

Annex C: Strategic Planning of USAID Water and Sanitation Activities in Africa

1. Introduction

Drinking water supply and sanitation activities are crucial parts of U.S. Agency for International Development (USAID) programs throughout Africa. Increased access to improved water and sanitation has many benefits: a significant reduction in disease; averted health-related costs and time savings associated with having water and sanitation facilities closer to home. Water and sanitation interventions are also cost-effective: a recent WHO cost-benefit analysis found that every \$1 invested in providing improved access to water and sanitation activities yields an economic return of \$3 to \$34.

The majority of USAID's support for water supply and sanitation in recent years has been as a key part of humanitarian response programs established to assist populations subjected to environmentally-induced or conflict-related crises. Water and sanitation activities within development-focused programs have largely been programmed as integral parts of health, education, natural resources management, economic growth, and democracy and governance programs, which themselves reflect region- and country-specific strategic development priorities. In Fiscal Year 2006, the USAID Bureau for Africa established a new regional program focused on water and sanitation activities in Africa, reflecting in part a greater commitment to and higher visibility of this sector. This has also afforded the opportunity to take greater advantage of partnership opportunities that leverage USAID's limited resources and to develop a strategic water program.

2. Current USAID Activities in Water Supply and Sanitation in Africa

USAID's Fiscal Year (FY) 2006 water and sanitation activities in Sub-Saharan Africa are summarized in Chapter 5, and are detailed in the table below. The programs highlighted in grey (Kenya, Somalia, USAID/West Africa and Africa Regional) together make up a new set of Bureau for Africa water and sanitation activities, established this year to assure a substantial increase in planned (non-emergency response) water and sanitation activities in this region.

All activities listed in the table meet the criteria for "drinking water and related activities," in response to Congressional direction in USAID's FY 2006 Appropriations Act for at least \$50 million in such activities in Africa. This list excludes other water-related activities in the Africa region, such as freshwater and coastal watershed management, fisheries, disaster preparedness, and irrigation, which will account for more than \$15 million in additional USAID activities in Africa in FY 2006.

The majority of USAID's water and sanitation activities this fiscal year are expected to be provided through emergency humanitarian assistance efforts, wherein water supply and sanitation facilities are provided to populations temporarily in crisis because of natural or human events. This reflects the continuing urgency of to address emergency water shortages. The nature of other water supply and sanitation activities varies by program.

Table C.1: USAID Drinking Water Supply Projects and Related Activities in Africa -- FY 2006

Country, Mission, or Office	Water Obligation Estimate (\$ million)	Description
Burundi	0.225	Drinking water supply and sanitation facilities for community health centers and improvement of water sources for human consumption.
Djibouti	0.200	Drinking water supply and sanitation as part of Education and Health programs.
Eritrea	0.961	Drinking water supply and sanitation.
Ethiopia	0.700	Drinking water supply and sanitation.
Ghana	1.349	Drinking water supply and sanitation as part of the Health program.
Guinea	0.109	Drinking water supply as part of the Natural Resources Management program.
Kenya	4.172	Address the long-term need for clean water and improved sanitation, particularly in the drought-affected areas of northern Kenya.
Liberia	0.150	Drinking water supply and sanitation under the Community Revitalization and Reintegration program.
Madagascar	0.797	Drinking water supply and sanitation as part of the Health program.
Mali	0.300	Drinking water supply, sanitation, and wastewater treatment, as part of the Democracy and Governance and the Economic Growth programs.
Mozambique	0.392	Drinking water supply and sanitation, as part of the Health and Rural Incomes program.
Nigeria	0.250	Drinking water supply and sanitation, as part of the Basic Education and Health Care program.
Somalia	2.600	Address the short- and long-term need for clean water and improved sanitation, particularly in drought-affected areas.
South Africa	0.750	Drinking water supply and sanitation, as part of the Housing and Municipal Services program.
Uganda	0.150	Drinking water supply and sanitation, as part of the Food Aid-funded Economic Development program.
Zambia	0.800	Drinking water supply and sanitation, as part of the Health program.
USAID/Southern Africa	0.100	Drinking water supply, as part of the Okavango River Basin Management program.
USAID/West Africa	1.500	Support to the West Africa Water Initiative (WAWI), a public-private partnership to provide potable water and sanitation to rural villages in Ghana, Mali and Niger. Leverages about \$4.5 million per year.
Africa Regional	4.000	<p>Two public-private partnerships:</p> <ul style="list-style-type: none"> • The “Global Watersheds Partnership Program” with The Coca Cola Company, including increasing access to safe water supply, promoting sanitation and hygiene, and protecting and conserving local water resources. • A new partnership under development to provide water and sanitation to schools, health clinics, and communities throughout Sub-Saharan Africa using innovative technology and an innovative business model.
Bureau of Democracy, Conflict and Humanitarian Assistance (DCHA)	35.201	Drinking water supply and sanitation as part of emergency humanitarian assistance in Africa.
TOTAL	54.706	

Examples of USAID Water and Sanitation Programs in Africa

Following are three examples of USAID-supported water and sanitation programs in Africa:

West Africa Water Initiative

The “West Africa Water Initiative” (WAWI) was launched in 2002 to maximize the impact of water-related investments by both private and public actors, targeting interventions to highly vulnerable rural and peri-urban populations in West Africa. Inspired by the vision of the Conrad N. Hilton Foundation, this public-private partnership grew from years of experience with World Vision and other international non-governmental partners. In its initial phase, WAWI invested in small-scale potable water supply and sanitation activities in Ghana, Mali, and Niger, as the entry point for an integrated approach to water resources management. Collaboration with other organizations creates programmatic synergy and accesses the complementary strengths and funding potential of a number of affiliated partners. The initial budget from all partners is more than \$45 million for six years, including \$6 million from USAID.

The impact of this initiative will be significant, and result in increased access to services, improved health and welfare, and more sustainable management of water resources for hundreds of thousands of people. WAWI hopes to foster a new and potentially replicable model of partnership and institutional synergy that ensures technical excellence, programmatic innovation, and long-term financial, social and environmental sustainability in water resources management.

Community-Watersheds Partnership Program with The Coca-Cola Company

The Coca-Cola Company (TCCC) formed a global partnership with the U.S. Agency for International Development and non-governmental organization the Global Environment and Technology Foundation (GETF) in 2005 to address specific local water resources and development needs. In addition to producing tangible results for target communities, the partnership will also advance Coca-Cola’s business objectives in corporate responsibility, water stewardship, and local community support. The Community-Watersheds Partnership Program was born to support collaborative water sector interventions in developing countries around the world. The budget to date of this program is \$6.5 million, including \$3 million from USAID and \$3.5 million from Coca-Cola. One of the first two projects supported by the Community-Watersheds Partnership Program is located in Mali, and the program will expand to several other African countries in 2006-2007.

In the Mali project, Coca-Cola faces water resources opportunities and challenges. Through the partnership, TCCC and USAID co-invested in support for community interventions in water supply, sanitation, and hygiene to increase access to clean water for residents in the immediate communities. USAID’s local non-governmental organization (NGO) partners are developing and rehabilitating water points and promoting sanitation and hygiene in peri-urban Bamako (near the local bottling plant), as well as rural communities in the Ségou, Mopti and Timbuktu regions. In addition, the local TCCC bottler is upgrading their wastewater treatment plant in 2006, and is exploring opportunities with NGO partners to use treated wastewater for small-scale irrigation,

and potential application of waste biosolids as a soil conditioner, with the goal of increasing food security and generating revenues for local families.

Millennium Water Alliance Water and Sanitation Program in Ethiopia

The Millennium Water Alliance (MWA) is a cooperating group of U.S. humanitarian and faith-based agencies working to assist poor communities in the developing world to gain access to safe water and sanitation. Begun in 2004 with \$1.8 million in support from USAID and the State Department, \$800,000 in grant funds from MWA partner organizations, and in-kind resources of local partners, the MWA implemented a community-based water and sanitation program to clean water, sanitation facilities and hygiene training in four locations in Ethiopia. Activities include capping water sources; digging wells and drilling boreholes; building reservoirs, roof rainwater harvesting schemes and latrines; hygiene training; and training in water system construction and maintenance. As of August 2005, the program had provided improved water and sanitation facilities to over 70,000 rural Ethiopians.

3. Leveraging Available Resources

The scale of the water and sanitation problem in Africa is so great that it can only be met through the combined efforts of all actors. Funding will be needed from international donor agencies, multilateral development banks, private philanthropic organizations, private investors, and African governments. As of 2002 in sub-Saharan Africa, 288 million people, or 42 percent of the population, lacked access to clean drinking water and 437 million people, or 64 percent of the population, lacked access to improved sanitation. One recent estimate places the total annual expenditure requirement to meet the Millennium Development Goals for water and sanitation in Africa at \$6.7 billion. (http://www.wsp.org/publications/af_washsynthesis.pdf.)

USAID will seek to achieve the greatest impact in its water and sanitation activities in Africa. USAID will seek to mobilize significant funding from other available sources, and coordinate with and increase the impact of activities supported by other organizations, such as multilateral development banks and bilateral donors.

4. Priority Focus for Water and Sanitation in Africa

While the need for improved access to clean water and sanitation facilities is felt in every country of Africa, USAID will focus strategically in regions, countries and communities where we can achieve the greatest results. While difficult choices will be needed, it is important to promote collaboration among donors to ensure wide coverage.

The principle of responding to the greatest need has been the determining factor in the geographic selection of most of USAID's water and sanitation activities in Africa. As noted above, the bulk of these activities have been implemented as part of humanitarian assistance programs. For example, in the past four years, USAID's International Disaster Assistance funding for water and sanitation activities in Africa has focused on Sudan, Ethiopia, Sierra Leone

and Somalia. Similarly, in FY 2006, the USAID Bureau for Africa will target the bulk of its new development-focused water and sanitation funding on the chronically drought-stricken areas of Kenya and Somalia, to increase the resilience of populations in those areas to drought in the future.

USAID will apply additional criteria to set priorities for its future water-related activities in regional and country level planning within Africa. As specified in the Water for the Poor Act, these priority setting criteria address both the water and sanitation needs of the countries in which we work and the likely effectiveness of our interventions to achieve results. While many of these criteria are already being informally applied throughout Agency decision-making, a more systematic consideration of these factors could help enhance the strategic impact of work done in the water sector over the next ten-year period.

Geographic Prioritization Criteria:

- Level of Need in Water Supply and Sanitation Coverage: This is defined as the percentage of population without access to improved drinking water supply and improved sanitation facilities, as defined by the WHO-UNICEF Joint Monitoring Program.
- Country Enabling Environment to Support Sustainable Impact: The likelihood of successful interventions in the water sector can be partially assessed by considering the legal, policy and institutional context for water resources management or water supply and sanitation delivery in a given country. USAID investments will have the greatest impact in countries where a government is committed to providing water and sanitation in a cost effective manner.
- USAID Historic and Existing Investments in the Water Sector: Across its development portfolio, USAID is interested in consolidating the gains it has made in various countries in different development sectors, and building on the successes it has already achieved. In most cases complementing existing programming (including adding new water subsectors of intervention to strengthen what is already in place) may be the most strategic approach.
- Opportunities to Integrate Water Investments with USAID Overall Country Portfolio: Integration of water and sanitation activities into a given Mission's core strategic framework helps ensure that water investments contribute to other priority development areas, and promotes greater programmatic sustainability as well as impact on the ground. For example, introducing a water supply, sanitation and hygiene component into a large, ongoing regional or national health or education program is more likely to have far-reaching impacts and to be a sustainable intervention than a stand-alone and localized activity with no connection to other USAID programs.
- USAID Comparative Advantage: We will take into account USAID's capacity to work in key countries, and evaluate how the water sector fits into that analysis. In some countries USAID will have a clear area of unique expertise in the water sector. In addition, the plans of national governments, other donors, and/or the private sector need to be fully considered to determine if there is a logical and strategic water-related niche for USAID to fill.
- Other Significant Leveraging Opportunities to Build on Other Donors/Partners with Parallel and Complementary Activities: USAID will strategically evaluate the developing partnerships with other donors and international financial institutions (e.g. the World Bank

and the African Development Bank) to increase financial investments in water programs. We will seek to leverage a much more significant investment by these actors, e.g., a multilateral development bank, another bilateral or private donor, the national government of the target country, or a private sector financier.

- Partnership Opportunities with Significant Matching Funds: Priority will be given to those locations where there is an opportunity to leverage other resources through other alliances with non-traditional partners, such as those promoted under the Agency’s Global Development Alliance model. Alliances are often geographically-specific, and can present excellent opportunities in specific countries to stretch the effectiveness of limited USAID resources in the water sector.

Considerations for applying these criteria:

- While the objective conditions related to water supply and sanitation and water resources management facing the countries in which we work are clearly important and taken into account in these criteria, they only represent one part of the story. An important consideration for determining effectiveness and strategic impact of U.S. government investment pertain to the internal characteristics of USAID and the overall U.S. government context. Absolute “need” in a country will be a secondary consideration, given that the great level of need in most places where USAID works far exceeds any realistic budget levels for our activities, and wherever we work the highest need populations are targeted. Of more relevance is where we can make the highest impact on that need through our investment choices.
- Further, in the area of water supply and sanitation in particular, the prioritization criteria listed must be differentially applied to urban and rural situations. Extensive past experience suggests that virtually all the potential “need” and “success” factors will differ quite markedly in a single country depending on whether the focus is urban or rural, and combining the two obscures these important differences, and can unbalance strategic decision-making about investments in each area.
- The criteria outlined are not necessarily all weighted equally. If a particular country has both great need and great potential for impact in the water sector, if other U.S. foreign policy and development interests are overwhelmingly higher in that place (e.g., HIV/AIDS), water sector activities will not always be the optimum strategic option.
- While it is tempting to develop a numerical index to assign a single ‘score’ to each country for ranking priorities, it should be recognized that water resources management issues, as well as deficits in water supply and sanitation, are extremely local in nature, and this diversity may not be captured in national level figures. Any ranking of quantitative factors needs to be balanced with qualitative input and common sense analysis that drills down to a higher geographic resolution.
- These criteria primarily address where USAID should be engaged in the water sector. If a decision is made to go forward in a given country, they also provide some guidance on what activities should be the focus of the intervention (e.g., to take advantage of leveraging opportunities, or an area of particular comparative technical expertise in that country). Additional guidelines and information must also be brought to bear in defining the specific content of activities, however, and several of these points are also outlined below.

- USAID will analyze trends and needs in water resource needs on a more regular basis and more frequently than once in a ten-year period. The framework and criteria will be flexible enough to permit a rapid response to new opportunities for strategic leveraging or to address changing foreign policy priorities that cannot be anticipated. These criteria are meant to inform strategic decision-making on water-related investments, but not dictate it.

5. What USAID Should Do in Water and Sanitation in Africa

The choice of what to do – the nature of the specific water and sanitation intervention in any given country – is affected by many of the same factors mentioned above as criteria for choosing where to work. For example, a partnership opportunity might lead the Agency to undertake activities that utilize the particular capacities and methodology of the partner organizations. Similarly, USAID’s comparative advantage in a given technical area, e.g. innovative financing, may recommend that technical approach over another.

In addition, the imperative to make the most of available resources indicates that interventions should be selected for their impact on the largest number of people over the largest timeframe, and this may lead USAID to place greater emphasis on some types of water and sanitation interventions over others. For example, given a choice between drilling wells in one community and working with the host government to influence national water policy, the former is easier to immediately appreciate but the latter may have broader impact.

Role of Water and Sanitation in USAID Sectoral Programs

Activities to increase access to improved water and sanitation facilities have a role in many types of USAID programs. Following is a discussion of the “entry points” for water and sanitation activities in the major sectoral programs managed by USAID.

- **Health**

This is the most common entry point, because of the positive impact of water, sanitation and hygiene activities (WASH) on child survival and other vulnerable populations, including People Living With HIV/AIDS (PLWHA). The primary focus in this sector has been on promoting three key behaviors proven to reduce diarrheal disease. These include proper hand washing at critical times, safe disposal of feces, and safe water handling, including point of use water treatment. Subsidizing household latrines has been shown to be unsustainable, but the health sector can promote good sanitation behaviors, stimulating interest in and demand for household and community sanitation solutions. In addition to stand-alone programs, promotion of these three key behaviors should be integrated into other health programs, including HIV/AIDS, family planning, pre- and post-natal clinics, nutrition programs, and training of local health staff.

The USAID Health sector should implement country-specific hygiene improvement initiatives that include multiple, coordinated interventions, such as involvement of all stakeholders, behavior change strategies to enhance the desirability of improved hygiene practices, increased access to the products that facilitate the desired behaviors, and advocacy for improved policies that support hygiene behavior change. A number of behavioral and social change methods are

available, including social marketing, community social mobilization, interpersonal communication, and negotiation of safer alternative hygiene practices.

The Health sector should take leadership in partnering with other sectors and institutions for the financing and provision of the necessary hardware for water supply and sanitation facilities, for setting WASH within the larger water resources context, and for policy and legislative reforms to support the hardware and hygiene promotion efforts.

- Education

There are two entry points for promoting WASH in the Education sector: hygiene education and access to clean water and adequate sanitation facilities. School curricula should include a WASH module, but also integrate the WASH messages into other subject areas like environment, biology, history, and math. USAID should promote and/or partner with other agencies like UNICEF to provide WASH facilities at schools can reduce exposure to contaminated water, reinforce health and hygiene messages in the curricula, and act as an example to both students and the wider community. Adequate sanitation is linked to increased school attendance, especially for girls.

- Democracy and Governance

Water and sanitation programs can be impacted by weak democracy and governance, and building strong community involvement in water and sanitation services delivery can strengthen the links between citizens and the local officials who are accountable for these services. Efficient, effective and regular delivery of services improves quality of life, increases productivity, builds confidence in democracy, and increases government effectiveness and legitimacy – all important objectives in USAID’s Strategy for Africa. Governance is the cross-cutting theme that links and reinforces these sectors by ensuring that governments have the capacity to effectively deliver, regulate, and oversee services. Women can have more opportunities for involvement in governance through WASH issues. Democracy and Governance sector programs should look for opportunities to organize and build capacity of communities around WASH service delivery.

- Economic Growth

Water is a driver of a new path of development in which economic growth is linked to social equity and environmental responsibility. Investment in WASH can reduce both the time and cost of treating waterborne disease, a burden that falls heavier on women and girls who spend hours collecting water from distant sources and caring for sick family members.

Partnerships with the commercial private sector can provide good opportunities for WASH hardware and hygiene promotion. A good example is hand washing, where private sector interests can promote their own soap products with health messages in parallel with public-sector generic messages. Other Economic Growth entry points include supporting development, manufacture, distribution, maintenance, and sales of WASH related hardware, including pipes, pumps, latrine slabs, and safe water storage and treatment products. Funds could be used to guarantee financing mechanisms such as revolving funds and pooled-financings to mobilize domestic savings and municipal funds for investments in water and sanitation. These can serve

as a catalyst for greater investment in water and sanitation projects by villages, small towns, and municipalities.

- Environment

Water supply and sanitation are closely linked to broader issues of water resources management. Poor sanitation and feces disposal can lead to contamination of water resources. Integrated water resources management (IWRM) can be used as a framework to provide water for multiple uses in an ecologically sound and sustainable manner. It takes into account social, economic, environmental and technical dimensions in the development and management of water resources.

One entry point is the development of partnerships linking those focused on the delivery of community-scale water supply and sanitation hardware with those working to improve water resources planning, water supply governance, and community capacity. State-of-the-art thinking on ensuring safe water quality relies on examining hazards to water quality at critical points ranging from catchment to consumer. This can involve interventions at the level of watershed (e.g. protection activities, including sanitation), water production (or access to water) (e.g. treatment plant, well), distribution system (e.g. pipes, containers), and household (e.g. storage containers, POU treatment). This ensures the protection of domestic water supplies and the sustainability of improved water supply and sanitation investments. Another possible entry points is to organize community groups or farmer associations to develop low-cost, low-technology water harvesting techniques such as seasonal dams and water catchments.

- Food Aid and Emergency Humanitarian Assistance

Water and sanitation are priorities when dealing with both natural disasters and complex emergencies. People affected by disasters are more likely to become ill and to die from diseases related to inadequate sanitation and water supplies than from any other single cause. A frequent avoidable problem is the contamination of clean ground water at the point of use due to improper transport and storage. The USAID Bureau for Democracy, Conflict and Humanitarian Assistance/Office of Foreign Disaster Assistance (DCHA/OFDA) responds rapidly with non-food items in the immediate aftermath of a disaster and aims to lay the foundation for long-term development during its response to long-term protracted disasters. The USAID Office of Food for Peace (FFP) implements the use of food aid as direct distribution during a disaster response and as Food For Work (FFW) for development programs. Potable water and adequate sanitation are included in the definition of food insecurity, and along with hygiene promotion these are specifically targeted to improve health and nutrition by FFP. Entry points include joint programming of funds such as 1) DCHA/OFDA takes the lead in constructing the water supply and sanitation systems, and USAID's Regional and other Pillar Bureaus provide the hygiene promotion, policy and training components, 2) simultaneously EGAT or Regional Bureaus could use Development Assistance-supported technical assistance to work with communities to build sound WASH systems to be maintained using DCHA/FFP development program resources such as FFW. Additional entry points include the participation of WASH experts in Disaster Area Response Teams.

General Principles of Operation

All USAID development programming must follow the nine core guiding principles of the Agency as a whole (see box below). These principles guide overall U.S. development and reconstruction assistance, and are fundamental to the success of aid as an instrument of U.S. foreign policy and national security.

USAID Guiding Principles	
1. Ownership:	Build on the leadership, participation, and commitment of a country and its people.
2. Capacity Building:	Strengthen local institutions, transfer technical skills, and promote appropriate policies.
3. Sustainability:	Design programs to ensure their impact endures.
4. Selectivity:	Allocate resources based on need, local commitment, and U.S. foreign policy interests.
5. Assessment:	Conduct careful research, adapt best practices, and design for local conditions.
6. Results:	Focus resources to achieve clearly defined, measurable, strategically focused objectives.
7. Partnership:	Collaborate closely with governments, communities, donors, NGOs, international organizations, universities, and the private sector.
8. Flexibility:	Adjust to changing conditions, take advantage of opportunities, and maximize efficiency.

More specifically in the water sector, USAID strongly supports internationally endorsed principles of sound and sustainable water resources management as well as water supply, sanitation, and hygiene programming for human health outcomes. Some of these include:

Integrated Water Resources Management (IWRM) Principles: In recent years, water management institutions around the world have embraced the fundamentally interconnected nature of hydrological resources by promoting integrated water resources management as an alternative to the dominant sector-by-sector, top-down management style of the past. The IWRM concept has been defined by Global Water Partnership as ‘a process that promotes the coordinated development and management of water, land and related resources in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital eco-systems.’

Integrated Water Resources Management Principles

- A **landscape-scale perspective** at the basin or watershed scale spanning from ‘ridge-to-reef’, addressing surface and groundwater, land and water, freshwater and coastal interactions, and water quality and quantity to ensure sustainability of ecosystem processes and freshwater use for human applications alike;
- An **intersectoral approach** to decision-making, considering the domestic, agricultural, industrial, and ecosystem uses of water and coastal resources, and balancing economic and social needs of people with ecological values and sustainability;
- An emphasis on **governance** at all scales including participatory and equitable decision-making and resource management; full involvement of women and other marginalized populations in decision-making; management delegation to the lowest appropriate level (subsidiarity principle); utility reform and corporate governance strengthening; improved policy, regulatory, and institutional frameworks; transparent and sustainable financing options; and a full partnership between public and private sector actors;
- The application of **sound science** and information management for decision-making, including hydrological, biophysical, economic, social, and environmental characteristics of a basin and its inhabitants;
- The recognition of the key role of **capacity building** as a pillar of sustainability in areas including general awareness about water, policy making and governance approaches, regulations and compliance, and infrastructure and utility design, financial management, and O&M;
- An acknowledgement that water has an **economic value** in all its competing uses and should be considered an economic good, including full-cost pricing complemented by targeted subsidies, more complete valuation of environmental services of water and watershed resources, and promotion of reliable and sustained financing mechanisms; and
- The adoption of the **best and most appropriate technical practices** in all subsectors including water source management (supply optimization, demand management/water efficiency, and pollution prevention), sustainable aquaculture and fisheries management, efficient irrigation systems and increased water productivity, sustainable water/sanitation/hygiene service delivery, and freshwater flows for ecosystem health and environmental services.

- **The Hygiene Improvement Framework:** USAID has developed a comprehensive approach for preventing diarrhea by identifying the three major determinants of hygiene improvement and a number of potential strategies for program action within each category.

Hygiene Improvement Framework

- **Access to Hardware** – enhancing access to water/sanitation infrastructure and household technologies such as household chlorination systems and soap;
- **Hygiene Promotion** – promoting hygiene behaviors such as handwashing, safe water storage, and appropriate excreta disposal; and
- **Enabling Environment** – strengthening an enabling environment that facilitates or enhances key technologies and behaviors. This may be accomplished through advocacy, training, institutional strengthening and other appropriate support mechanisms.

- **Water Safety Plan Guidelines:** The most effective means of consistently ensuring the safety of a drinking-water supply is through the use of a comprehensive risk assessment and risk management approach that encompasses all steps in water supply from catchment to consumer. WHO and other international organizations, strongly endorsed and promoted by the U.S. Environmental Protection Agency, have developed guidelines for three essential actions that are the responsibility of the drinking-water supplier in order to ensure that drinking-water is safe.⁵⁶

Water Safety Plan Guidelines
<ul style="list-style-type: none"> • system assessment to determine whether the drinking-water supply chain (up to the point of consumption) as a whole can deliver water of a quality that meets health-based targets. This also includes the assessment of design criteria of new systems; • identifying control measures in a drinking-water system that will collectively control identified risks and ensure that the health-based targets are met. For each control measure identified, an appropriate means of operational monitoring should be defined that will ensure that any deviation from required performance is rapidly detected in a timely manner; and • management plans describing actions to be taken during normal operation or incident conditions and documenting the system assessment (including upgrade and improvement), monitoring and communication plans and supporting programs.

- **Millennium Development Goal Water Supply and Sanitation Target Principles:** The WHO/UNICEF Joint Monitoring Program has also set out a set of action recommendations that reflect many principles for achieving internationally endorsed goals specifically focused on water supply and sanitation coverage.⁵⁷

MDG Target Principles
<ul style="list-style-type: none"> • Making political commitments • Strengthening legislation and regulations • Building capacity to make a difference • Getting sanitation and hygiene right • Mobilizing financial resources • Paying attention to gender and equity • Supporting small-scale entrepreneurs • Focusing on youth and using education • Taking responsibility for the environment • Monitoring progress • Making information flow

It is clear that there is great consistency and considerable overlap among all these sets of guiding principles, and with the guidance outlined thus far in this document.

Areas of USAID Technical Comparative Advantage in the Water Sector

USAID has developed several areas of particular expertise within the water sector that are consistent with the above-mentioned international principles guiding the water sector, and are making real contributions to advancing the state-of-the-art around the world. Work in each of

⁵⁶ WHO. Water Safety Plans: Managing Drinking Water from Catchment to Consumer. Geneva. 2005.

⁵⁷ WHO and UNICEF. Joint Monitoring Program. Water for Life: Making it Happen. Geneva. 2005.

these areas should be expanded and deepened to consolidate and scale up progress made to date, and make further advances. As future USAID programming occurs in the water sector over the next ten years, Africa Bureau Missions will be encouraged to give special consideration to each.⁵⁸

Additional details regarding each area follow:

- **Innovative Financing for Water Supply, Sanitation, and Wastewater Treatment Infrastructure:** USAID is pioneering several models of innovative financing for water-related infrastructure in developing countries including India, the Philippines, Indonesia, and South Africa. The Agency is engaged in the world market for private debt financing, working closely with overseas missions in an effort to identify bankable projects and risk-sharing partners in the water sector. USAID’s Development Credit Authority (DCA) is one proven and effective tool that permits USAID to issue partial loan guarantees to private lenders to achieve economic development objectives. DCA partial guarantees help mobilize local capital and put it to work in creditworthy but underserved markets. The Agency also promotes other models such as “pooled” financing that allows municipalities to group infrastructure projects together and use government grants, credit enhancements or future revenues as collateral to tap local private capital. The U.S. Clean Water State Revolving Fund (SRF) model was also created as a sustainable financing mechanism to pay for infrastructure projects by leveraging public funds to raise private capital in U.S. capital markets. By providing low-cost financing for water and sanitation projects, small and mid-sized municipalities can access domestic capital from the local financial market rather than rely on public funds and subsidies. The model is now recognized as a leading vehicle for international donor agencies and nations to consider for replication.
- **Water and Sanitation Utility Reform:** Water and sewerage utilities in developing countries are often operating far below a sustainable cost recovery level. Bankrupt utilities struggle to maintain current inadequate levels of service, and lack capital to even begin to expand to the underserved poor populations in slums, peri-urban areas, and villages. Addressing problems of financial sustainability, weak management, often requires fundamental reforms in how these utilities are run, how they are regulated, and in the pricing and tariffs charged by these service providers. In addition to problems of weak utility management and inefficient operations, many experts have cited poor corporate governance as a root cause of the financial sustainability difficulties facing water and sewer utilities in developing countries. Water utility reform is often a prerequisite to coverage of the poor with water and wastewater services in towns and cities, because poorly governed utilities with inadequate tariffs tend to be deeply financially troubled, and cannot expand or sustain services in poor communities.

⁵⁸ Note that there is considerable overlap among these comparative areas of technical expertise of USAID and the five key areas of action recommended by the WHO-UNICEF JMP in 2005 to meet the MDGs in water supply and sanitation, i.e.:

- Meeting basic sanitation demand
- Significantly increasing access to safe drinking water
- Focusing on changing key hygiene behaviors
- Promoting Household water treatment and safe storage and
- Ensuring more health for the money (including cost effectiveness analysis for different situations)

This combination of utility governance, regulatory and management improvement is an effective approach to building water and sewerage utility sustainability. USAID has also found that combining water utility reform with sustainable capital market financing is a powerful combination. A range of techniques and project models have shown dramatic success in increasing coverage for the poor while still improving the financial sustainability of urban and town water utilities.

- **Household Safe Drinking Water:** USAID has been actively involved with other international partners in promoting a variety of approaches to improve safe storage, transport and household treatment of drinking water supplies, for example as a founding member of the International Network to Promote Household Water Treatment and Safe Storage. USAID works closely with the Centers for Disease Control and Prevention (CDC) in implementing and scaling-up use of CDC's Safe Water System for household-level chlorination of drinking water. The Agency has supported The Safe Drinking Water Alliance, a public-private collaboration to develop innovative program approaches for ensuring the safety of household drinking water. USAID, Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs, CARE, PSI, and Procter & Gamble joined forces to leverage their respective expertise and resources to better understand the behaviors and motivations for choosing particular technologies for treating household water, sharing the knowledge gained, and identifying opportunities for scaling up successful efforts. Recently, USAID has also made available a program for use by field Missions to promote both household water treatment and the use of zinc for diarrhea treatment, building on existing USAID-supported social marketing activities at country level, as well as a public-private partnership model that engages the public sector and manufacturers, NGOs, and civil society. The Agency also provides technical assistance to develop commercial partnerships for product development, marketing, and distribution.
- **Hygiene and Sanitation Promotion:** USAID has made investments for over thirty years in water, sanitation and hygiene to improve human health. Current areas of hygiene emphasis focus on improvements at large scale for three key hygiene practices: safe feces disposal, proper hand washing with soap, and point-of-use water treatment and safe storage. Each of these interventions typically results in a 30-40% reduction in diarrheal prevalence in children under five. USAID's approach is to strengthen partnerships, coordinate efforts between the various actors involved in health and hygiene, integrate hygiene into health and non-health platforms, and engage the private and commercial sectors to ensure products and services are available. The Agency provides technical assistance to develop, implement and evaluate program interventions that motivate and facilitate improved hygiene practices.
- **IWRM Models:** The USG has been an active supporter of integrated approaches to water resources management around the world, at a transboundary, national and subnational basin scale. Almost 40 percent of the world's population lives in more than 200 river basins that are shared by more than two countries. Cooperative management of shared watercourses can optimize regional benefits, mitigate water-related disasters, and minimize tensions. It can also help maintain shared ecosystems and improve water productivity in agriculture. The USG is actively participating in a wide range of transboundary related activities targeted at improving water resources management in a manner consistent with the principles of IWRM. Major activities are underway in the Amu Darya/Syr Darya (Central Asia), Kura (Caucasus), Okavango (Southern Africa), Pastaza/Western Amazon (Peru/Ecuador), and Mara (Kenya

Tanzania) Basins. The United States is also supporting the *UNDP Transboundary River Basin Initiative* promoting and strengthening regional institutions, legal structures, and development strategies to ensure the equitable utilization and benefit of basin resources. Activities are engaging a wide range of partners in the Nile, Niger, Senegal, Mekong, and Rio Frio river basins. At a national scale, DOS and USAID are supporting the development of national IWRM plans in Ethiopia, El Salvador and Indonesia through the Global Water Partnership, to help meet the WSSD target for IWRM national planning set forth in Johannesburg.

- **Emergency Response and Humanitarian Relief:** The U.S. is a global leader in providing humanitarian assistance and food aid in times of crisis and disaster around the world. This includes a significant amount of USAID investment (over \$104 million in 2005 alone) for water supply, sanitation, and hygiene related investments associated with these types of events. This is coupled with an enormous amount of technical assistance or logistical support from other federal agencies as well as the U.S. military in emergency settings. Responses to events including the recent South Asia tsunami, Pakistan earthquake, or Sudanese conflict have saved countless lives through timely and effective response to water and sanitation needs. Activities in water supply and sanitation are generally part of a more comprehensive package of assistance to assist with immediate emergencies and to help mitigate food insecurity and vulnerability to future shocks.
- **Applied Science and Technology:** U.S. federal agencies are global leaders in many areas of biological, physical or social science and technology expertise related to water that is of great applicability around the world. Areas such as pollution prevention, satellite remote sensing, global information systems, modeling and simulation, and high-performance computing are all niches where U.S. water-related science and technology leads the world. What the United States does internationally to address water issues can also pay significant experiential dividends as we grapple with similar issues domestically, e.g., uneven water resource distribution, unsustainable mining of groundwater, deteriorated water quality, strong growth in semiarid regions, increasing losses from floods and droughts, the impacts of climate variability, and dependence on shared international water resources.
- **Public-Private Alliances:** The Global Development Alliance (GDA) model reflects USAID's commitment to change the way it implements its assistance mandate. USAID is working to mobilize the ideas, efforts and resources of governments, businesses and civil society by forging public-private alliances to stimulate economic growth, develop businesses and workforces, address health and environmental issues, and expand access to education and technology. Alliances incorporate a diverse array of USAID and partner resources to arrive at solutions only available through pooled efforts. Since 2001, USAID has supported more than 400 public-private alliances with approximately \$1.4 billion, leveraging almost \$4.6 billion in outside contributions. The Agency strives to enter into partnerships that bring at least one-to-one leveraging of USAID resources with additional non-federal resources, which can be in-kind or cash. USAID is a member of many innovative alliances in the water sector around the world, several of which are highlighted in Section 6 below.