. The lack of safe drinking water access in 58% of rural households constitutes a major constraint to sustainable development and is one of the most critical environmental challenges faced by El Salvador. Natural disasters pose a major ongoing threat to the population of El Salvador, which is vulnerable to hurricanes, earthquakes and mudslides. In 2005, Hurricane Stan devastated the coast, forcing thousands of people out of their homes and damaging water and sanitation infrastructure.

Since the end of the civil war in 1993, CARE El Salvador has worked with more than 152,000 people to improve drinking water supply, increase hygiene and sanitation, and most recently develop programs of integrated watershed management. CARE El Salvador stresses the need for political and social reforms to address problems in regulation, finance and contamination of water resources. **With CARE's leadership, the ANDA-PRS solidarity net consulting program is developing a national policy for rural water and sanitation. The strategy will outline a \$42 million national program which will benefit more than 132,000 people living in 100 extremely poor communities.** The program includes components of community participation, child survival, education on environmental conservation and water sustainability.

CARE El Salvador has several active water programs. With an overall goal of reducing diarrheal disease in children under five, the *SAGYS* program directly impacts more than 20,000 people. Beyond treating illness, the program identifies the underlying conditions that lead to illness in the community and seeks sustainable solutions by integrating components in water and sanitation, health promotion and environmental conservation. With the establishment of health and water committees at the local level that improve community participation in decision-making and project management, this project is transferring ownership of outcomes to the communities. The *ANDA-KfW* water decentralization project provides an integrated management of administration, operation and maintenance water systems by the communities. The overall goal is to improve service delivery of water and sanitation to more than 44,000 persons and build the technical capacity of the local administration to manage them.

For the immediate future, CARE El Salvador is planning an integrated relief program of improved health through water and sanitation, micro enterprise development and psychotherapy for more than 30,000 people affected by the Santa Ana volcanic eruption and Hurricane Stan.



©2005 CARE/Jason Sangster

A young boy raises his fishing net with a smile. Watershed management is essential to ensure that ecosystems remain healthy.

HAITI



©2004 CARE/Rick Perera

People wait in line in a flooded neighborhood of Gonaïves to get clean water for their families.

Haiti is one-half of a mountainous island in the Caribbean. Originally, it was a lush island paradise, but in the last century the majority of trees has been cut down for firewood and charcoal. Deforestation has destroyed much of the fertile, causing soil erosion and massive flooding during the tropical storms and hurricanes that hit the island yearly. Political instability and natural disasters have taken their toll on this country, especially in the water and sanitation sector. As of 2002, 91% of urban dwellers and 59% of rural inhabitants had access to improved water sources. Only 34% of the entire population has access to adequate sanitation.

CARE began working in Haiti in 1954, providing relief assistance to people affected by Hurricane Hazel. Today, CARE's work in Haiti

reflects an integrated approach to programming with projects in reproductive health, maternal and children's health, education, food security, HIV/AIDS, and water and sanitation. CARE Haiti is implementing activities in some of the most vulnerable regions including the Grand Anse, West, Artibonite and Northwest departments. The work in Haiti came full circle after Tropical Storm Jeanne struck in September of 2004, returning CARE's focus to emergency relief and rehabilitation after a natural disaster. More than 3,000 people died, and 4,000 homes were destroyed in flooding and mudslides due to Tropical Storm Jeanne, mostly in the city of Gonaïves. **CARE is leading the Tropical Storm Reconstruction Project (TSRP) with several partners to aid in recovery and reconstruction, benefiting more than 150,000 people.** The TSRP project will provide potable water to over 50,000 people in Gonaïves through the construction of a water reservoir fed by two new wells and 27 kilometers of pipelines. Future disasters may be better curtailed through the construction of a new water system.

Recent water and sanitation projects in Haiti aim to move beyond water service delivery to integrated water programs that incorporate hygiene education and water resource management. Several programs involving more than 230 schools, one of which developed a hygiene and education program to be used at the school level, have been implemented throughout the country. Another program to improve school health and hygiene involved the creation of local Parents and Teachers Associations, which aimed to provide health and sanitation training at the community level and to implement small school infrastructure projects with community participation.

In urban areas of Haiti, CARE has implemented an infrastructure project to improve drainage and erosion control, increase access to potable water and improve food security. In Port-au-Prince, a recent program of solid waste removal supported the Haitian government in creating a cleaner environment in vulnerable areas of the city. By involving community members in the work, the program promoted a sense of individual and household responsibility for waste disposal, as well as developed a process of institutional transparency and accountability for ongoing waste management.



©2004 CARE/Christina Chan

CARE Haiti employees distribute clean drinking water in the Gonaïves region after the devastation of Tropical Storm Jeanne.

NICARAGUA



Access to safe drinking water can reduce gastrointestinal disease in communities, leading to healthy children and families.

More than half of rural Nicaraguans lack access to safe drinking water. Urban residents fare better, with 93% having access. Much of the existing water infrastructure in the country was constructed without proper analysis of the water or installation of filtration and treatment systems. Many communities are thus forced to drink water with high turbidity that is sometimes contaminated with lead, arsenic and pesticides, causing serious health problems. This poor water quality in Nicaragua shows how water from a pump or a tap is not necessarily safe. Those without access to formal potable water systems usually walk four to five kilometers in search of water, particularly in rural areas. Most of these people live in communities where they lack other basic services, such as electricity, transportation, or health facilities.

CARE has been working continuously in Nicaragua since 1966, despite political turmoil, civil war, and natural disasters. Initially focused on education and primary health care, CARE's work expanded in the 1980's to include safe pesticide use, agricultural development, and water infrastructure. Since 1990, CARE has embarked on a far-reaching rural water, sanitation, and preventive health program, and has expanded its activities in sustainable agriculture and natural resource management. CARE also contributed significantly to the relief efforts after Hurricane Mitch in 1998. Overall, CARE has contributed to the construction of around 750 rural water systems, providing access to safe water and adequate sanitation to around 185,000 people.

In Nicaragua, infrastructure construction is combined with capacity building and education to make integrated programs, such as the Potable Water, Latrines and Health Education Project (PALESA). PALESA is providing safe drinking water, basic sanitation, health education and community development training to approximately 15,000 inhabitants of rural communities in the departments of Leon and Chinandega. These families, particularly the children, have suffered from high levels of gastro-intestinal diseases related to unsafe water and improper disposal of solid wastes. Under the PALESA program, each community is responsible for financing 20% or more of the cost of their water systems in addition to contributing their labor and local building materials. The various water systems, which are operated and maintained by the community, include gravity-fed systems, hand-dug wells equipped with hand pumps, and deep wells with electric pumps combined with distribution systems. Extensive community involvement boosts the sustainability of the program, which will lead to lasting changes in hygiene behavior and health for local families.

In addition to drinking water and sanitation programs, CARE is heavily involved in watershed management in Nicaragua. Programs for management of natural resources on the farms in the micro-watersheds of La Majada, the Sabana Grande, and the Rio River are being implemented by CARE in the municipalities of Condega and Palacaguina. These programs use community organization and education to enable farmers to manage new technological options that lead to sustainable agricultural and forestry systems. By combining this technology with environmental education, community members learn to analyze environmental actions and improve their socioeconomic and environmental conditions.

CARE Water Programs



By helping communities build pumps nearby, CARE is reducing the burden of work for women and girls.

Updated 8/7/2006



HONDURAS

Honduras boasts higher levels of access to safe water and improved sanitation than most countries in Latin America. In rural areas, 72% of inhabitants have access to safe drinking water, while urban areas enjoy near total access with 91% coverage. More than half of rural community members and 89% of urban dwellers have access to some form of improved sanitation. Despite these encouraging figures, Honduras faces challenges in the water sector. In some areas, water supplies are still quite distant for some households, and the dispersed nature of the communities leaves members with the impression that participation in a water project could be costly. The majority of water points are found on private property which can lead to tensions over access. Furthermore, some water points are contaminated with pesticides and minerals which prevent them from being used for human consumption without affecting the health of the community.



Community members attend training sessions on operation and maintenance of their water system.

CARE began working in Honduras in 1954, providing emergency assistance to hurricane victims and running small-scale food programs. CARE officially established the Honduras country office in 1959, initially implementing food distribution programs and eventually moving toward a sustainable development program. Emergency response capacity has been critical throughout the program's history, especially during recent natural disasters such as Hurricane Mitch. Current projects include maternal and child health and nutrition, small enterprise development, agroforestry, irrigation, micro-watershed protection and environmental education. Water programming in Honduras incorporates construction of infrastructure with community-level organizing and capacity building.

One of CARE's programs in Honduras works to eliminate child labor while cleaning up the Tegucigalpa garbage yard. Adults who lack access to other types of formal employment are trained in the process of collecting, cleaning, classifying, and storing recyclable materials from the yard. By improving the entrepreneurial skills of the group of recyclers, they can trade goods directly with factories and thus improve their incomes, eliminating the need for their children to work. Youth between the ages of 14 and 18 participate in a program of occupational training, developed according to their expectations, capabilities, and market demands.



Construction teams and management committees rely heavily on the participation of women from the community.

CARE also implements community-managed integrated water and sanitation projects in 37 communities in Atlantida, Colon and Yoro departments, serving the needs of about 20,000 people through the PASOS II program (*Proyecto de Agua y Saneamiento Sostenible*). The program goal is to improve the health and quality of life for rural communities in Honduras by providing sustainable water and sanitation facilities, implementing hygiene and environmental education, and protecting micro-watershed areas. PASOS emphasizes community management through committees which facilitate and monitor all activities, while strengthening the capacity of local municipalities to function within this framework. Women are highly involved in all aspects of the program, particularly through participation in Water Management Committees.

MIDDLE EAST & EUROPE



©2004 CARE/Joshi Estey

Two Egyptian boys enjoy a drink of clean water from a pump.

The Middle East/North Africa region is one of the driest and most water-scarce areas in the world. According to World Bank estimates, average per capita water availability in the region is about 1,200 cubic meters per year (compared to a world average that is close to 7,000). Jordan, West Bank/Gaza and Yemen have less than 200 cubic meters per person. Irrigated agriculture claims about 90% of the scarce resources, which are further limited by the frequent droughts and high population growth. In Eastern Europe, the high levels of coverage in access to potable water are limited by the deteriorating reliability and quality of services, due to inadequate maintenance of infrastructure. Furthermore, political conflict and war in many

of the Eastern European countries led to the destruction of many water and sanitation systems, a major barrier for resettling of refugees and the establishment of peace.

CARE offices located in the Middle East, North Africa, and Eastern Europe are grouped together under a single management structure that provides coordination and technical support for the entire region. CARE's work in the Middle East focuses on emergency water supply, infrastructure development, sanitation and hygiene education and multi-level water resource management. Many of these activities take place in politically unstable environments where civil society strengthening plays an important role. In Eastern Europe, CARE assists with the recovery from the aftermath of civil war, helps countries to prepare both economically and socially for accession to the EU, and builds the capacity of civil society. Across the region, CARE is teaching better water management practices for individuals and municipalities with the participation of local, national, and international organizations. From establishing water supplies for returned refugees in Kosovo, to school infrastructure programs that encourage female education in Yemen, CARE is working to increase access to potable water for the region's most marginalized populations.



Emergency water supply during conflicts or droughts comprise an important component of CARE programming.

CARE has implemented water programs in Egypt, Georgia, Jordan, Kosovo, Serbia, West Bank/Gaza, and Yemen.

REGIONAL INITIATIVES



EMPOWERS projects include infrastructure installation as well as management of local water resources for agriculture and livestock.

Not only does CARE's water programming increase access to basic services like safe drinking water and latrines, but it also addresses the underlying causes of poverty such as insufficient governance, inequitable distribution of resources and social exclusion based on gender, class and ethnicity. CARE engages with social and political factors that can encourage or prevent access to services, often by operating at a regional level. In the Middle East, CARE has worked extensively to create opportunities for collaboration and learning among countries facing similar water scarcity problems. The Euro-Mediterranean Participatory Water Resources Scenarios Project (EMPOWERS) is an excellent example of this regional collaboration.

EMPOWERS, funded by the European Union, encourages participation in water management by some of the poorest people in

Egypt, Jordan and West Bank and Gaza. The program created a platform on which all who use the local water resources can discuss and plan its management. EMPOWERS uses innovative approaches and methodologies that emphasize the inclusion of women and marginalized end-users at the grassroots level through the use of integrated water resources management (IWRM). IWRM is a process that considers all uses of water in a community—drinking, household, commercial, agricultural, etc.—when coordinating, developing, and managing water systems. Through EMPOWERS, villagers, district-level authorities, governorate level actors, private companies, academics, national policy makers and other organizations come together to debate, plan, and resolve water supply issues.

EMPOWERS increases the influence of different stakeholders from the community level to the national policy level, so that planning and decision-making for IWRM will be better informed by local realities. EMPOWERS grounds its work in the design, development, and implementation of pilot projects in selected communities. Through these pilots, EMPOWERS develops and tests tools and approaches in a hands-on learning process.

For example, in Subeihi, Jordan, the stakeholders decided to establish a community organization aimed at improving disposal of household wastewater, while in Rweiha, Jordan, the focus is on increasing daily supply of drinking and irrigation water and improving the environmental and agricultural conditions in the village. The differing priorities between villages demonstrate the need for IWRM tailored to specific local conditions.

EMPOWERS shares knowledge gained from pilot projects at a regional level through development of training materials, a website and database, and policy dialogues in regional and international forums. Further information regarding EMPOWERS can be found at the program website: www.empowers.info

An EMPOWERS Pilot Project in Egypt

Location: *Mansha'at Kassab*

Problem: Low income families lack access to the village's local water distribution network due to high connection costs and fees. They no longer have access to public taps as they were closed by the water authority due to high water losses. As a result, most either use a neighbor's tap or walk long distances to the nearest water source.

Community Proposal: To increase the percentage of households connected to potable water by offering loans to low income families.

Implementation: The Beni Suef Potable Water Authority has committed to expanding the water distribution network allowing satellite communities to become involved with the project.

Preliminary Results: Since the EMPOWERS project began, 49% of the 386 low income families have connected to the water distribution network.

WEST BANK/GAZA



©2002 Alan Gignoux/CARE

CARE uses tanker trucks like these to bring water to areas that have no access, particularly in emergency situations.

The West Bank and Gaza territories of the Palestinian Authority have been in the throes of a humanitarian crisis, particularly since the beginning of the second Intifada in 2000. With the political instability, constant threat of violence, and high levels of economic insecurity, access to potable water is limited for many inhabitants of these areas. Much of the water infrastructure and aquifers are directly controlled by Israel. The population relies heavily on rainwater harvest and tanked water to obtain minimal resources for daily consumption.



CARE has been an active participant in relief and development in the West Bank and Gaza since 1948. It is currently the largest international development organization working in the

zone. CARE's program has evolved from the direct provision of services into a capacity building organization that supports local government authorities and local non-governmental organizations. Since 2000, much of CARE's work is focused on emergency water supply and other relief efforts for the region. CARE has worked tirelessly with local partners to provide empirical information on nutrition, education, water and sanitation and psychosocial health to key policy makers worldwide, who have the capacity to influence decision makers and thus improve the quality of life for those living in this troubled region.

Some of the most recent emergency relief programs have taken a holistic approach, combining the provision of an immediate supply with long-term solutions for water scarcity. In the Jenin and Tulkarem districts, CARE is providing water tanks, rehabilitating boreholes and building household and communal cisterns. Residents from the area are helping with construction, and the project will eventually provide more than 18,000 individuals with increased quantities of potable water and improved sanitation facilities. In the Rafah area, which borders Egypt, recent military incursions have resulted in a large number of people losing access to potable water supplies.

CARE is responding by providing 7,000 families with portable water canisters, soap and information on safe hygiene practices. These materials provide families with a safe source of water during periods of interrupted water supply.

Other non-emergency projects in the West Bank/Gaza region include participation in a regional partnership, called EMPOWERS (Euro-med Participatory Water Resources Scenarios). The overall objective of this four-year project is improved long-term access to water by vulnerable populations through more effective local integrated water resource management. In the West Bank/Gaza, CARE will contribute to the strengthening of the horizontal and vertical flows of information and influence among stakeholders in integrated water resource management.



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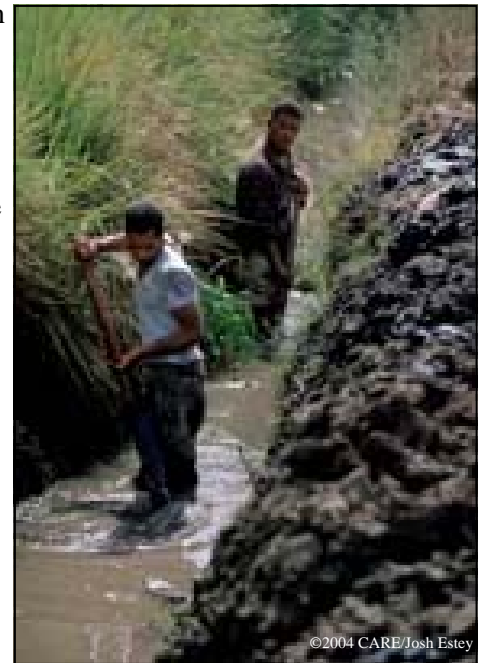
A West Bank man brings water to his sheep. Severe water shortages limit the capacity of many families to keep livestock.



EGYPT

Egypt has the highest per capita water availability in the Middle East. This water supply is still insufficient to meet demand, particularly for agricultural needs. The majority of Egyptian citizens live along the fertile banks of the Nile River, leaving vast areas of the desert uninhabited. Egypt is almost entirely dependent on water resources coming from outside of the country. In rural areas, many farmers exploit the inefficiency of irrigation of other farmers in order to obtain their water. Much of the existing infrastructure for household consumption is deteriorating due to age, which leads to inefficiency.

CARE has been implementing water and sanitation programs in Egypt since a 1979 potable water project in North Sinai. Since 1991 CARE Egypt has focused on long term programs that encourage sustainability by involving local organizations in a variety of ways, from direct service delivery to networking, advocacy, and rights awareness. Several current projects in the water and sanitation sector involve the development of community partnerships that strengthen local water systems.



Two men dig out a canal bed to improve irrigation practices.

The ALIVE program (Integrated Development with Emphasis on Water and Sanitation), seeks to improve quality of life for more than 226,000 Egyptians through water, sanitation, environmental education and microfinance interventions. CARE partners build capacity of local organizations, including a micro-finance institution, to help people bring clean water into their homes and install environmentally sound sewage and solid waste management systems.



A young boy washes his face in a canal.

Another excellent example of cross-sector partnership for water resource management is the EMPOWERS Partnership (Euro-Med Participatory Water Resources Scenarios). This innovative four-year regional program works in Egypt, Jordan and West Bank and Gaza with the ambition of improving long-term access to water by vulnerable populations. EMPOWERS encourages local water users and institutions to address issues of integrated water resources management to better care for the region's precious and scarce water resources. This is being achieved by enabling a dialogue between end-users (including women's groups and farmers) and government officials and other stakeholders at the district and governorate levels. EMPOWERS also involves national level stakeholders to ensure the relevance of local IWRM activities in the national policy formulation processes. The pilot phase of the EMPOWERS project centered on the Ehnasia district within the Beni Suf governorate of Upper Egypt.

JORDAN



As much as 96% of the entire population of Jordan is connected to a piped water system, and 65% of households have access to improved sanitation. These statistics can be misleading, however, as Jordan is one of the ten most water-deprived countries in the world. In many areas, water is rationed to one or two days a week and families must store their supply in tanks. The arid climate and shortage of surface water supplies, combined with a rapidly growing population and increased industrial development have led to a quantity of available per capita fresh water that lags far behind quantities available in most other countries. Limited social and political support for water conservation practices and a lack of research on new technologies for saving water all contribute to overuse of the available fresh water supply. Extreme water scarcity is one of the principle constraints to Jordan's economic growth, and leads to water being a highly politicized issue both nationally and internationally.



A community member discusses water usage with CARE project advisor.

CARE first began work in Jordan in 1949, and has since been involved in humanitarian assistance, infrastructure support, agriculture, the environment and water. In recent years, CARE Jordan has focused on community development, while maintaining the capacity to react to humanitarian emergencies. Work in Jordan is strengthened by staff members who are highly knowledgeable of the regional culture and political realities on which appropriate programmatic responses can be based. CARE Jordan has an excellent reputation for developing the capacity of partner organizations, with a dedicated training unit that provides multi-sector training and capacity building services to the Government and non-government organizations as well as to communities.

CARE Jordan has extensive experience in water programming. As a participating member of the EMPOWERS regional program for integrated water resource management, CARE works with six villages with a total population of around 20,000 people. These villages have seen their livelihoods adversely affected by the dwindling supply of water caused by leaking pipes and poor supply lines, coupled with increasing pressure from a growing population, new industries and agricultural production. To add to the problem, many sources are becoming badly polluted. With support from CARE, villages devise strategies to tackle supply problems and protect their sources. Working closely with local governorate and national-level government, villages are encouraged to develop practical projects that use local technologies to improve water quality and use: for example, water harvesting, treated water reuse and spring protection. CARE helps villages to bring their experience and views to the National Steering Committee to advocate for policies that will fairly sustain the supply. By 2008, this program will improve water efficiency and water storage for 150 households; CARE will demonstrate grey-water technologies in 20 households and then expand to an additional 60 households. Water delivery to farms will reduce the use of potable water for agriculture, saving 30,000 liters daily. In one village, 15% of households with no access to the network will receive delivered water on a cost recovery basis for the first time while a further 30% in the upland areas will receive supplementary water to compensate for poor pressure. Villages will continue their effective discussions with the local government, which as a result of this project has agreed to replace the dilapidated network systems.



CARE will teach village representatives to clean and protect this spring, making the water safe for consumption.

KOSOVO



CARE provides clean drinking water to people in refugee camps in Kosovo.

Kosovo's domestic water supply is unreliable and of poor quality. Weak management of water companies, regular cuts in the electricity supply, misuse of potable water and illegal connections also contribute to the unreliability of the network. Although the 1999 conflict in the Balkans caused some damage to infrastructure, public water supply systems in Kosovo are suffering more from lack of maintenance and investments over the last 15 years. Only 44% of the total population living in urban areas of Kosovo has access to the formal water supply system, and only 8.4% has access in rural areas. In the rural areas, sewage contaminates the wells leading to a high incidence of gastrointestinal disease, especially in children under five. Only 2.5% of the households chlorinate water supplies in the home. Kosovo has no wastewater treatment system, and only 28% of the population has access to a sewage system.

CARE has been operational in Kosovo since 1997. When the program began, it focused primarily on humanitarian assistance projects for internally displaced people and refugees from the various conflicts in the Balkans. After the NATO bombing in 1999, CARE responded to the Kosovo refugee crisis by managing eight refugee camps, housing more than 120,000 people. CARE also established community service and health programs, including youth centers, information centers, mother and child health centers, trauma counseling and mine-awareness

programs. Today, CARE Kosovo strives to achieve sustainable peace by promoting lasting changes in institutional structures. To do so, they focus on areas including education, health, the economy and citizens' participation. They also work to change the behavior of individuals and groups to be conducive to peace-building, community re-integration, poverty reduction and the fulfillment of human rights. CARE strengthens the capacity of local communities, governments and community service organizations to develop and implement mechanisms that address inter-ethnic tensions. Water components are integrated into all programs. In the education sector for example, CARE supports schools in writing proposals to gain access to water and assists parent associations to dig wells where possible.

A major part of peace-building efforts is the rehabilitation and installation of water and sanitation infrastructure in villages and towns that were abandoned during the conflict. Communities prioritize access to water for all members in order to reduce the imbalance in access to resources between the ethnic majority and minority. The improved water supply thus builds bridges between ethnic groups. CARE has designed a multi-sectoral program for the return of Kosovar Serbs to Zhiti/Žitinje village in the Gjilan/Gnjilane region, and for the reintegration of those who have already returned. Core activities include rehabilitation of houses, assistance in economic and business development for all residents and support of municipal authorities to enhance their capacity to promote peaceful return and reintegration. CARE now seeks funding to expand and improve the Zhiti/Žitinje community water system to accommodate returning families. The improved system will serve more than 500 households of two ethnic groups, enabling them to meet their water consumption needs.



CARE staff visits a water project in rural Kosovo.

YEMEN



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Community members gather around a water tank used for irrigation and livestock in rural Yemen.

Yemen suffers from water scarcity unmatched by most countries. Available water resources provide less than 120 m³ per person per year, compared to a global average that is close to 7,000 m³. The Yemeni Ministry of Water and Environment estimates that some regions may completely deplete their groundwater sources in the next ten years. The cities of Sana'a and Taiz already experience severe shortages, with the public utility only furnishing water between 8-10 days per month. The main causes of the crisis include aquifer depletion as the population grows and market-led agriculture develops the unregulated exploitation of groundwater resources, and policies which have promoted expansion rather than efficient use and sustainable management.

Water quality in Yemen is poor, due to inadequate sources as well as unsafe handling and storage practices. Fetching water, an activity which may take up to five hours a day in some areas, is the responsibility of women and girls. Inadequate water resources, supply coverage and sanitation practices affect health conditions, educational opportunities, and income generation possibilities for women and girls throughout the country. Indeed, work on women's empowerment through literacy programs or community associations in Yemen is next to impossible without addressing the water issue; women simply do not have the time to spare for additional activities.

CARE has been working in Yemen since 1992. Work evolved from basic relief such as running a refugee camp near Aden in 1993, to reconstruction after the civil war, to the current portfolio of development programs including women's literacy, agriculture and food security, capacity building of local organizations and natural resource management. As safe drinking water is an important issue in rural areas where CARE Yemen is working, water supply is a component of most projects.

CARE's water programs in rural areas focus on improving food security, safe water supply, and sanitation. One program in the Western Highlands is constructing water supply systems in 20 communities, benefiting 6,000 people. In another area, 22 water supply systems were constructed, while community members were elected to water management committees and women were trained in sanitation. In Abyan Governorate four water supply systems in six communities benefited 1,200 people. They were managed by four local women's associations created by CARE to ensure sustainability of water supply systems and empower women in the rural communities. In urban areas the focus is on basic water and sanitation services provision. In the capital city of Sana'a a program that provides basic services to marginalized communities resulted in the construction of community latrines and the connection of one community to the main sewage system, benefiting 8,700 people. Both rural and urban areas programs are concerned with the quantity and quality of water, especially through hygiene promotion. One CARE program integrates adult literacy and life skills education by including sanitation issues such as waterborne illness as a part of the curriculum. Given CARE's extensive experience in integrated water resource management, the organization is well placed to effect positive changes in Yemen.



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Scarce water resources in Yemen are used for agriculture as well as drinking.

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