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USAID
WATER AND DEVELOPMENT STRATEGY
2013-2018

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STRATEGY

2013- 2018

“The impact of water on all aspects of development is undeniable: a safe drinking water supply, sanitation for health, management of water resources, and improvement of water productivity can help change the lives of millions.”

Dr. Rajiv Shah,
USAID Administrator,
World Water Day, 2011

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BFS – Bureau for Food Security
BRM – Office of Budget and Resource Management
CATS – Community Approaches to Total Sanitation
CDCS – Country Development Cooperation Strategy
CGIAR – Consultative Group on International Agricultural Research
CLTS – Community-Led Total Sanitation
CMM – Conflict Management and Mitigation
DA – Development Assistance
DCA – Development Credit Authority
DCHA – Bureau for Democracy, Conflict and Humanitarian Assistance
DIV – Development Innovation Ventures
DRR – Disaster Risk Reduction
E3 – Bureau for Economic Growth, Education and Environment
E3/W – Office of Water in E3 Bureau
ESF – Economic Support Funds
ESP – Environmental Services Program
EXIM – Export-Import Bank
FTF – Feed the Future
FY – Fiscal Year
GH – Bureau for Global Health
HIP – Hygiene Improvement Project
IDA – International Disaster Assistance
IR – Intermediate Results
IWRM – Integrated Water Resource Management
JMP – Joint Monitoring Program
MDG – Millennium Development Goal
NEAT – Nepal Economic Agriculture and Trade
NGO – Non-Governmental Organization
NOAA – National Oceanic and Atmosphere Administration
OFDA – Office of U.S. Foreign Disaster Assistance
OPIC – Overseas Private Investment Corporation
PPD-6 – Presidential Policy Directive on Global Development
PPL – Bureau for Policy, Planning, and Learning
PWRF – Philippines Water Revolving Fund
QDDR – Quadrennial Diplomacy and Development Review
RANET – Radio and Internet Technologies for the Communication of Weather and Climate Information for Rural Development
SCADA – Supervisory Control and Data Acquisition
SEEDS – School Environment and Education Development for Somalia
SO – Strategic Objective
SPLASH – Schools Promoting Learning Acievement through Sanitation and Hygiene
SWSS – Sustainable Water Supply and Sanitation
WASH – Water Supply, Sanitation and Hygiene
WATER – Water, Sanitation, and Hygiene Transformations for Enhanced Resilience

EXECUTIVE SUMMARY

This is the US Agency for International Development's (USAID) first global Water and Development Strategy. It is intended to provide a clear understanding of USAID's approach to water programming. This Strategy emphasizes how sustainable use of water is critical to save lives, promote sustainable development, and achieve humanitarian goals.

Projections are that by 2025, two-thirds of the world's population could be living in severe water stress conditions. This stress adversely affects individuals, communities, economies, and ecosystems around the world, especially in developing countries. Ensuring the availability of safe water to sustain natural systems and human life is integral to the success of the development objectives, foreign policy goals, and national security interests of the United States.

To address global water-related development needs, this Strategy provides an increased focus for USAID's water programs that is sustainable, works through host country systems, uses emerging science and technology, and learns from past efforts.

The goal of this Strategy is: To save lives and advance development through improvements in water supply, sanitation, and hygiene (WASH) programs, and through sound management and use of water for food security. To achieve this goal, the Strategy sets two strategic objectives (SOs):

SO1) Improve health outcomes through the provision of sustainable WASH. This will be achieved through a continued focus on providing safe water, an increased emphasis on sanitation, and support for programs that can be brought to scale and be sus-

USAID-built electric tube well used for irrigation in the Terai region of Nepal. Photo by Patrick D. Smith

tained. Based on previously requested funding levels, USAID projects providing a minimum of 10 million persons with sustainable access to improved water supply and 6 million persons with sustainable access to improved sanitation over the next five years.

SO2) Manage water for agriculture sustainably and more productively to enhance food security. This will be achieved through increased emphasis on more efficient use of rainfall and improved efficiency and management of existing irrigation systems including private and farmer-owned micro-irrigation systems. The Strategy recognizes that the greatest and most cost-effective potential for crop yield increases are in rainfed areas. USAID will focus on increasing irrigated agriculture in select countries, including expanding irrigation in a responsible, sustainable, and climate-resilient way.

Historically, USAID budget allocations for water programs have been made in four thematic areas: (1) WASH; (2) Water Resources Management; (3) Water Productivity; and (4) Disaster Risk Reduction. Between Fiscal Years 2003-2011, USAID annually allocated an average of $452M to water activities. Over this time period, USAID annually programmed an average of $318M to WASH, $61M to Water Resources Management, $57M to Water Productivty, and $16M to Disaster Risk Reduction.

Beginning in Fiscal Year (FY) 2014, the Strategy calls for all new USAID water programs to fully align with the two SOs of the USAID Water and Development Strategy.

Strategic Approach

To achieve these objectives, this Strategy:

- Furthers the strategic approach to water and development put forward by the Secretary of State in 2010 by emphasizing five 'streams of action' to address water issues.
- Advances activities consistent with the Senator Paul Simon Water for the Poor Act of 2005 including establishing criteria to designate high priority countries for increased investments to support access to safe water and sanitation.
- Addresses the impact of water problems for countries important to U.S. national security interests.
- Builds on the joint USAID and U.S. Department of State's 2008 Framework for Action, which called for improving access to water supply and sanitation, promoting better hygiene, improving water resources management, and improving water productivity in agriculture.
- Draws on USAID Forward and the USAID Policy Framework 2011-2015 by supporting host country systems, emphasizing an integrated approach to development, focusing where resources will be invested, programming resources selectively to ensure meaningful impact, leveraging science, technology, and innovation, promoting gender equality and female empowerment, and increasing partnerships.
- Gives priority to supporting the Presidential Initiatives of Global Health and Feed the Future, and supports other development objectives such as resilience, natural resource and coastal zone management, climate change efforts, humanitarian assistance, increasing access to education, and gender equality efforts.
- Will seek investments in longer-term monitoring and evaluation of its water activities in order to assess sustainability beyond the typical USAID Program Cycle and to enable reasonable support to issues that arise subsequent to post-completion of project implementation.
- Emphasizes an integrated water resources management approach to development.
- Increases attention to sanitation in WASH programs and encourages multiple use systems of water for agriculture.
- Builds on USAID's comparative advantage in capacity building and governance by emphasizing policy reform, strengthened enabling environments and institutions, participatory governance, and innovative financing.
- Links humanitarian and development efforts more effectively by supporting programming of WASH funds in emergency situations.
- Applies the USAID Gender Equality and Female Empowerment Policy by supporting gender sensitive approaches to empower women in the development and implementation of water-related programs.

USAID intends to address the global challenges of water in close cooperation with non-governmental and civil society organizations that undertake the critical front-line responsibility of developing and implementing water programs. This includes working with advocacy groups that bring both knowledge and passion to the challenge, with governments that are dedicated to providing a better life for their citizens, with communities that best understand the challenges and solutions, with universities that are creating innovative solutions today, with the private sector that can build a new global economy while supporting sustainable development, and with international development and financial institutions which provide essential program development implementation and financial support.

USAID seeks to be both a leader and a partner in the global effort to elevate the importance of water across all development objectives.

1. INTRODUCTION

Achieving water security for regions, nations, and individuals is one of the greatest development challenges confronting the world today. By its nature, as a basic and essential resource, water considerations cut across nearly every aspect of USAID programming.

The purpose of the Strategy is to guide USAID investments in water programming, to inform the development of Country Development Cooperation Strategies (CDCS), to guide decision-making on budgeting and resource allocation, and to highlight priority regions and program areas for water programs. Over the duration of the Strategy there will be greater focus and selectivity among USAID water programs leading to greater development impact.

STRATEGIC FOCUS

USAID has three overarching development objectives that address the Presidential Initiatives of Climate Change, Food Security, and Global Health. This Strategy focuses on two key development objectives related to effective and multiple uses of water resources: water for health and water for food. USAID addresses the climate change and water linkage in its Climate Change and Development Strategy (2012-2016).[1] This Strategy responds to the need for USAID to focus investments and identify priorities within the wider role that water and watershed management play toward energy, conflict, climate change, education, bio-diversity, ecosystems, and economic growth. This Strategy specifically endorses the principles and proven approaches of integrated water resources management (IWRM) and encourages the use of all appropriate technologies and tools in achieving those objectives.

KEY DEVELOPMENT CHALLENGES

Population growth, increased demand for and rising cost of energy, increased urbanization, watershed and environmental degradation, natural disasters, conflict, climate change, and weak water governance are putting water resources under increasing pressure. Projections are that by 2025, two-thirds of the world's population could be living in severe water stress conditions.[2] This stress adversely affects individuals, communities, economies, and ecosystems around the world, especially in developing countries. It also underscores why it is so critical to properly manage the scarce freshwater resources upon which human life depends.

Inadequate access to safe drinking water and sanitation

Millennium Development Goal (MDG) 7C calls to halve by 2015 the proportion of the population without sustainable access to safe drinking water and basic sanitation. While the safe drinking water target was met in 2010, 783 million people still do not have access to safe drinking water, and major issues related to equity of access, water quality, and sustainability of water supplies remain.[3] In addition, the world is not on track to meet the sanitation target as approximately 2.5 billion people still lack access to improved sanitation.[4] The challenges and solutions vary significantly by region; for example, sub-Saharan Africa has the highest proportion of people without sufficient sanitation facilities, while South Asia has the largest number of people practicing open defecation.

Often the burden of inadequate access to water and sanitation falls heavily on women and girls. Examples of this are evident throughout the developing world. Two concerns of particular importance are reducing the many hours women and girls spend seeking water for their families which often put their safety at risk and addressing the different sanitation needs of women and adolescent girls which have direct impacts on maternal mortality and morbidity.

Lack of access to safe water and sanitation services has direct health implications as nearly two million people – the vast majority of whom are children under five – die from diarrhea each year. Nearly 88 percent of diarrhea is attributed to unsafe drinking water, inadequate sanitation, and poor hygiene, and is preventable by known interventions.[5]

The importance of meeting sanitation goals

Conventional sanitation, a flush toilet connected to a centralized sewer system, is available for only a small fraction of people in developing nations. Forty percent of the world's population use unsafe toilets or practice open defecation. The consequences of

unsafe sanitation can be devastating and last a lifetime. Every year, food and water tainted with fecal matter cause up to 2.5 billion cases of diarrhea among children under five, resulting in 1.5 million child deaths. Chronic diarrhea can hinder child development by impeding the uptake of essential nutrients that are critical to the development of children's minds, bodies, and immune systems. Studies show that hand washing, improved sanitation, and improvements in household water quality significantly reduce the risk of diarrhea.[6]

The impact that clean and safe sanitation can deliver is transformational. The economic benefits of improved sanitation can increase productivity, reduce healthcare costs, and prevent illness, disability, and early death. People who have access to clean, safe, and convenient sanitation services also experience greater dignity, privacy, and security. This is especially important for women and girls, who may miss work or school when they are menstruating or risk sexual assault when they do not have access to safe sanitation facilities. This importance extends not just to the existence of sanitation facilities, but also to the physical location and design in a school/workplace that has an impact on safety, security, and use.

Limited access to fresh water for food security

The interdependence between food security and sustainable water resource management is significant. Globally, agriculture consumes 70 percent of available freshwater resources and is often used in irrigated systems that are inefficient and environmentally unsustainable.[7] Global population growth projections of two to three billion people over the next 40 years, combined with changing diets, are expected to increase food demand 70 percent by 2050.[8] However, as the largest user of water, food production also represents the largest unknown factor of future water use in terms of future global water demand. Significant efficiency gains are possible. Based on current use patterns, agricultural water consumption will increase by approximately 19 percent to feed a larger and richer global population of 9.1 billion people.[9]

The impact of climate change on water resources

The impacts of climate change can be seen from oceans to mountain tops. Rapid glacier melt and decreased snowpack will increase variability of streamflows and may contribute to a long-term decline in supplies. Rising sea levels will exacerbate saltwater intrusion into many river deltas, salinizing productive/cultivatable land and impacting drinking water. Stronger storm surges could flood large tracts of coastal areas, where a significant number of people and critical infrastructure are located. The effects of climate change in combination with other drivers of stress on water resources will increasingly restrict access to safe water and sanitation and make food security even harder to achieve.

The risks of climate change to rainfed agriculture could be particularly acute. Increased rainfall variability and reduced natural storage will likely reduce crop yields by producing higher rates of run-off, escalate soil desiccation at critical times, and shift rainfall patterns and the timing of rainy seasons. Resilience to climate change and other pressures is an emergent property of a functioning ecosystem, and water programs need to consider climate impacts. This Strategy seeks to strengthen adaptation and resilience to climate change, in accordance with the USAID Climate Change and Development Strategy, through increased efforts to support integrated water and watershed management practices. The USAID resiliency policy will further guide Agency programming and development approach.[10]

The significant energy requirements for water

Every drop of water that has to be pumped, moved, or treated to meet health and food needs requires energy. Inefficiency and waste in the use of water for industrial production increases energy demands and raises emissions. Effective co-management of water and energy, including the integration of water, food and energy programs, as well as support for and development of technology, can lead to significant returns on investment.

Water as a potential source of conflict

As indicated by the 2012 Intelligence Community Assessment on Global Water Security, water problems will contribute to instability in countries important to U.S. security interests.[11] Water security is an increasingly important component of the U.S. Government's diplomatic and development efforts to promote peace and security within and between key countries and around trans-boundary river basins. Growing demands on limited fresh water, degradation of fresh water quality, and greater variability in rainfall patterns are potential drivers of tension. Competition and disputes over water and watersheds exist in many places around the world. The causes and nature of these disputes vary widely; from small-scale clashes over pasture and water, to urban protests over changes in water pricing schemes, to sub-regional disputes between provinces over water for agriculture or hydropower, to upstream/downstream countries competing for a share of an increasingly limited water supply.

As water becomes scarcer at community water points, women and children who gather the water may find themselves at the forefront of inter- and intra-community based conflict as they compete against each other for access to scarce water resources. The U.S. National Action Plan on Women, Peace and Security, for instance, calls for building resilience through assistance that supports women's roles in the management of natural resources, mitigation of resource related conflict, and adaptation to climate change in fragile and conflict-affected states.

2. STRATEGY CONTEXT

USAID supports integrated water resource management as a vital approach to achieve global development objectives. USAID's engagement in the water sector will continue to reflect the Senator Paul Simon Water for the Poor Act of 2005, annual appropriations directives, the Presidential Policy Directive on Global Development (PPD-6), the Quadrennial Diplomacy and Development Review (QDDR), USAID Forward, and the USAID Policy Framework 2011-2015, as well as global targets such as the Millennium Development Goals (MDG). The Strategy raises the importance of water programming across the Presidential Initiatives of Global Health, Feed the Future, and Global Climate Change.[14]

With limited resources in the face of significant challenges, the Strategy responds to PPD-6's call for selectivity and focus by prioritizing the water needs for health and food security. USAID's resources are most effective by leveraging resources at the country level, and by using emerging science and technology to promote innovation. As such, the Strategy emphasizes sustainable solutions that work through host country systems.

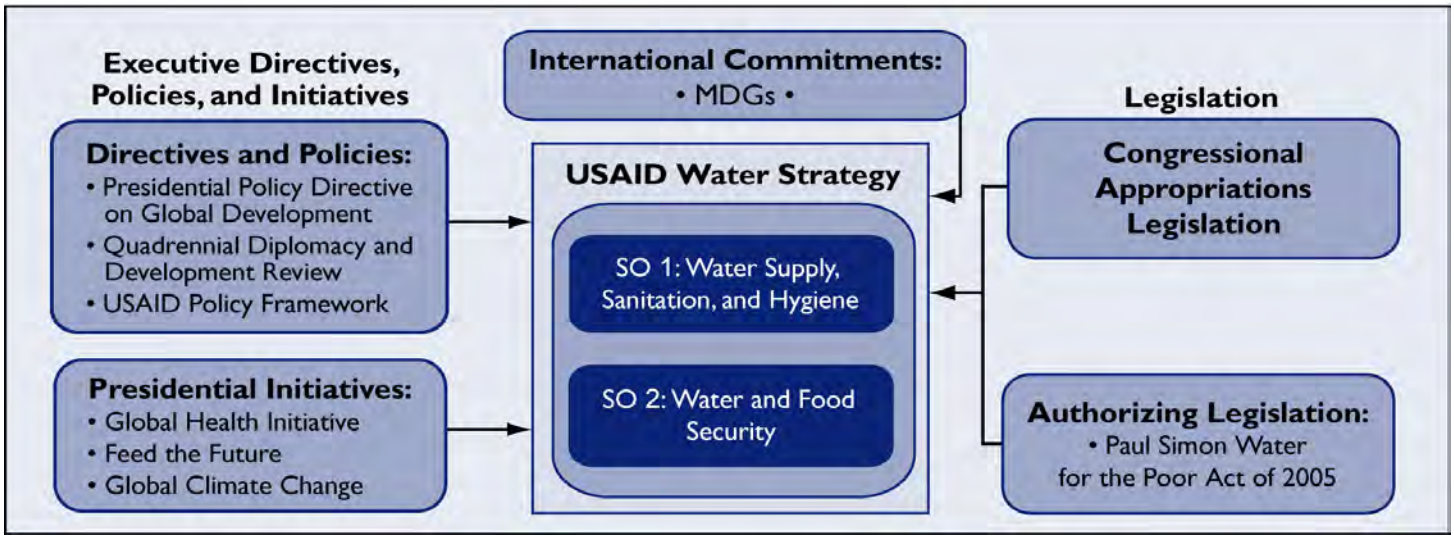
The Strategy applies selectivity by focusing resources in fewer countries, sub-national regions, sectors or programs so that USAID can have the greatest possible development impact. In addition, the Strategy encourages shifts in program emphasis to include increasing attention to sanitation in WASH programs, supporting multiple use systems of water supply for agriculture and, when appropriate, integrating water programming with multiple development objectives.

The Strategy builds on the joint USAID and U.S. Department of State's 2008 Framework for Action, which called for improving access to water supply and sanitation, promoting better hygiene, improving water resources management, and improving water productivity in agriculture.[15] The Strategy furthers the strategic approach to water and development put forward by the Secretary of State in 2010 by emphasizing five 'streams of action' to address water issues. These streams include building capacity at the local, national, and regional levels, elevating our diplomatic efforts, mobilizing financial support, harnessing the power of science and technology, and broadening the scope of our partnerships to leverage our efforts against the work of others.[16]

The Strategy also draws upon the extensive experience of public and private sector partners that are engaged in the financing, development, and support of USAID programs and development objectives. Among others, this includes non-governmental organizations (NGOs), businesses, faith-based organizations, universities and international organizations.

Implementation of the Senator Paul Simon Water for the Poor Act of 2005

One of the primary sources of guidance for water programming is the Water for the Poor Act. As amended to the Foreign Assistance



Act, this legislation defines access to safe water and sanitation for developing countries as a specific policy objective of U.S. foreign assistance programs. Each year USAID, with the U.S. Department of State, reports to the U.S. Congress on progress achieved towards the goals of this Act. This Strategy supports this effort by advancing many activities consistent with the goals of the Act including:

- Developing quantitative metrics and indicators to measure results;
- Mobilizing and leveraging the financial and technical capacity of public and private entities through partnerships;
- Encouraging capacity building to strengthen the ability of host countries to develop, manage and implement water programs and practice watershed management;
- Supporting governance structures, regulations and policies to expand access to safe water and sanitation services;
- Protecting the supply and availability of safe drinking water;
- Establishing criteria to designate high priority countries for increased investments to support access to safe water and sanitation; and
- Supporting sound environmental management including the protection of watersheds.

Support for Feed the Future

Feed the Future (FTF), the U.S. Government's global hunger and food security initiative, supports country-driven approaches to address the root causes of hunger and poverty and forge long-term solutions to food insecurity. Through FTF, the U.S. Government renewed its commitment to agriculture and economic growth and focused on harnessing the power of the private sector and research to transform agricultural development. Integrated water resource management is a critical component of the long term objectives of FTF to meet the challenges of global hunger.[17]

USAID Program Cycle

The USAID Program Cycle integrates Agency-wide polices and strategies, strategic planning, project design and implementation, and evaluation and monitoring. The Water Strategy represents one component of the Program Cycle, the setting of policies and strategies, within a broader cycle of an integrated approach to development. The Strategy provides Missions with strategic direction for the CDCS process and encourages Missions to formulate development objectives and multi-sector approaches to integrate water for health and water for food programming.

Historically, USAID budget allocations for water programs have been made in four thematic areas: (1) WASH; (2) Water Resources Management; (3) Water Productivity; and (4) Disaster Risk Reduction, Between Fiscal Years 2003-2011, USAID annually allocated an average of $452M to water activities. Over this time period, USAID annually programmed an average of $318M to WASH, $61M to Water Resources Management, $57M to Water Productivty, and $16M to Disaster Risk Reduction.

Consistent with the USAID Policy Framework, when designing water programs Missions are required to apply selectivity in regions and program areas, and to focus the volume of resources to have a meaningful, measurable, and lasting impact.

Based on the analysis and results framework of the CDCS, the Strategy will be operationalized through project design. The Project Design guidance outlines a series of steps each Mission should take when operationalizing the Strategy. Projects, defined as a set of interventions intended to achieve a discrete development result over a specific timeframe, in the water sector should align to the priorities outlined in the Strategy. To help determine whether projects are having the intended impact Missions should monitor the achievements of programs and projects, analyze results and track progress, use data to inform decision making, and communicate this information to stakeholders. Project design should utilize gender, youth, and community analyses to ensure that design, implementation, and measurement of impact specifically include women and children. All Program Cycle components applied to water programming contribute to improving the clarity, analytic rigor, and evidence with which requested resources connect to expected results.programing contribute to improving the clarity, analytic rigor, and evidence with which requested resources connect to expected results.

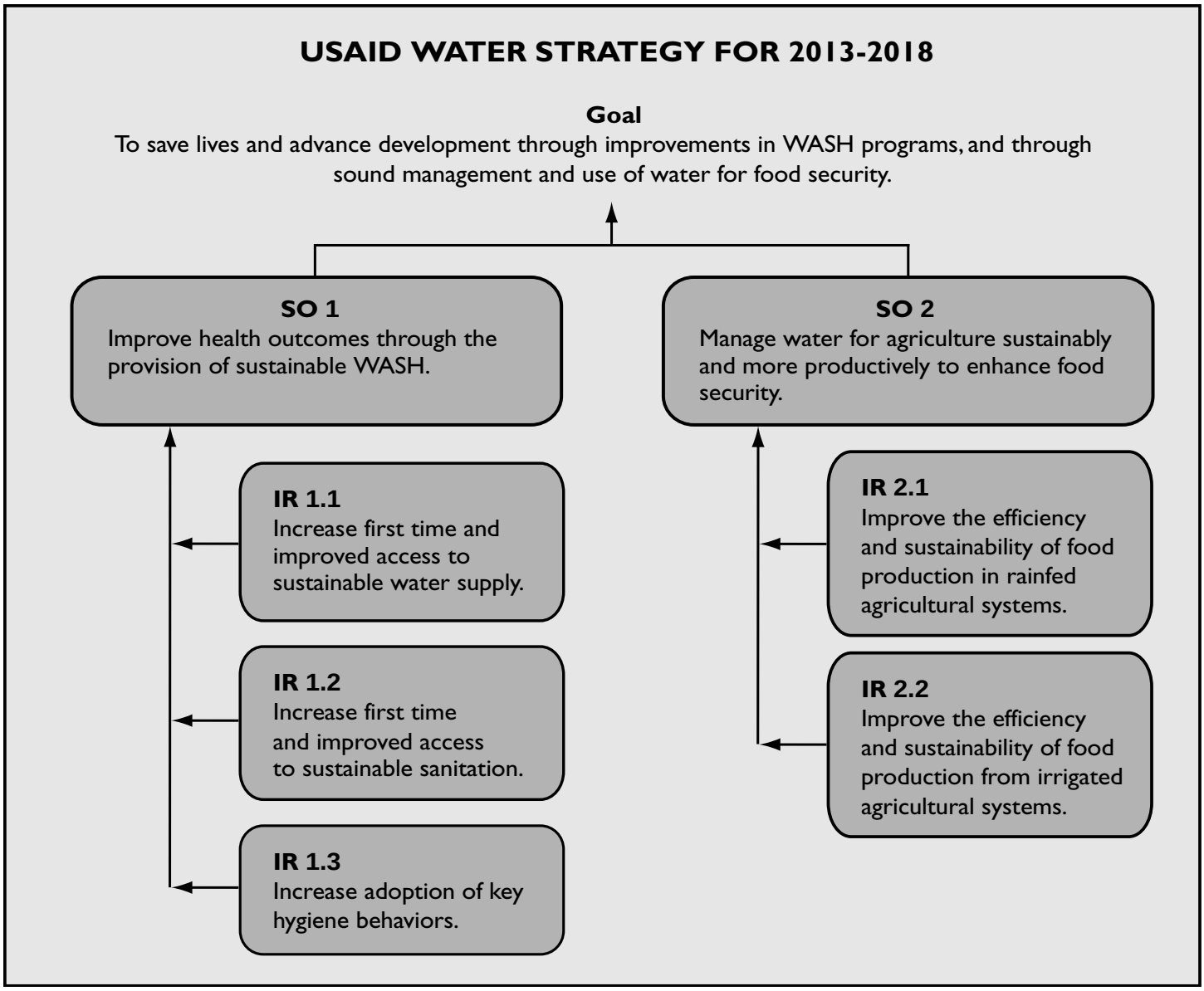
USAID Budget Allocations for the Water Sector by Thematic Area
Fiscal Years 2003 2011 (Millions of Dollars)

USAID Budget Allocations for the Water Sector by Theme ($ Millions)	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**Ave. 2003-2011**
Drinking Water Supply, Sanitation & Hygiene (WSSH)	159.80	239.80	216.93	265.00	213.22	389.92	493.01	520.41	360.05	318
Water Resources Management (WRM)	105.70	82.50	60.73	56.00	27.41	58.58	41.24	47.20	67.19	61
Water Productivity (WP)	115.60	68.40	45.35	22.50	17.39	38.91	45.30	53.11	109.30	57
Disaster Risk Reduction	20.60	10.00	6.76	5.84	5.65	2.20	50.55	21.45	21.82	16
Grand Totals	**401.70**	**400.70**	**329.77**	**349.34**	**263.67**	**489.61**	**630.11**	**642.17**	**558.36**	**452**

3. STATEGIC OBJECTIVES 2013-2018

The overarching goal of this Strategy is: **To save lives and advance development through improvements in WASH programs, and through sound management and use of water for food security.** To achieve this goal USAID will pursue two SOs:

- SO 1 Improve health outcomes through the provision of sustainable WASH
- SO 2 Manage water in agriculture sustainably and more productively to enhance food security



To accomplish the SOs, intermediate results (IRs) have been identified that will guide the planning and implementation of this effort.

SO 1 – IMPROVE HEALTH OUTCOMES THROUGH THE PROVISION OF SUSTAINABLE WASH

SO 1 Measures of Success 2013-2018

- Projects providing a minimum of 10 million persons with sustainable access to improved water supply and 6 million persons with sustainable access to improved sanitation.
- Key hygiene behaviors adopted in priority WASH countries

WASH investments can improve health and save lives, especially by reducing incidences of diarrheal disease in children under five years. By improving health outcomes through improved WASH practices, girls can have better opportunities for education and women can be less burdened in the home. WASH programs have significant economic and social benefits including reducing the time, labor and risk of fetching water, and reducing violence against women who use public facilities or defecate in the open after nightfall. Predictable access to water expands job options for both men and women and supports broad-based economic development. When safe water and sanitation are reliable and accessible, food security and nutrition can be improved. When wastewater is adequately treated, environmental quality, food safety, and human health are better protected.

Water, sanitation and hygiene approaches are most effective in reducing diarrhea and other water-related infections when implemented as a package of interventions. A balanced WASH program has three interdependent pillars: (1) hardware (e.g., water and sanitation infrastructure); (2) the promotion of behavior change; and (3) support to an enabling policy and institutional environment. USAID support will generally include interventions within all three pillars of the framework, with different levels of emphasis in each area as determined by the development context.

WASH Needs and Opportunity Criteria

WASH country needs criteria:

- The number of people and the percent of the population without access to improved sources of safe water and sanitation.
- The mortality rate and number of deaths of children under five years due to diarrhea.

WASH country opportunity criteria:

- The extent of host government commitment to WASH.
- The presence of supportive enabling environments.
- The opportunities for leveraging existing donor and/or private sector investments in the water sector.

COUNTRY SELECTIVITY — NEEDS AND OPPORTUNITY CRITERIA

USAID's WASH activities in FY 2012 were spread across 62 bilateral programs, regional platforms, and centrally funded programs. USAID has identified criteria for country selection based on a combination of factors that relate to country needs and country opportunities for water programming (see box). These criteria only relate to countries receiving USAID WASH support.

USAID will use these WASH criteria to achieve a greater concentration of resources in fewer countries and fewer program areas. This approach is in line with the goals of the PPD-6 towards greater selectivity and focus to facilitate greater country-level impact and results.

COUNTRY CATEGORIES

USAID has established three categories for WASH focus: transformative impact, leveraged impact, and strategic priority. These three categories will be used as a framework to analyze funding and program priorities for WASH funds as part of the CDCS process.

Transformative Impact countries are determined based on an analysis of need, opportunity, and a favorable programming environment to significantly leverage USAID's resources. These include countries where there is an opportunity to have transformative impact on national level policies and to leverage host country resources for the development and implementation of services. These countries would have the requisite infrastructure, governance, track record, and expertise necessary to bring WASH programs to scale.

- *Ethiopia is an example of a country that could meet the criteria as a transformative impact country. It has the requisite infrastructure, governance, and institutional expertise for USAID water programs to have a transformative impact. USAID is currently working with the Government of Ethiopia to increase access to improve water supply in rural communities and to achieve universal access to sanitation.*

Leveraged Impact countries are based on the strategic application of limited USAID resources, and generally are countries in which relatively small investment levels are likely to generate significant impact in at least one dimension of WASH – such as first time access to an improved drinking water source, first time access to an improved sanitation facility, ending open defecation, or new hand washing practices. In such countries USAID will concentrate relatively small investment levels to generate significant impact on at least one dimension of WASH.

- *An example of a leveraged impact program is the Philippines Water Revolving Fund (PWRF). USAID established the PWRF, in partnership with the Japanese International Cooperation Agency, to enhance financing options and opportunities for small water and wastewater utilities. With an approximately $5 million investment in technical assistance to the sector, the program was able to mobilize $93 million worth of loans ($56 million of which came from private commercial banks), for water supply and sanitation projects reaching two million people with new or improved access to basic water and wastewater services.*

Strategic Priority countries or locations are places in which USAID anticipates continued WASH programs due to a combination of strategic considerations and development needs. These countries or locations include but are not limited to programs located in Lebanon, Jordan, Yemen, and West Bank-Gaza, and often feature large-scale programs with a focus on infrastructure development.

- *For example, the USAID/West Bank and Gaza Mission recently completed the Dura Cluster Water Storage and Distribution System Project, which has provided approximately 43,000 Palestinians with reliable access to potable water for the first time. The $17.5 million water project consists of more than 12 kilometers of transmission pipelines, 92 kilometers of distribution networks to rural communities, and the construction of three large, concrete water-storage tanks, which have the combined capacity to hold 4,000 cubic meters of water.*

These three categories, transformative, leveraged, and strategic priority, will be used to review budget priorities and to determine expected impacts from WASH programs during the development of a CDCS. When using Development Assistance (DA) funds, strong consideration should be given to providing transformative impact countries with additional resources to take programs to scale, while leveraged impact countries will need to ensure that their relatively smaller investments create appreciable and significant impact. USAID expects a mixture of DA funds to go toward both transformative and leveraged impact countries and locations. Economic Support Funds (ESF) are expected to continue to support WASH programs in strategic priority countries and locations. Missions will need to work closely with their Regional Bureaus, during the CDCS process when possible, to clearly define programming rationale using these categories.

In addition, the Strategy anticipates that USAID will continue to commit significant WASH funds to countries outside of the three-tier system through Disaster Risk Reduction (DRR), International Disaster Assistance (IDA) and emergency and non-emergency Food for Peace Title II funding. Emergency situations will require flexibility for rapid response in crises.

PROJECTIONS FOR WASH PROGRAMMING

Based on previously requested funding levels, USAID projects providing a minimum of 10 million persons with sustainable access to improved water supply and 6 million persons with sustainable access to improved sanitation over the next five years. It is expected that a vast majority of the results from USAID water programming will represent longer-term development programs in transformative impact and leveraged impact countries.

The implementation of the Strategy will begin immediately, and starting in FY 2014, The USAID Global Water Coordinator will coordinate an agency-wide effort to recommend funding levels of WASH priority countries based on priorities identified through the CDCS process and on the criteria established in this Strategy.[20]

The projected number of beneficiaries to be reached includes two distinct categories of impact – "sustainable first time access to water supply and sanitation services for unserved populations" and "improved access to sustainable water supply and sanitation services." SO 1 of this Strategy aims to increase both

sustainable first time access to water and sanitation and to improve the sustainable water supply and sanitation to acceptable levels of service.

This projection is not a definitive target. The projection is based on estimating methods using available data, and this Strategy sets no commitment to reach a fixed number of people for any specific region or field Mission. Among the quantitative and qualitative information gaps that persist are insufficient data to separate out first time access to safe water from those gaining

Historical USAID Water Funding and Beneficiaries Reached (Funding in Millions of USD)

	2008			2009			2010		
		Beneficiaries			Beneficiaries			Beneficiaries	
	Funding	Water Supply	Sanitation	Funding	Water Supply	Sanitation	Funding	Water Supply	Sanitation
Sub-Saharan Africa	174	1,195,570	579,521	165	1,490,911	359,587	191	1,346,057	2,054,859
Asia Pacific	69	2,221,695	1,060,750	107	2,625,256	830,581	177	1,278,431	555,389
Central Programs	20	0	0	16	0	0	21	0	0
Europe and Eurasia	7	51,149	0	2	74,340	0	2	4,596	1,986
Latin America and Carribean	24	464,152	229,145	14	1,393,153	75,107	39	181,828	84,873
Middle East and North Africa	96	3,807,000	4,421,475	177	208,000	65,038	89	33,572	191,998
Other	0	0	0	1	0	0	2	0	0
TOTAL	**390**	**7,739,566**	**6,290,891**	**482**	**5,791,660**	**1,330,313**	**522**	**2,844,484**	**2,889,105**

	2011			Total 2008-2011			Average 2008-2011		
		Beneficiaries			Beneficiaries			Beneficiaries	
	Funding	Water Supply	Sanitation	Funding	Water Supply	Sanitation	Funding	Water Supply	Sanitation
Sub-Saharan Africa	186	1,176,021	548,745	715	5,208,559	3,542,712	179	1,302,140	885,678
Asia Pacific	52	1,516,705	604,881	406	7,642,087	3,051,601	101	1,910,522	762,900
Central Programs	15	60,514	40,465	72	60,514	40,465	18	15,129	10,116
Europe and Eurasia	2	50,193	0	13	180,278	1,986	3	45,070	497
Latin America and Carribean	18	140,086	116,586	94	2,179,219	505,711	24	544,805	126,428
Middle East and North Africa	86	880,982	614,589	449	4,929,554	5,293,100	112	1,232,389	1,323,275
Other	2	0	0	5	-	-	1	-	-
TOTAL	**360**	**3,824,501**	**1,925,266**	**1,754**	**20,200,211**	**12,435,575**	**438**	**5,050,053**	**3,108,894**

access to improved quality of water, as well as disaggregated unit cost data for water and sanitation programs across all regions.

Therefore, an important learning objective of this Strategy is to further develop key data points and currently unknown factors affecting water programming. The Strategy intends for these projections to drive approaches leading to greater impact in WASH programming and to develop, by the end of the strategy period, a unit cost analysis across all regions.

The projection of providing 10 million persons with sustainable access to improved water supply and 6 million persons with sustainable access to improved sanitation only represents the direct impact from USAID-funded water programming. It does not include additional multiplier effects expected from partner organizations, other donors, foundations, non-profit organizations, and the private sector. When leveraging projected impacts from partner organizations and host country efforts to bring interventions to national scale, the expected total may be significantly higher.

To accomplish SO 1, three intermediate results have been identified that will guide the planning and implementation of this effort.

IR 1.1: Increase first time access to, and improved access to, sustainable water supply services

In the Strategy, increasing "sustainable first time access" refers to access to an improved water source that is gained by previously unserved populations. Improving the "quality of sustainable water supply services" refers to increasing existing access to and improving the quality of an already improved water supply.[21] For both first time access, and improved access, methods for ensuring the sustainability of water quality in the long term should be incorporated into program design. This may include developing monitoring systems to ensure that water quality, as well as water supply, is sustained at acceptable levels.

The developing world's population with access to an improved source of drinking water increased by 16 percent from 1990 to 2010, and most regions around the world are on track to reach the goal for access to improved water by 2015. Sub-Saharan Africa, however, is not on track, even though nearly 273 million people gained access to an improved source of drinking water between 1990 and 2010. In sub-Saharan Africa, 39 percent of the population still did not have access to an improved source of drinking water in 2012. Globally, 81 percent (653 million) of people who are still without access to an improved drinking water source live in rural areas.[23] To meet this development need, the Strategy, in alignment with the Global Health Initiative, Feed the Future, and the Water for the Poor Act emphasizes increased programming and focus in sub-Saharan Africa.

Urban coverage is currently far ahead of that in rural areas, but challenges remain and Missions must consider the scale of required investment and potential for sustainability. As the world rapidly urbanizes, with urban populations expected to increase over 50 percent to 4.9 billion between 2008 and 2030, maintaining coverage levels in urban settings will create new development challenges.

To accelerate access to water, USAID should support, when adequate resources are available, decentralization of responsibilities. This requires capacity building of local governments to engage communities, mobilization of financing for both system expansion and operations and maintenance, and oversight of public and private sector service providers. Increased support to small-scale, private water suppliers will also increase service access, particularly in smaller towns, peri-urban neighborhoods, and rural communities relying on non-networked, decentralized systems. Support to water and sanitation entrepreneurs can increase coverage and generate income, while recognizing the

South-South Knowledge Sharing Transforms Urban Water Systems

Sometimes the most effective drivers of change are local. This was the principle that drove USAID efforts to improve water and sanitation access in Asian cities through the regional network called Water Links. Of 1.7 billion people who live in Asian urban centers, 340 million lack access to safe water supply. WaterLinks built water sector capacity by facilitating partnerships between water operators in cities throughout Asia. Partnerships paired mentor operators with expertise in water access, water quality, and sanitation with recipient operators looking to improve and extend their service. Both mentor and recipient organizations benefited from targeted trainings and knowledge sharing. "There is nothing like learning from one's peers," said Arjun Thapan, Chairman of the WaterLinks Board of Trustees. WaterLinks has to date orchestrated 60 such south-south partnerships, which have brought reliable access to safe water to more than one million urban dwellers in Asia.[22]

need to balance between expanded coverage and the price differential between municipal and private water service, particularly for those that have no alternatives.

Capacity building to ensure the continued quality of water resources, environmental sustainability, and climate resilience of all investments will be supported, especially where competition for scarce water resources is increasing. By focusing on capacity building and leveraging local partners, programs can minimize overreliance on donors and bolster lasting sustainability.[24] Collaborative relationships with other multi-lateral and bi-lateral donors, with local and international banks, and with financing institutions to increase attention to small-and medium-scale financing should be strengthened.

IR 1.2: Increase first time and improved sustainable access to improved sanitation services[25]

USAID will highlight scaling up and strengthening its sanitation programs as a special area of focus in the Strategy. This includes bringing a number of proven innovative and successful approaches to scale through Community Approaches to Total Sanitation (CATS). In addition, these efforts will focus on combining the promising approaches of Community-Led Total Sanitation (CLTS) and sanitation marketing to generate sanitation demand and strengthen the supply of sanitation products and services at scale, leading to improved health for people in rural and urban areas.[26]

A number of innovative and successful approaches have increased access to sanitation on a small scale. However, governments and the global community have not been able to scale-up and sustain these efforts. Moving forward, Missions must increase the proportion of water investments focused on sanitation services, as sanitation is critical to health and access lags far behind that of water. Sanitation is too often left out of programs, almost universally falling behind in terms of priorities in water programming. This Strategy encourages Missions to focus on sanitation services in both urban and rural settings. In countries that are off track to meet the MDG for sanitation, and where diarrheal disease and under-nutrition are prevalent, Missions must add sanitation as a key element of their water, health, and nutrition activities.

Initiatives should promote the three pillars of WASH programming: support for sanitation infrastructure, the promotion of behavior change, and creation of an enabling policy and institutional environment including robust financing and the development of local ordinances and regulations to stop open defecation and/or establish latrine building codes. These approaches generate sanitation demand and strengthen the supply of sanitation products and services. With limited sanitation funding, these approaches can be integrated to add value to nutrition, HIV/AIDS, governance, education, and maternal and child health programming.

USAID Missions can promote community or public toilets in dense settlements, as well as sanitation facilities in institutional settings, such as schools, health facilities, markets, and transportation hubs. It is important that these efforts involve youth associations and women's groups, and encourages the construction of facilities that are accessible for people with disabilities and the elderly. To accelerate expansion of decentralized sanitation solutions in rural and peri-urban areas not connected to a sewerage network, Missions should focus on the entire sanitation hierarchy in developing sustainable sanitation services. Integrating supply-demand marketing approach can help address sustainability concerns of past sanitation efforts, especially those that focused on highly subsidized rural and peri-urban latrine construction. USAID sanitation programs will need to address how and where to dispose of concentrated sewage and sludge to not add to the environmental

USAID/Egypt: Water and Sanitation Services at Scale

Since the 1970s, USAID has supported the development of a sustainable water sector in Egypt. Beginning with emergent major infrastructure projects to address critical health issues in large urban centers and coastal cities, USAID sustained investment in the sector through smaller but critical infrastructure projects in provincial and secondary cities and small-scale simple projects in the poorest governorates in Upper Egypt. USAID-supported institutional strengthening activities and focused on helping local utilities develop their management capabilities and operations and maintenance capacity. USAID supported Egypt's water sector policy and regulatory reform, establishing the holding company for Water and Wastewater and establishing 24 regional utilities. As a result of this nearly $4 billion program, more than one quarter of Egypt's population has gained access to new and improved water supply or sanitation service and basic human health has improved dramatically.

Starting with a Sustainable WASH Formula

While constructing latrines and wells has been essential for improved public health in rural Afghanistan, it is not enough to create lasting impact. With 89 percent of rural Afghans defecating out in the open, changing long-held behaviors was the key to long-term health results. USAID's Sustainable Water Supply and Sanitation (SWSS) project mobilized communities to seek change and to build their own capacity to make it happen. Rather than using subsidies for latrine construction, SWSS trained women, religious and community leaders, and teachers in hygiene promotion. The program also trained select community members in CLTS to ensure ownership and sustainability at the community level. With 42,129 new or renovated latrines for more than 294,900 people, now communities not only have the hardware, they have the tools and the will to make real change for years to come.[27]

(including groundwater and downstream) impacts from poorly constructed or maintained septic tanks.

Opportunities for development and testing of improved, low-cost sanitation and waste management technologies should be pursued, as well as innovative management and financing approaches, to ensure sustainability and facilitate more rapid expansion of basic sanitation solutions.

Targeting priority countries in sub-Saharan Africa and South and South East Asia is key to the sanitation component of the Strategy.

IR 1.3: Increase prevalence of key hygiene behaviors

Building on its long-standing experience in promoting improved hygiene behaviors, the Strategy calls for USAID to promote three hygiene practices with the greatest demonstrated impact on health: (1) hand washing with soap at critical times, (2) safe disposal and management of excreta, and (3) improving household water storage, handling and treatment.[28] In addition, community-based approaches to behavior change, e.g., through health and agriculture extension services, will support communities transitioning from open defecation.

To accomplish sustained behavior change in hygiene, engagement with service providers will be required to ensure that a full range of products and services are available to respond to the consumer demands of both women and men. Promoting these behavior changes should draw on diverse approaches, including mass media communications, community mobilization, social marketing, promotion in schools and health facilities, and interpersonal contact and outreach. Integrating WASH into HIV care and support programs is essential, and a growing body of literature has demonstrated that WASH practices are particularly important in programs to reduce the impact of HIV and AIDS.[30]

Improving the capacity of local public and private sector actors to design, implement and evaluate locally appropriate and effective hygiene and sanitation promotion programs, and to create demand for products and services is crucial. This includes working with a broad range of providers of hygiene products and services, including local private sector actors, to provide household water treatment and storage technologies, soap, and other products to facilitate optimal hygiene behaviors. Supporting private sector networks that are already successfully promoting and selling products and services can help create demand for products and services.

Small Actions Leading to Large-Scale Change

When added together, small, doable actions can result in large-scale, lasting change. USAID's Hygiene Improvement Project (HIP) focuses hygiene behavior changes around hand washing with soap at critical times, safely disposing of feces, and household water treatment and safe storage. By integrating hygiene into multiple sectors, such as in schools and with people living with HIV/AIDS, the project delivered sustainable results to communities and households. Follow-on project WASHplus builds on HIP's successes by targeting schools and expanding to include nutrition and maternal and child health. Its Schools Promoting Learning Acievement through Sanitation and Health project in Zambia focuses on learning, and uses a framework for sustainability around cross-cutting issues, such as menstrual hygiene management and gender equity.[29]

Bringing Sanitation Access to Girls at Schools

In Somalia, cultural norms require absolute privacy for girls when using the latrines. Without proper access to sanitation facilities, the academic achievement of all children can suffer from the high truancy rates that result from illness. USAID's School Environment and Education Development for Somalia (SEEDS) project works to maintain a healthy environment within schools by improving WASH facilities, especially ensuring the separation of latrines for boys and girls. Rehabilitation and construction of latrines and hand washing stations under SEEDS has led to an overall increase of 32,337 new students, of whom 12,666 were girls, and access for 3,686 female students to improved WASH facilities and practices in FY 2011 alone.[31]

SO 2 – MANAGE WATER IN AGRICULTURE SUSTAINABLY AND MORE PRODUCTIVELY TO ENHANCE FOOD SECURITY

SO 2 Measures of Success 2013-2018

- Increase water use productivity and efficiency in rainfed areas
- Increase water use productivity and efficiency in irrigated agriculture systems

To ensure there are sufficient water resources available to simultaneously meet expanding food security needs while supporting an effective local water use balance, food producers must use water resources more effectively, economically, and in more environmentally sustainable ways. SO2 helps guide the Agency's Feed the Future investments in rainfed and irrigated agriculture with special attention given to rainfed agriculture.

Country selection and prioritization for water programming in agriculture will align with Feed the Future priority countries.

An integrated approach to enhance food security must consider the water productivity of the basin as a whole, and the water related tradeoffs and synergies between health needs and different types of productivity in both agricultural and natural food producing systems. This approach addresses the competing demands of multiple water users including households, agriculture, and industry. These principles are being incorporated in multi-year strategies developed by Missions with Feed the Future programs and are continually reinforced during implementation through technical support from USAID Washington.

Sufficient investments are critical for watershed management, as well as creative use of "natural" infrastructure to reduce erosion, mitigate floods, and ensure that ecosystem services are maintained and preserved for use by future generations. By stressing the notion that farming is an enterprise and effective water management is an investment input, USAID support can help producers take on the responsibility of covering recurring costs that can be accrued to water management. This includes labor costs associated with irrigating a crop, pumping costs, water user fees, and routine irrigation system maintenance costs. By placing a price on irrigation water, or other water distribution mechanisms, efficient allocation of water can be encouraged that reflects water's value and scarcity, and the need to build sustainable systems.

Water management affects both coastal and watershed regions, and there is an important role of aquaculture in food production and fish as a source of protein in diets. The Strategy, however, is focused on land-based food production as the area with the greatest potential for development impact given USAID's current resource investments. USAID, through Feed the Future and other activities, can still support fisheries and coastal areas outside the focus of this Strategy.

The private sector is a key and necessary ally for implementation and scale-up of the most promising farmer associations, agro-processing companies, local water associations, and buyers which increasingly understand water-related risks associated with their agricultural supply chains, though may be not yet aware of how climate change and other stresses can exacerbate these risks. Priority should also be given to non-point sources of pollution from agriculture and livestock activities to encourage investment in pollution control practices and technologies by farmers, fishers, investors, managers, and other stakeholders.

The Strategy supports USAID efforts to improve agricultural water management by promoting transparency and inclusiveness, paying particular attention to elevating the voice of women and their rights and address their specific and unique needs in this process. Opportunities for women to lead in water governance and to increase their technical and management capacities should be identified and expanded, where

appropriate. In addition, decentralized water use governance structures, such as local water user associations, community-based organizations, producer groups, and other local organizations often provide a platform where women gain management and leadership experience.[32]

Finally, regardless of the amount of food produced and its availability, nutritional status can still be undermined by many factors, including high rates of diarrheal disease that reduce absorption of nutrients and cause under-nutrition and stunting in children. Close coordination of production activities with nutrition, domestic water supply, sanitation, and hygiene interventions, already described in SO1, is essential to ensure a healthy and properly nourished population.

IR 2.1: Improve the efficiency and sustainability of food production from rainfed agricultural systems.

The greatest and most cost-effective potential for crop yield increases are in rainfed areas. Half of the increase in the projected demand for water by 2025 could be met by increasing the efficiency of irrigation in these areas.[33] Almost 80 percent of agricultural land worldwide relies on rainfed production systems, and these systems provide 62 percent of the world's food. There is a wide regional variation in the percentage of rainfed cultivated land. For example, the percentage of rainfed cultivated land in sub-Saharan Africa is almost 95 percent, for Latin America it is 90 percent, for the Near East and North Africa it is less than 70 percent and for South Asia it is less than 60 percent. Variable rainfall, dry spells, and droughts make rainfed farming a high-risk endeavor.[34] This is particularly true in Africa, where only about 14 percent of the area is relatively free of stress.[35] USAID water programming will address the specific conditions of each region.

Support for small-scale, often privately and farmer-owned, micro-irrigation as a point of investment has the potential to impact millions of farmers in sub-Saharan Africa and Asia and drive significant improvements in crop yields in smallholder agriculture. The majority of the Feed the Future investments to increase agricultural production are in areas where farmers rely on rainfed agriculture, with significant small-scale irrigation efforts ongoing in Tanzania, Ghana, Mali, Tajikistan, Haiti, and Ethiopia that include rehabilitation of defunct irrigation schemes.[37] In places like Cambodia, Ethiopia, and Kenya, where climate change is increasing the severity of dry conditions in the dry season, USAID is helping rainfed agricultural systems incorporate supplemental irrigation measures.

A Winning Watershed Formula Feeds Haiti

About 60 percent of Haiti's nine million people are farmers, but the country still imports more than 50 percent of its food. Farmers need help protecting their land against extreme weather, preventing soil erosion, and improving agricultural productivity. Through integrated Feed the Future activities across entire watersheds, USAID's Feed the Future West (formerly WINNER) program is training Haitians in modern farming techniques and providing them with access to innovative science and technological advances.

The result is that while the watersheds improve, production and incomes increase simultaneously. In 2012, increases in productivity yielded $9 million in gross margin for farmers. "I have been a farmer for five years and I used to barely scrape by," said farmer Ronald Champagne. "I am producing a lot more since I received assistance, and my products are of better quality." Average production of corn increased by 341 percent, beans by 100 percent, and rice by 58 percent.[36]

In many instances, the major obstacle to rainfed agriculture is not the absolute volume of rainfall, it is management of that rainfall. There is potential for increasing production in dry, sub-humid, and semi-arid rainfed regions around the world because approaches already exist which can double productivity in rainfed agriculture.[39]

New scientific innovations and information technologies can also be effective. Cases in point include the use of drought or flood tolerant seed varieties such as "scuba" rice and hydro-meteorological and forecasting tools, e.g. RANET (Radio and Internet Technologies for the Communication of Weather and Climate Information for Rural Development).[40 41]

Low-Tech Solutions to Water Scarcity

With 80 percent of the labor force employed in agriculture and 51 percent of the population living on less than $1.25 a day, the importance of water to the food security and economic development of Mali cannot be overstated. The key to combating the challenges of climate change lies in understanding local conditions. Poor soil infiltration rates were plaguing Mali's rainfed farms, so USAID worked with farmers on ridge tillage to help increase the efficiency of rainwater capture for improved agricultural production. Ridge tillage has boosted cereal crop yields by 30 to 50 percent and reduced water runoff by 20 to 40 percent. This relatively simple intervention has had wide-ranging impacts on food security, ecosystem health, and livelihoods. Recharged local water tables allowed women to establish dry season gardens, and increased the productivity of high-value tree crops that provide nutritious food, oil, construction, and forage products.[38] On a regional scale, ridge tillage techniques have been replicated in Senegal and the Gambia.

IR 2.2: Improve the efficiency and sustainability of food production from irrigated agricultural systems.

USAID will focus on increasing irrigated agriculture in select countries, including expanding irrigation in a responsible, sustainable, and climate-resilient way. The most cost-effective investment for USAID in irrigated systems will be in improving the efficiency of existing irrigation systems and building the capacity to manage those systems like a business, whether through community based organizations or private investments. While irrigation can provide significant benefits, the investment costs are also large, and financing will be a challenge in many places. The environmental and social implications of expanding irrigation, including pumping aquifers dry and leaving drinking water saline and unusable, can be significant and must be managed appropriately.

USAID supports building the capacity of producer groups to manage irrigation systems as a business within viable value chains.[43] Absent such an approach, irrigation infrastructure has often fallen into disuse after the end of a project because benefits were too small and/or users were unable to cover recurring costs.

Weak management and poor farming practices can adversely affect water resources, and water-related problems can adversely affect food production, and the availability of safe water for drinking. Stripping land of its natural vegetation, for example, can result in increased flooding, erosion, hillside instability, and reduced water infiltration. Improved agronomic practices such as drought and flood-tolerant varieties, forecasting tools, conservation tillage, cover crops, integration of perennials, and other practices can help raise production, enrich soil organic matter, and ensure that more rainfall is absorbed and used for production.

Investments in Year-Round Farming Pay Off

In Nepal, 66 percent of households experience food shortages each year. Farmers, who make up more than two thirds of the workforce, struggle to maintain a subsistence income because they have no access to irrigation facilities and limited finances to invest in them. The Nepal Economic Agriculture and Trade (NEAT) program helps cut input costs and boost crop productivity by installing new and rehabilitating existing irrigation systems and training local technicians to maintain them, which enables year-round farming. Sita Rana Magar, farmer and matriarch of a family of five said her output had increased tenfold: "I have no debt to pay and no problem of living hand-to-mouth." NEAT's irrigation team works closely with farmers to understand local water resources, water demands, and topography to determine and install appropriate, sustainable systems for specific areas. To foster ownership, farmer group members pool funds for maintenance, and individual farmers pay for their own operating costs.[42]

Improving productivity with environmentally-friendly irrigation in Nepal. Photo by Fintrac Inc.

The following governance and management approaches can increase the efficiency of an irrigation system:

- Canal rehabilitation and maintenance;
- More efficient on-farm water management techniques;
- Incorporation of water-efficient and drought-tolerant crops and varieties;
- Combined use of surface water and groundwater;
- Adoption of innovative irrigation management schemes by water users associations; and
- Expanded reuse of treated wastewater.

In addition to multi-stakeholder decision-making and planning to ensure sustainability, a key step in moving toward more rational water management is to support policy initiatives that use pricing mechanisms to create incentives for more efficient water use and ensure fair and equitable water distribution, including a measurement system that disaggregates the impacts by gender. USAID will support efforts to carry out economic valuation of water and watershed ecosystem services to better account for the financial value of natural systems through cost-benefit analysis and impact assessments for Feed the Future programs.

The Strategy calls for programs to reduce the vulnerability of farmers to rainfall variability by diversifying household economies and investing in systems that are less vulnerable. The Strategy also supports increased efforts to encourage national and local stakeholders to incorporate climate and ecological vulnerabilities into their planning and decision-making processes.

4. OPERATIONAL PRINCIPLES

The Strategy's operational principles provide the foundation of how water issues will be integrated into USAID programming. These principles, consistent with the USAID Policy Framework, are essential to improving health and increasing food security programming.

OPERATIONAL PRINCIPLES:

- Support host country ownership
- Build in sustainability from the start
- Apply integrated approaches to development
- Leverage "solution holders" and partner strategically
- Promote gender equality and female empowerment
- Leverage science and technology
- Measure and evaluate impact
- Achieve resilience

SUPPORT HOST COUNTRY OWNERSHIP

USAID should be responsive to each country's development path, in accordance with the principle of country-led development. Programs should seek out and support country leaders and institutions that can help promote water policies and programs in those countries. USAID investments should build on existing efforts, assessments, and programs that partner countries and/or other donors may have already taken, such as those undertaken in partnership with the Consultative Group on International Agricultural Research (CGIAR) centers, or collaboratively with U.S. universities.

Many nations are devolving responsibility for natural resource management, land use planning, water and sanitation service delivery, and economic zoning to regional or municipal governments. Due to a lack of attention to informal settlements and peri-urban areas, these populations may often be deliberately ignored or excluded from service by municipal administrations. At the same time, water challenges are inherently global in nature and some issues may be best dealt with at the multinational or trans-boundary level. Good practices in democratic governance emphasize the importance of working at the level where relevant decisions are made, with attention to the lowest and most local levels of government. USAID will invest in social analysis, capacity building and developing the capacity of institutions at the appropriate governance level. USAID will ensure that its programming is inclusive and transparent, and that planning processes involve a range of stakeholders, including men and women, youth, indigenous peoples and other vulnerable and marginalized populations.

BUILD IN SUSTAINABILITY FROM THE START

Approaches that support sustainable health and food security are indispensable to meet long-term development objectives. Globally, the water community is moving beyond a simple focus on supporting first-time water supply access to a more thoughtful consideration of ensuring that such access is sustained over time. USAID has been on the cutting edge of sustainable WASH service delivery in urban and rural areas, and this Strategy emphasizes our continuing commitment to this critical dimension of the water challenge. Sustainability of agriculture systems is the key to long-term food security. The pillars of sustainability for water programs include: integrated water resource management, sound governance and citizen participation, inclusion of the unique roles, responsibilities, needs, and access concerns of women, appropriate environmental design, and long-term behavior change.

COMPREHENSIVE COMMITMENTS YIELD ACCESS TO WATER

In Indonesia, where more than 100 million people lack access to safe water, and 61 percent of the urban population are not served by piped water, a strong relationship between USAID and the Government of Indonesia has been the key to the sweeping improvements in service delivery at all levels under the Environmental Services Program (ESP) and the Indonesia Urban Water, Sanitation, and Hygiene (IUWASH) project. Working side-by-side to improve the capacity of service providers to expand coverage, the involvement of civil-society in decision-making, and the enabling governance and financial systems, IUWASH is targeting sustainable, improved access for two million people and improved sanitation for 200,000.[44 45]

To support sustainability, the Strategy seeks to strengthen governance and institutional capacity building in such areas as adapting to the water-related impacts of climate change, delivering potable water to families, ensuring adequate supplies of water are available to support economic growth, and mitigating potential conflict around water scarcity at the local, national, and – with the U.S. Department of State – regional levels. This Strategy supports building the capacity of women to lead in water governance, calls for greater support for professional advanced degrees for local professionals in water-related fields, and emphasizes the development of technical and leadership capacities among local stakeholders.

Additionally, through the implementation of the Water and Development strategy, USAID will seek to invest in longer-term monitoring and evaluation of its water activities in order to assess sustainability beyond the typical USAID Program Cycle and to enable reasonable support to issues that arise post implementation.

APPLY INTEGRATED APPROACHES TO DEVELOPMENT

People depend on freshwater and coastal, marine ecosystems from "ridge to reef" to protect human health and safety, reduce risks from floods and droughts, support recreational and aesthetic functions, maintain water quality, and assimilate waste. Many of these functions are water and watershed related. Whether those critical services succeed or fail depends in a significant way on how the ecosystem water resources are managed. Policy tools, technical approaches, and market mechanisms that keep ecosystems and watersheds healthy will be integrated across water activities where their application supports USAID's development objectives in health and food security.

Integrated water resource management can help to ensure that demands for water are equitably met without significant negative impact on users and the environment. A comprehensive approach must consider the water productivity of the basin as a whole, and the water related tradeoffs and synergies between health needs and productivity in both agricultural and food producing, natural systems. An integrated approach addresses the competing demands of multiple water users -including households, communities, agriculture, and industry.

LEVERAGE "SOLUTION HOLDERS" AND PARTNER STRATEGICALLY

Partnerships are a critical component to achieve the objectives and desired results of this Strategy. These partnerships will help develop innovative approaches to financing, specifically focused on achieving the Strategy's two core objectives.

Private sector partnerships should focus on promoting market-based models of service delivery to mobilize local entrepreneurs to provide water-related products and services along the entire value chain. The Strategy encourages coordination with new and existing partners and key solution-holders, particularly non-governmental organizations, civil society, the private sector, local and national governments, and international donors. The Strategy supports a more concerted effort to encourage strategic relationships with bilateral and multilateral donors. Achieving the Strategy's goals will require concerted effort to leverage support through multilateral development banks and credit authority mechanisms, such as USAID's Development Credit Authority (DCA), the Export-Import Bank (EXIM), and the Overseas Private Investment Corporation (OPIC).

PROMOTE GENDER EQUALITY AND FEMALE EMPOWERMENT

The Strategy ensures that programming interventions meet women's needs. This includes safety and security issues, specific concerns related to disaster risk reduction for women and children, reducing unpaid labor, and leveraging women's leadership. In both the home and the community, the role women play in ensuring the success of WASH programming and access to safe water and sanitation is paramount.

Women, in much of the developing world, are responsible for finding and providing water for their families and gardens. This is in addition to their responsibilities related to crop production and livestock care.

Women and girls also bear the significant time burden and risk of collection from distant water sources. Particularly in poor rural areas, improving access to safe water, and thereby reducing the time women and girls spend on collection can lead to increased girls' attendance at school and women's involvement in income generating community and leisure activities. Adequate sanitation facilities in schools (e.g., private, clean, and gender-segregated) are especially crucial for ensuring that girls remain in school.

The Strategy seeks to ensure that women are empowered to effectively advocate for their perspectives and priorities, and that they are able to fully engage as managers, and partners and entrepreneurs in water-related activities and enterprises. Missions can draw upon guidance provided in the Agency's Gender Equality and Female Empowerment Policy for integrating gender equality objectives in project design and gender advisors for technical support when developing and implementing water programs.

WASH FOR LIFE

USAID, with co-funding from the Bill & Melinda Gates Foundation supports promising new approaches in the WASH sector, through the WASH for Life initiative. Beginning in 2011, and continuing over four years, this $17 million partnership will use USAID's Development Innovation Ventures (DIV) program to identify, test, and help transition to scale evidence-based approaches for cost-effective and sustained WASH services in developing countries. The DIV WASH for Life program will contribute to the growing evidence base for cost-effective approaches in this sector and aims to attract further investment to those solutions that prove successful.

One innovative idea supported by DIV is a 12-month pilot by Sanergy to build and franchise a dense network of 60 low-cost latrines to residents in Lunga Lunga, a slum of Nairobi, Kenya. The program collects waste daily and processes it as fertilizer and biogas. Designed by MIT engineers and architects, the low-cost, modular hygienic latrines can be assembled in one day. The sanitation centers are franchised to local entrepreneurs and local youth groups. Revenue from the organic fertilizer and biogas energy add to the model's profitability. Sanergy aims to expand to 3,390 centers reaching 600,000 slum dwellers – creating jobs and profit, while aiming to reduce the incidence of diarrhea by 40 percent.[46]

ENGAGING WOMEN AND GIRLS IN IMPROVEMENTS IN SANITATION AND HYGIENE

The Mara region is one of the driest areas in Kenya. Women must walk up to six hours to get water under dangerous conditions. USAID is partnering with World Vision International to improve women's status, empowerment and safety. The project, which will ultimately benefit more than 150,000 people, includes activities such as building wells and latrines near the community, programs to improve hygiene and sanitation practices, and capacity building for health workers. There has also been support for setting up water user associations and village savings and loan groups, emphasizing the participation and empowerment of women to take leadership positions that support the long-term sustainability of the new organizations.[48]

LEVERAGE SCIENCE AND TECHNOLOGY

When designed appropriately for the local context, and with attention to inclusiveness and gender sensitivity, innovations in science and technology can dramatically improve WASH and the management of water resources at regional, national, and local scales. Investments in technologies such as hydro-meteorological, and groundwater monitoring stations; ICT and geographic information systems; Supervisory Control and Data Acquisition (SCADA) systems and remote sensing; as examples, can help host governments better manage water and sanitation facilities, extend or improve access, promote better hygiene, protect crucial ecosystem services, and operate more transparently. The data collected through these sources can be used in hydrologic, hydraulic, and water management modeling software to predict the possible outcomes of water use strategies, assisting in a range of policy issues including transnational water agreements, national water use strategies, and municipal water management systems. These and other innovations such as conservation tillage, crop rotation, drought resistant crops,

and new irrigation methods should lead to improved food security by increasing agricultural output, reducing costs, and building the resilience of local communities.

ACHIEVE RESILIENCE

Through increased efforts to support integrated water and watershed management practices, the Strategy seeks to strengthen adaptation and resilience to climate change, in accordance with the USAID Climate Change and Development Strategy. USAID's policy and program guidance on Building Resilience to Recurrent Crisis will further guide Agency programming and development approach.

INTEGRATING RESILIENCE AND WASH TO TACKLE POVERTY

While moving herds in search of pasture and water for their livestock herds and for their communities, pastoralists have been hit hard by changing weather patterns and decreased rainfall in Ethiopia. When they can better forecast these changes, they not only more readily adapt to changing climatic conditions but they can protect their livelihoods. USAID supports the integration of these needs with access to clean and sustainable water sources under the Water, Sanitation, and Hygiene Transformations for Enhanced Resilience (WATER) Project. This integration has led to greater resiliency through early warning systems and improvement of rangeland and water management through community mobilization and support to customary institutions, including peace building through a "do no harm" approach. So far, 146,000 people have access to water year round as a result of USAID assistance.[49]

MEASURE AND EVALUATE IMPACT

The Water Office within the Economic Growth, Education and Environment (E3) Bureau will establish a research agenda that defines key water and development challenges to be addressed as part of the Strategy implementation process and determine how impact will be measured and evaluated. This learning agenda will identify and disseminate lessons learned and best practices, including developing quantitative indicators and models related to the two SO. This should include collaborative research on the most effective integrated projects that combine water programs with other Agency program areas, such as global health, food security, conflict, education, and climate change. Both U.S. and host country institutions of higher education can be key partners in applied research to support the integration and wise use of water resources. Water-related results and lessons learned from Agency programs will be identified and widely shared within USAID and the broader international water community.

5. ORGANIZATIONAL ROLES AND RESPONSIBILITIES

This section highlights organizational elements necessary to ensure effective adoption of the Strategy's principles and priorities. This Strategy will have both long-term and short-term implications beginning in FY 2013 and continuing for the duration of this Strategy. The USAID Global Water Coordinator, working together with the leaders of the Bureau for E3, Bureau for Food Security (BFS), Bureau for Global Health (GH), Bureau for Policy, Planning, and Learning (PPL), selected offices in the Bureau for Democracy, Conflict and Humanitarian Assistance (DCHA), regional bureaus, and individual Missions will coordinate the implementation of the Strategy.

To promote effective Agency-wide coordination, a cross-cutting Water Sector Council will be established to bridge offices and responsibilities. The Council will serve as the technical platform for discussion and enhanced coordination on water-related topics at USAID. The Council will be chaired by the Global Water Coordinator and have representation from all regional and technical Bureaus and offices engaged in water-related programming.

The USAID offices and personnel listed below have specific roles related to water programming:

USAID Global Water Coordinator

The Coordinator is the senior representative within USAID responsible for coordinating the response to key water policy initiatives, including USAID's Strategy. The Coordinator will also serve as the primary spokesperson and liaison with public and private organizations, including interagency partners such as the U.S. Departments of Defense and State, foreign development agencies, and Congress, to coordinate efforts.

Office of Water, Bureau for Economic Growth, Education, and Environment (E3/W)

The Office of Water, in the E3 Bureau, provides USAID with technical leadership in areas related to water. The Water Office is the principal USAID technical office responsible for implementation of this Strategy including providing technical support, developing appropriate indicators, and reporting progress toward the global projections. The Water Office provides Missions with technical support and training from Washington and in the field. The E3 offices of Global Climate Change and Energy and Infrastructure will also provide technical support and training.

Bureau for Global Health (GH)

The Bureau for Global Health's Environmental Health Team provides technical leadership for sanitation and hygiene within USAID, and is responsible for implementing water, sanitation and hygiene programs. In collaboration with the E3 Water Office, GH has worked to increase the visibility and quality of WASH programs in the Agency and to build Mission capacity to manage them. GH also has lead responsibility for implementing Strategy recommendations as part of maternal and child health, HIV/AIDS and nutrition programs.

Bureau for Food Security (BFS)

In order to increase food production, and therefore food security, the BFS is making significant investments in water, including irrigation, water for agro-processing, rain harvesting, and conservation of water resources through agro-forestry, among others. BFS is responsible for analyzing supply and demand for water as related to food security, and for ensuring that its investments to increase food production are sustainable. BFS will support the development of relevant tools, toolkits, training materials and best practices, in coordination with the Water Office, in areas related to the intersection of water, food production, food security, and the integration of health objectives into Feed the Future programs.

Bureau for Policy, Planning, and Learning (PPL)

PPL will ensure that the Strategy incorporates relevant policies and directives and is properly aligned with the CDCS process as well as other elements of the program cycle.

Office of Budget and Resource Management (BRM)

The BRM is responsible for USAID's internal budget process and thus plays a key role in budget formulation and allocation. Funding is provided in such a manner as to maximize development and humanitarian impact and comply with legislative directives.

Office of Conflict Management and Mitigation (CMM)

CMM is organized within DCHA to lead USAID's efforts to identify and analyze sources of conflict. CMM will work with officers developing water programs to analyze the role water can play in both conflict mitigation and prevention. CMM may also conduct conflict assessments for water programs and support the development of tool kits for programs in water conflict areas.

Office of U.S. Foreign Disaster Assistance (OFDA)

OFDA is charged by the President of the United States with directing and coordinating international U.S. Government disaster assistance. OFDA continuously monitors global hazards, identifies potential areas of need, and stands ready to respond whenever disaster strikes. Disasters related to water include floods and storms, emergency WASH needs, and responses to slow-onset emergencies such as prolonged drought leading to food insecurity.

Regional Bureaus

Regional bureaus work in concert with the E3 USAID's Global Water Coordinator , the E3 Water Office, and BRM to identify during the budget formulation and allocation processes where financial resources should be allocated. The technical experts in the regional bureaus are responsible for program design and evaluation, reviewing Mission CDCSs, and for determining if Missions in their region have allocated adequate funds to address Agency and country water-related development priorities and objectives.

Missions

Missions are responsible for programming water investments, managing for results, and for evaluating water projects in order to meet their development goals as articulated in their CDCS. Missions are also responsible for continuing to provide data through existing reporting processes to enable USAID to present a consolidated report to external stakeholders on USAID's overall water investments, as well as inventory best practices.

In budget requests and CDCS submissions, Missions proposing food security and global health programs should consider, as relevant and appropriate, how water interventions help support their program objectives. Missions proposing WASH programs should consider linkages between WASH programs, and food security and global health efforts.

Installing micro-jet irrigation in Zimbabwe. Photo by Fintrac Inc.

6. CONCLUSION

Achieving water security for regions, nations and individuals is a great development challenge confronting the world today.

At the individual and community levels, nothing is more fundamental to a safer and more secure future than ensuring the health of each and every child in a family and in their community. Nothing is more important than providing those same children with access to clean and safe water, the chance to live in a healthy environment, and adequate nutrition. At a global level, this Strategy addresses the many challenges of sustainable access to safe water and sanitation services for all, as well as to improve food security, through the Presidential Initiatives of Global Health, Feed the Future, and Global Climate Change.

The Strategy raises the importance and visibility of water as a development priority, and highlights its importance to meeting the development imperatives of improved health and increased food security. Improving human health and welfare, and maintaining the sustainability of natural systems, requires a coordinated global response to the challenges of water access for present and future generations. This Strategy reflects the commitment of the U.S. Government to work in partnership with the global community to meet these challenges.

Making water accessible for everyone.

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