U.S. Government Global Water Strategy

2017

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2017

"Water may be the most important issue we face for the next generation."

- Donald J. Trump, President of the United States

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Executive Summary

There is a growing global water crisis that may increase disease, undermine economic growth, foster insecurity and state failure, and generally reduce the capacity of countries to advance priorities that support U.S. national interests. To address these challenges and contribute to a healthier, safer, and more prosperous world, the United States will work to support a water secure world where people have sustainable supplies of water of sufficient quantity and quality to meet human, economic, and ecosystem needs while managing risks from floods and droughts.

This work will be guided by four interconnected strategic objectives:

- Increasing sustainable access to safe drinking water and sanitation services, and the adoption of key hygiene behaviors;
- Encouraging the sound management and protection of freshwater resources;
- Promoting cooperation on shared waters; and,
- Strengthening water-sector governance, financing, and institutions.

To achieve these objectives, the United States will provide technical assistance; make targeted investments in sustainable infrastructure and services; promote science, technology, and information; mobilize financial resources; engage diplomatically; and, strengthen partnerships and intergovernmental organizations. This will be achieved through direct assistance to countries, scientific and technical engagement, and support to international organizations, institutions, and partnerships. Foreign assistance can only provide a small portion of the funds needed to meet water and sanitation needs globally and must be used strategically to mobilize financial resources from host country governments, the private sector, and capital markets, where appropriate. The United States will focus its efforts on countries and regions where needs and opportunities are greatest and where U.S. engagement can best protect our national security interests. This includes high priority countries designated under the Senator Paul Simon Water for the World Act of 2014 for October 1, 2017 – September 30, 2018. Overviews of country-specific plans for implementing this Strategy in high priority countries and geographic areas are appended to this Strategy.

More than 17 U.S. government agencies and departments contributed to the development of this Strategy. Many contributed specific plans describing how they will work to implement this Strategy. Public and private stakeholders also contributed through public fora.

Implementation of the Global Water Strategy (the Strategy) will be coordinated in Washington, D.C. through the Interagency Water Working Group, and in the host countries through U.S. Missions. Together, we are working to create a more water secure world.

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The Global Water Strategy

THE WATER CHALLENGE

Hundreds of millions of people across the planet do not have access to safe drinking water. Billions suffer the health impacts of poor sanitation and millions of others live without sustainable supplies of water, or are threatened by floods or droughts.

Without improved sanitation and sustainable supplies of water of sufficient quantity and quality, many countries will suffer from increased poverty and disease, food and energy insecurity, economic dislocations, and cross-border and regional tensions. These problems have the potential to undermine economic development, exacerbate migration pressures, increase civil unrest, aid terrorist recruitment, reduce trade and export opportunities, and prevent countries from advancing policies and programs important to the United States. Safe water and sanitation are fundamental to solving challenges to human health, economic development, and peace and security.

Water problems are difficult to solve. The poor and marginalized, in particular women and girls, are the most difficult to reach. Local capacity is often weak and financial resources limited. Water-related issues are frequently not a priority for local or national governments; this is especially true for sanitation. Weak policy and regulatory environments can make local capital hard to find and hinder coordinated decision-making around the management of water resources. At a national level, water is often viewed as a strategic resource with national security implications.

Water is also an opportunity. Water is an entry point to advance core democratic values around equality, transparency, accountability, women's empowerment, and community organization. Governments that deliver basic water and sanitation services are often seen as working on behalf of the people – creating a more stable environment. Countries that cooperate on water are less likely to go to war and networks established for water and sanitation service delivery have been used to strengthen community responses to challenges such as Ebola and other infectious disease outbreaks. In other words, water can be a means of strengthening governance, civil society engagement, and resilience at all levels.

Finally, the United States benefits directly from engaging on international water issues. U.S. technologies, experience, and best practices are in high demand, which presents an opportunity for the U.S. private sector. The global water and wastewater market currently exceeds $700 billion annually and is growing. Demonstrating U.S. approaches and technologies globally can increase U.S. exports and jobs. Work on water globally gives us access to knowledge and expertise that can help us address water related challenges at home.

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VISION OF THE GLOBAL WATER STRATEGY

Our vision is a water secure world, where people have sustainable supplies of water of sufficient quantity and quality to meet human, economic, and ecosystem needs while managing risks from floods and droughts.

This means:

- Increasing access to safe drinking water and sanitation and improving hygiene practices, especially in regions where there are significant populations without such access;
- Improving water-resources management, especially in countries where water issues may be impeding social and economic development or contributing to state fragility and/or failure; and,
- Promoting cooperation on shared waters in regions where water is, or may become, a source of tension and conflict.

The Strategy aims to reduce disease and save lives, eradicate poverty, and promote sustainable economic growth, increase food and energy security, build peace and security, and open up international markets to U.S. technologies and approaches. U.S. international engagement will also inform best practices and cultivate opportunities to strengthen water security in the United States.

U.S. GOVERNMENT STRATEGIC OBJECTIVES

To advance the vision of the Strategy, the U.S. government will work with partner countries, the private sector, and other stakeholders to advance four interrelated strategic objectives. These objectives should be viewed as complementary pillars that together contribute to improving water security at the national and regional level.

STRATEGIC OBJECTIVE 1: PROMOTE SUSTAINABLE ACCESS TO SAFE DRINKING WATER AND SANITATION SERVICES, AND THE ADOPTION OF KEY HYGIENE BEHAVIORS.

As of 2015, 2.1 billion people (29 percent of global population) lacked access to safely managed drinking water and 4.5 billion people (61 percent) lacked properly managed sanitation.[1] Coupled with poor hygiene, the lack of adequate water and sanitation is a leading cause of disease and death worldwide: it is a key factor in global malnutrition and stunting, and contributes to the spread of many neglected tropical diseases, such as schistosomiasis, and serves as the breeding ground for mosquitoes that carry malaria and Zika.[2] The burden of disease, coupled with time spent collecting water, represents a significant drag on the economies of developing countries. Women and girls are disproportionately affected, since they often bear primary responsibility for providing drinking water and sanitation to their families, and for taking care of the sick.

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[1] "Progress on Drinking Water, Sanitation and Hygiene: 2107 Update and SDG Baselines." UNICEF/World Health Organization, July 2017.
[2] "Fact Sheet: The Top 10 Causes of Death." World Health Organization, January 2017.

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Moreover, access to sanitation for women and girls is particularly crucial to preserving basic dignity, improving access to education and economic opportunities, and reducing gender-based violence. Finally, improving access to basic services such as water and sanitation can be an important aspect of efforts to strengthen government stability and accountability.

To address these challenges, the U.S. government will increase access to safe drinking water, sanitation, and hygiene for the underserved and most vulnerable.

Key outcomes of Strategic Objective 1 will include:

- *Increased number of people in households and institutions with sustainable access to basic or safely managed drinking water and sanitation services; and,*
- *Decreased mortality/morbidity from causes linked to lack of drinking water, sanitation, and hygiene.*

STRATEGIC OBJECTIVE 2: ENCOURAGE THE SOUND MANAGEMENT AND PROTECTION OF FRESHWATER RESOURCES.

By 2050, some regions could see their economic growth decline by as much as six percent of Gross Domestic Product (GDP) as a result of water pollution, increasing water demand, and dwindling water supplies.[3] For many countries, these losses may be as high as 15 percent of GDP, which could significantly increase state fragility and the risk of failure.[4] The protection and sound management of water resources across all uses — especially in response to water-related disasters — are critical not only to avoiding major economic losses, but also to ensuring the sustainability of drinking water supplies, local livelihoods, power production, and economic and agricultural productivity.

Watershed protection and restoration are key elements to improving water quality, increasing water availability and groundwater recharge, and reducing the impacts of flooding. Managing agricultural practices and increasing the efficiency of agricultural water use are essential to both protecting water quality and increasing water and food security. Water allocation planning is also critical to optimizing the benefits of water across competing uses at the local and basin levels. Finally, correct information underpins sound decision-making. Accurate and timely water and hydro-meteorological data are vital to water resources planning, and to anticipating changing conditions that can save lives, reduce costs, and maximize the impact and sustainability of other interventions.

To address these challenges, the U.S. government will promote common-sense conservation and a risk-based approach to water resources management by engaging stakeholders to identify the greatest needs and vulnerabilities and to prioritize actions that can address those risks most effectively and efficiently. These efforts will also seek to create greater integration between water management activities and programs aimed at bolstering the resilience of communities,

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[3] *High and Dry: Climate Change, Water, and the Economy*. The World Bank Group, 2016.
[4] *Ibid.*

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and build bridges among water management, humanitarian assistance, and longer-term food security to ensure sustainability.

Key outcomes of Strategic Objective 2 will include:

- *Increased access, quantity, and quality of water supplies to meet basic human needs, support economic growth, enhance food security, and maintain ecosystems;*
- *Improved preparedness for and resilience to water related disasters and future hydro-meteorological changes, and greater linkages between water programs and food security activities; and,*
- *Greater capacity of the United States to anticipate and meet domestic and global water challenges.*

STRATEGIC OBJECTIVE 3: REDUCE CONFLICT BY PROMOTING COOPERATION ON SHARED WATERS.

More than 260 river basins and 600 aquifers are shared between two or more countries.[5] In many of these basins or aquifers, no formal agreement or institutional relationship exists between the parties to govern use of these shared water resources.[6] As these resources degrade or become scarce, competition is likely to increase, raising tensions and increasing the likelihood of conflict. These can be particularly challenging problems to solve, as there are often legitimate competing interests. Countries often view water as a strategic asset and a national security priority. Water disputes are often embedded within a broader context of social, economic, and political challenges or animosities, and the data on disputed water systems are often sparse or not publicly available. Many of these same challenges also exist at the local level as competition increases between different communities or water users, such as farmers and pastoralists. At the same time, water issues represent an important means of bringing communities and countries together, strengthening regional integration, and providing a stabilizing influence in regions of conflict.

To reach this strategic objective, the U.S. government will work to strengthen the political will for cooperation, and promote the development of agreements and mechanisms that support the cooperative management of shared water resources in regions where water is, or may become, a source of conflict.

Key outcomes of Strategic Objective 3 will include:

- *Increased number of cooperative events on water in priority regions; and,*
- *Stable, adaptive, and responsive institutions that support the cooperative management of shared waters.*

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[5] *UN World Water Development Report*. United Nations, 2017.
[6] *Atlas of International Freshwater Agreements*. United Nations Environment Programme (UNEP), Food and Agriculture Organization of the United Nations (FAO), and Oregon State University, 2002.

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STRATEGIC OBJECTIVE 4: STRENGTHEN WATER SECTOR GOVERNANCE, FINANCING, AND INSTITUTIONS.

Sound governance is essential to achieving water security. National governments must make water and sanitation issues a priority in their development plans, policies, and strategies, while both national and local governments must create enabling environments that will improve drinking water and sanitation service delivery, enhance water sector coordination, mobilize investment, and incentivize the management of watersheds and water resources. When countries have effective policies, country-led processes, and institutions capable of delivering sustainable water and sanitation services and managing water resources transparently, they attract investment from both domestic and external sources. This leads to increased capacity, greater investor confidence, increased sector finance, accelerated coverage of water and sanitation services, and the effective management of watersheds and water resources. Foreign assistance can only provide a small portion of the funds needed to meet water and sanitation needs globally, and must be used strategically to mobilize financial resources from host country governments, the private sector, and capital markets, where appropriate. At the same time, the U.S. government must engage with the international community to provide targeted support to developing countries in the most effective and efficient means possible.

The U.S. government will seek to strengthen governance, financing, and institutions in the water sector at all levels, with the goal of transitioning countries away from a reliance on donor assistance.

Key outcomes of Strategic Objective 4 will include:

- *Improved policy, regulatory, and institutional environment at local and national levels;*
- *Increased mobilization of public and private resources for water and sanitation; and,*
- *Well-functioning international institutions, organizations, and partnerships that build global capacity and support the sustainable development and sound management of water resources.*

U.S. GOVERNMENT STRATEGIC APPROACH

The following section describes the U.S. government's tools and approaches for achieving the four Strategic Objectives outlined above. Details on the specific activities individual agencies and departments will undertake to advance the Strategy are presented in the plans specific to the Department of State and United States Agency for International Development (USAID) below, and in plans from the other U.S. government agencies included in Annex A.

- **Provide technical assistance:** The U.S. government will strengthen developing countries' capacity to address the entire range of challenges to service delivery and water resources management. This includes activities focused on the enabling environment as a means of leveraging and improving the sustainability of U.S. investments (e.g., improved policies,

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institutional support, technical guidance, community organization, finance and cost recovery, and public-private partnerships).

- **Invest in sustainable infrastructure and services:** Provide and catalyze targeted investments in infrastructure and sustainable service delivery to meet needs for drinking water and sanitation, and improve the management of watersheds and water resources (e.g., drinking water and sanitation systems; agricultural water systems and uses; and multi-purpose infrastructure and natural systems that can increase water storage and improve the timing of delivery, navigation, flood protection, and food and energy production).

- **Promote science, technology, innovation, and information:** Provide direct and in-kind support to improve science and technology capacity, water conservation and water use efficiency; promote common data exchange formats and access to data for decision-making; and build knowledge to monitor the quality and quantity of water resources, improve forecasting, and model water related systems. Provide support for the monitoring and evaluation of programs to identify the most effective interventions and activities to spur innovation and catalyze the deployment of new technologies — particularly those with U.S. export potential.

- **Mobilize financial resources:** Promote functioning capital markets that can support the mobilization of local capital for water and sanitation services through utility reform and financial instruments that reduce the risks to investors (e.g., loan guarantees, development impact bonds, revolving funds, and pooled funds). Support the engagement of the U.S. private sector by showcasing U.S. technologies and approaches, and providing risk insurance, loans, and loan guarantees, where appropriate.

- **Engage diplomatically:** Engage diplomatically to raise the priority of water and sanitation issues at the country level and globally; encourage global institutions and organizations to promote best policies and approaches aligned with U.S. interests; promote the sharing of best practices and lessons learned; and support the efforts of riparian countries, or those that share aquifers, to resolve potential conflicts over shared waters peacefully.

- **Strengthen partnerships, intergovernmental organizations, and the international community:** Leverage U.S. investments through partnerships with the international community, U.S. civil society, private sector stakeholders, and other major donors.

The above tools and approaches follow guiding principles of sustainability, gender equality and empowerment, local ownership, and the appropriate protection and use of indigenous knowledge, maximizing impact, and a whole-of-government approach. Development programs will focus on meeting the needs of the poor and most vulnerable, and then design and implementation will ensure their impact endures beyond the life of U.S. foreign assistance. The perspectives of gender and marginalized populations will shape diplomatic and development engagements. A specific emphasis will be placed on meeting the needs of women, girls, and marginalized groups — including people with disabilities — and making sure that such groups have a voice in decision-making. Efforts will be made to ensure the support of local communities, to partner with local organizations, and to make maximum use of indigenous knowledge and experience, as

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appropriate, with the goal of locally strengthening the capacity of individuals in the sector and the organizational capacity of local institutions, agencies, and networks. We will leverage U.S. expertise, knowledge, and resources, and build partnerships to achieve impact at scale, while aligning our efforts with international best practices and stakeholders. Finally, we will mobilize and coordinate assets across the U.S. government, and throughout the country, to support our goals and objectives.

HIGH PRIORITY COUNTRIES/GEOGRAPHIC AREAS

Under this Strategy, the United States will focus its efforts on those countries and geographic areas where the needs are greatest, and where U.S. engagement can best protect our national security interests.

Within this set of countries and geographic areas, pursuant to Section 136 of the Foreign Assistance Act of 1961 (FAA), as amended by the Water for the World Act of 2014, 13 countries or geographic areas have been designated as high priority for October 1, 2017 – September 30, 2018. The selection of these high priority countries and geographic areas was based on the following factors, in the context of U.S. foreign policy interests:

- Level of need;
- Host government's commitment, capacity, and ability to work with the United States;
- Opportunities to leverage U.S. support with the private sector and other donor partners; and,
- The likelihood of making significant improvements in the health, educational, and economic opportunities available to women and girls.

(See Annex B for a more detailed description of the process to identify high priority countries and a list of source materials used in making these determinations.)

The following countries and geographic areas will be high priority under the Water for the World Act for October 1, 2017 – September 30, 2018:

Afghanistan
Democratic Republic of Congo
Ethiopia
Haiti
Indonesia
Jordan
Kenya
Lebanon
Liberia
Nigeria
South Sudan
Uganda
West Bank/Gaza[7]

Plans for implementing the Strategy in these high-priority countries and regions are summarized in the USAID agency-specific plan below.

[7] The inclusion of West Bank/Gaza in this list as a geographic area is in reference to USAID programming in support of the Palestinian people, and is not intended to convey a position on sovereign status.

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AGENCY-SPECIFIC PLANS

More than 17 U.S. government agencies and departments engage internationally on water and sanitation. They work to build scientific and technical capacity; catalyze investments in infrastructure and service provision; strengthen the global/regional policy framework to promote cooperation; and, fund partnerships, intergovernmental organizations, and international financial institutions. While some of these agencies and departments have resources appropriated for international work, others advance their own scientific mission, or are supported by another agency or third party. In addition to U.S. government agencies and departments, the United States draws upon expertise that exists within our two transboundary institutions: the International Joint Commission (between the United States and Canada) and the International Boundary and Waters Commission (between the United States and Mexico).

Table 1 summarizes where U.S. government agencies and departments expect to make contributions to the implementation of the Strategy. Detailed plans for implementing this Strategy by the Department of State and USAID, as required by the Water for the World Act, are provided below. Other U.S. government agency plans are appended in Annex A.

Table 1. Overview of Agency Contributions to the Global Water Strategy[8]

Means of Engagement	Strategic Objectives			
	SO1: WASH	**SO2: WRM**	**SO3: TBW**	**SO4: Governance**
Technical Assistance	CDC, DOI, EPA, MCC, NIST, USACE, USAID, USDA	DOI, EPA, MCC, NIST, USACE, USAID, USDA	DOI, DOS, EPA, USACE	DOI, EPA, MCC, USAID
Sustainable Infrastructure & Services	DOI, EPA, MCC, USAID	DOI, EPA, MCC, USAID, USDA	DOI, EPA	DOI, EPA, MCC, USAID
Science, Technology & Innovation	CDC, DOI, EPA, NASA, USAF, USAID	DOI, EPA, NASA, NOAA, USAID, USACE, USAF, USDA	DOI, EPA, NASA, NOAA, USACE, USAF	DOI, EPA, NASA, USAF, USAID
Resource Mobilization	MCC, OPIC, USAID	MCC, OPIC, USAID	DOS	MCC, USAID
Diplomatic Engagement	DOS	DOS	DOS	DOS

U.S. government efforts to implement this Strategy will be coordinated in Washington, D.C. through monthly meetings of the Interagency Water Working Group, and in host countries through U.S. Missions.

[8] CDC-Centers for Disease Control and Prevention; DOI – U.S. Department of the Interior (U.S. Geological Survey and/or Bureau of Reclamation); DOS – U.S. Department of State; EPA – U.S. Environmental Protection Agency; MCC – Millennium Challenge Corporation; NASA – National Aeronautics and Space Administration; NIST – National Institute of Standards; OPIC – Overseas Private Investment Corporation; USAID – U.S. Agency for International Development; USACE – U.S. Army Corps of Engineers; USAF - U.S. Air Force; USDA – U.S. Department of Agriculture.

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U.S. Department of State

As the U.S. government's lead foreign policy institution, the Department of State's mission is to shape and sustain a peaceful, prosperous, just, and democratic world, and foster conditions for stability and progress for the benefit of the American people and people everywhere. This includes responsibility for the continuous supervision and general direction of economic and other assistance programs under §622 of the Foreign Assistance Act of 1961 (22 U.S.C. §2382), and coordination of all U.S. foreign assistance, with certain limited exceptions, under 1523 of the Foreign Affairs Reform and Restructuring Act of 1998 (22 USC §6593).

The Department views water security as an issue of national security. The Department's Washington-based officials and those based at our Embassies and Missions worldwide, engage with foreign governments and in international fora to promote policies and initiatives to improve global water security.

Managing Water within the Department of State

The Secretary of State provides direction and guidance on U.S. foreign policy and U.S. foreign assistance related to water and sanitation issues, including implementation of the Senator Paul Simon Water for the World Act of 2014, within the Department of State and the U.S. Agency for International Development. Within the Department of State, the Bureau of Oceans and International Environmental and Scientific Affairs coordinates with other U.S. government departments and agencies on the development of U.S. policies and positions, as well as activities to advance these policies and positions internationally through the Interagency Water Working Group. This coordination includes the U.S. government's implementation of the Strategy. With guidance from the Department of State's regional bureaus, U.S. Missions abroad oversee the implementation of the Strategy in the high priority countries. These activities are described in the overview of country specific plans in the USAID plan, and included as part of the USAID-developed Country Development Cooperation Strategies and the Mission-developed Integrated Country Strategies, which guide the programming of U.S. foreign assistance funds at the country level.

Contributions to the Global Water Strategy

The Department of State will implement the Strategy in three ways:

1. **Support the engagement of the United States on international water issues.** The Department of State will:
    - Provide a platform with USAID and other U.S. departments and agencies, for coordinating interagency efforts on water, sanitation, and hygiene issues internationally, and ensure that U.S. departments and agencies have timely and authoritative information on emerging trends and threats;

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- Coordinate the implementation of the Strategy, including the development of a shared vision of the goals and objectives for the United States on global water and sanitation issues;
- Coordinate the development of U.S. policies and positions on international water and sanitation issues;
- Identify and take advantage of opportunities to leverage U.S. expertise, knowledge, and resources on water and sanitation to strengthen our domestic capacity to address water challenges and develop markets for U.S. technologies and approaches;
- Support American jobs and exports through targeted advocacy for U.S. firms on water projects;
- Create public diplomacy programs and coordinate public outreach to engage a broad array of partners to communicate the importance and opportunity of addressing the world's water challenges; and,
- Develop partnerships and programs that support the engagement of U.S. government departments and agencies, and leverage U.S. efforts with public and private partnerships.

2. **Raise the priority of water, sanitation, and hygiene issues on the global agenda and in partner countries, and strengthen the international community's capacity to respond to these challenges**. National governments need to prioritize water in their development plans and strategies, and support these plans and strategies with budgetary commitments and policies that promote the sound management of water resources. In addition, the international community should be structured to effectively and efficiently respond to these challenges. The Department of State will:
    - Emphasize water and sanitation issues in our diplomatic engagements with other governments, regional organizations, and intergovernmental institutions and organizations;
    - Engage diplomatically in bilateral, regional, and global fora to promote policies, programs, and initiatives that advance U.S. policies, positions, and approaches on water and sanitation;
    - Promote conditions that level the playing field for U.S. businesses that strengthen water and waste management; and
    - Improve the effectiveness and efficiency of regional and international organizations and partnerships working on water.

3. **Mitigate tensions over shared water resources in countries or regions where water is, or may become, a source of conflict.** While these are issues that the countries themselves must solve, conflict over water resources is not in the interest of the United States. The Department of State will:
    - Build the political will for cooperation on shared waters (both within and among countries);
    - Develop new, and strengthen existing, mechanisms and organizations that support the joint planning, development, and management of shared water resources; and,
    - Use water as a means of building trust and promoting cooperation in countries and regions where other opportunities may not be available.

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U.S. Agency for International Development

USAID
FROM THE AMERICAN PEOPLE

Overview

As the U.S. government's principal leader, coordinator, and provider of international development assistance, the U.S. Agency for International Development (USAID) advances national security and economic prosperity, while demonstrating American values and goodwill abroad. Our investments save lives, foster inclusive economic growth, reduce poverty, and strengthen democratic governance while helping other countries progress beyond needing our assistance. In partnership with the Department of State, USAID co-leads the U.S. government's efforts to implement the Water for the World Act. In support of the Global Water Strategy, USAID seeks to provide 15 million people with sustainable access to safe drinking water services, and eight million people with sustainable access to sanitation services.[9]

Contribution to the Global Water Strategy

USAID developed its agency-specific plan (the "Water and Development Plan") in conjunction with the whole-of-government Global Water Strategy. It provides a framework for USAID's contribution to the U.S. government's shared vision for a water secure world, and links directly to the following strategic objectives in the Strategy:

- Promote sustainable access to safe drinking water and sanitation services, and the adoption of key hygiene behaviors (Strategic Objective 1);
- Encourage the sound management and protection of freshwater resources (Strategic Objective 2); and,
- Strengthen water sector governance, financing, and institutions (Strategic Objective 4).

This contribution is aligned with and complementary to other USAID investments across development sectors that promote water security.[10]

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[9] The number of beneficiaries the Agency seeks to reach under the Water and Development Plan is based on estimations that use available data on the number of beneficiaries reached, and the FY 2018 budget request levels for water over the life of this Strategy. Actual beneficiaries reached under this Plan will be subject to the availability of funding, and operational constraints encountered in the future. In addition, USAID's financial systems track all water and sanitation allocations and do not disaggregate by first time access. USAID does not set a target percentage of funding directed at first time access. USAID intends to annually monitor the number of people who gain such access against the cited beneficiary targets.

[10] Specifically, this contribution is aligned with and complementary to the U.S. government Global Food Security Strategy (2016) the USAID Strategy on Democracy, Human Rights, and Governance (2013), the USAID Multi-Sectoral Nutrition Strategy (2014), the USAID Sustainable Service Delivery in an Increasingly Urbanized World Policy (2013), the USAID Building Resilience to Recurrent Crisis Policy and Program Guidance (2012), the USAID Gender Equality and Female Empowerment Policy (2012), and the USAID Education Strategy (2011).

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Agency Goal and Way Forward

The goal of USAID's Water and Development Plan is to **increase the availability and sustainable management of safe water and sanitation for the underserved and most vulnerable, in alignment with U.S. national security and foreign policy objectives**. As the U.S. government's lead development agency, USAID seeks to increase access to sustainable water and sanitation services, promote key hygiene behaviors among the world's poorest and most vulnerable, billions of whom remain unserved or underserved, and enhance the effective management of the water resources that are essential for the sustainable provision of drinking water, as well as for other objectives such as food security, nutrition, resilience, education, and economic growth.

To promote more efficient and effective investments, the Water and Development Plan emphasizes:

1. The sustainability of the delivery of both water and sanitation services and water resources;
2. Investment in governance, institutions and innovative financing to foster vibrant, financially sound, and increasingly self-sufficient system of service providers;
3. A holistic treatment of water challenges in response to heightened water pollution, scarcity and variability, and economy-wide competition for the freshwater resource base;
4. Partnerships with host country governments, utilities, private sector entities, financial institutions, and civil society organizations to enhance the long-term effectiveness of USAID's investments;
5. Monitoring, evaluation, research, and learning to ensure high-impact, cost effective investments and implementation;
6. The empowerment of women to determine and implement appropriate water and sanitation solutions, and programs targeted to meet the specific needs of women and girls; and,
7. Targeted use of foreign assistance resources geographically and demographically.

The Water and Development Plan calls for focusing investment where needs intersect with opportunities, to achieve the greatest possible impact within the sector.

Development Results

USAID will program, monitor and report activities and outcomes across four development results to advance the Agency goal and the Strategy:

1. Strengthen Sector Governance and Financing (Development Result 1);
2. Increase Sustainable Access and Use of Sanitation and the Practice of Key Hygiene Behaviors (Development Result 2);
3. Increase Sustainable Access to Safe Drinking Water (Development Result 3); and,
4. Improve Management of Water Resources (Development Result 4).

By 2022, the Agency seeks to provide **15 million people with sustainable access to safe drinking water services** (Development Result 3) and **eight million people with sustainable**

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access to sanitation services (Development Result 2).[11] Standard indicators and targets for strengthening sector governance and financing (Development Result 1) and improving the management of water resources (Development Result 4), against which USAID has not previously reported, will be developed as part of more detailed USAID Implementation Guidance for this Plan, and, the Agency will use them for programming starting in 2018.

Development Result 1: Strengthen Sector Governance and Financing

The Agency will improve water sector finance and governance by strengthening responsible local and national institutions and policies, which will enable countries to transition away from reliance on foreign assistance. USAID will support the development and implementation of governance systems grounded in evidence, and which provide a sound framework for providing safe drinking water and sanitation services and water resources management at all levels. USAID will use its funds strategically to mobilize financial resources from host country governments and the private sector. USAID's investments in the sector will increasingly use innovative financial tools, such as Development Credit Authority transactions, blended finance, and assisting the establishment of revolving funds and development impact bonds. The limited availability of financial data and lack of capacity to track available resources impedes the ability of countries to assess investment levels and progress to improve performance. USAID will therefore support national level efforts to track financial data on public allocations and expenditures for water and sanitation.

More specifically, USAID will do the following in the high priority countries and aligned Operating Units:

- Operationalize policies, strategies, and implementation plans for the water and sanitation sector;
- Increase coordination of actors within the water and sanitation sector to align objectives and leverage resources;
- Increase the capacity of national and sub-national governments to assess, regulate, and manage water and sanitation service delivery and water resources;
- Increase the capacity of civil society to advocate for water and sanitation service delivery and water resources management;
- Increase private investment mobilized for water or sanitation infrastructure, services, and water resource management, including through innovative financial vehicles and partnerships; and,
- Increase public sector expenditures on water, sanitation, and water resource management *per capita*.

Development Result 2: Increase Sustainable Access and Use of Sanitation and the Practice of Key Hygiene Behaviors

[11] The number of beneficiaries the Agency seeks to reach in this Plan is based on estimates that use available data on the number of beneficiaries reached and on FY 2018 request levels for water over the life of this Strategy. Actual beneficiaries reached under this Plan will be subject to the availability of funding, and operational constraints encountered in the future. In addition, USAID's financial systems track all water and sanitation allocations and do not disaggregate by first time access. USAID does not set a target percentage of funding directed at first time access. USAID intends to annually monitor the number of people who gain such access against the cited beneficiary targets.

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USAID will help the poor and underserved end open defecation, gain first-time or improved access to basic sanitation services, move progressively toward safely managed services, and create hygiene behavior change that lasts. Sanitation and hygiene are critical for health, economic growth, personal security, and dignity, especially for women and girls. Separating individuals and communities from human waste, properly treating fecal waste, and promoting key behaviors that lessen the risk of illness are critical sanitation and hygiene interventions that reduce diarrheal disease, child mortality, malnutrition, neglected tropical diseases, and other waterborne illnesses, such as cholera.

USAID will do the following in high priority countries and aligned Operating Units:

- Reduce the number of people practicing open defecation;
- Increase the number of people with access to basic sanitation facilities;
- Improve the availability and affordability of sanitation products and services;
- Increase the amount of fecal waste effectively captured and treated *in-situ,* or collected, transported, and treated offsite;
- Improve the ability of educational and health systems to manage sanitation and hygiene facilities in institutions;
- Increase the number of people with access to safely managed sanitation services; and,
- Increase handwashing with soap at critical times, and increase the rate of safe management of household drinking water.

Development Result 3: Increase Sustainable Access to Safe Drinking Water

The Agency will help the poor and underserved gain first time or improved access to basic drinking water services and climb progressively toward safely managed services. Access to a safe, reliable, and proximal drinking water source is critical for health and livelihood, and is especially important for unlocking educational and economic opportunities for women and girls. The reliable provision and management of drinking water also builds trust in local and national governments, and can contribute to local and national stability. Increasing access levels in rural areas has been a traditional focus of USAID investments. While investments in rural water supply will continue under this Plan, the rapid pace of urbanization also requires increasing attention to urban services and utilities, particularly in dense peri-urban settlements and secondary cities and towns, often served by informal providers.

USAID will do the following in the high priority countries and aligned Operating Units:

- Increase the number of people with access to basic drinking water services;
- Improve the ability of education and health facilities to provide and manage water services adequately in schools and clinics;
- Catalyze increased financing for the operations and maintenance of water systems, including through investing in innovative financial vehicles;
- Improve the quality and reliability of drinking water;
- Increase the number of people with access to safely managed drinking water services; and,
- Promote full cost recovery and decrease non-revenue water of utilities.

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Development Result 4: Improve Management of Water Resources

Through investments that promote sustainable and long-term management of polluted, scarce, or variable freshwater supplies, USAID will assist partner countries to better cope with rising pressures on freshwater resources. USAID will focus on water-stressed basins that are the source of important drinking water supplies, by engaging with stakeholders to develop robust water allocation plans that secure the availability of water for households, improve the storage and quality of water through sustainably managed watersheds, and promote adaptive innovations to build resilience and reduce water related risk for vulnerable households and communities.

USAID will do the following in the high-priority countries:

- Increase the number of basins covered by stakeholder-driven water allocation plans implemented and enforced;
- Increase the voice of the poor and marginalized groups in determining water allocations;
- Increase the number of multi-stakeholder water user groups that engage in collaborative water management;
- Improve the quality and quantity of water in key watersheds and basins;
- Increase water storage capacity, aquifer recharge, and flow regulation within key watersheds;
- Increase resilience to floods, droughts, and other water related risks and shocks;
- Reduce conflict over water resources at basin and watershed scales; and,
- Increase the capacity of water service providers to manage future changes in water resource availability.

Complementary Results: The Water and Development Plan includes five complementary results from aligned Agency programming that also contribute to USAID's goal. These include: **efficient agricultural water management for food security, emergency water and sanitation, healthy freshwater and forest ecosystems, improved land and resource governance, management of household water and sanitation for vector control, and well-educated populations**. Conversely, in some cases the results from the Water and Development Plan reinforce the impact of other investment streams and sector strategies. Explicitly connecting to, coordinating with, and supporting these work streams helps ensure the Water and Development Plan leverages investments across USAID to maximize results.

Monitoring, Evaluation, and Learning: USAID will ensure accountability of its programming and contributions to the Strategy, through the development of a **comprehensive monitoring, evaluation and learning plan** that identifies lessons learned from the previous strategy and a thoughtful, informed **research and learning agenda** that closes evidence gaps and sharpens technical and operational approaches associated with this Plan. USAID is committed to improving performance monitoring processes to ensure it is effectively managing programming, measuring results, and meeting objectives. USAID will enhance transparency by making all monitoring data (except sensitive data) available to external audiences. In addition, USAID programs will report by using a combination of appropriate standard and custom indicators to capture the results of water and sanitation programming. In this way, standard indicators enable data to be compared and aggregated across the Agency, while custom indicators facilitate the monitoring of the local context.

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Organizational Roles and Responsibilities: Clear organizational roles and responsibilities are necessary to ensure effective adoption of the Water and Development Plan's principles and priorities. The USAID Global Water Coordinator is responsible for: guiding, overseeing, and directing water and sanitation programs across the Agency and coordinating with the Department of State and the interagency; leading the implementation of USAID's portion of the Strategy; coordinating and guiding USAID Missions and Washington-based staff; and communicating with Missions regarding the requirements of the Water for the World Act. The Coordinator also co-chairs, with the Department of State, processes within and outside of the Interagency Water Working Group to advance and coordinate implementation of the Water for the World Act in the high priority countries.

USAID Missions with high priority countries are responsible for leading the development of costed, results-oriented, evidence-based plans that describe how they will achieve the goals of the Water and Development Plan and advance the Strategy. These Missions are also responsible for programming water investments, managing for results, and evaluating water and sanitation projects to meet their development goals, in alignment with the focus areas. USAID Mission Water Leads are at the "front line" for the implementation of the Water and Development Plan. Missions in countries designated as high priority for water programming will designate a lead subject-matter expert to oversee the implementation of this Plan.

Prioritization of Activities and Resources in High Priority Countries Designated Under the Water for the World Act

In accordance with Section 136 of the FAA, as amended by the Water for the World Act of 2014, the U.S. government has designated high priority countries and geographical areas from October 1, 2017 to September 30, 2018 to be the primary recipients of U.S. foreign assistance related to affordable and equitable access to safe water, sanitation, and hygiene authorized under Section 136 of the FAA. The following are the countries and regions assigned high priority status: ***Afghanistan, Democratic Republic of Congo, Ethiopia, Haiti, Indonesia, Jordan, Kenya, Lebanon, Liberia, Nigeria, South Sudan, Uganda, and West Bank/Gaza.***

Within each of these countries or regions, challenges with water and sanitation are constraints to alleviating extreme poverty; promoting resilient, democratic societies that advance U.S. security and prosperity; and progressing developing countries beyond the need for foreign assistance. USAID is committed to concentrating water and sanitation foreign assistance resources in these focal countries, and to supporting the host country governments, other development partners, and private sector leadership in closing the needs gap.

Consistent with the Water for the World Act the following criteria will frame activities and resource allocations in the designated Water for the World Act high priority countries to ensure country alignment with this Strategy's guiding principles:

- Level of need;
- Host government's commitment, capacity, and ability to work with the United States;
- Opportunities to leverage U.S. support with the private sector and other donor partners; and,
- The likelihood of making significant improvements in the health, educational and

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economic opportunities available to women and girls.

Key Resource Points

- **Strategic Direction of Water, Sanitation and Hygiene Funding:** This Strategy is expected to be revised no less then every five years through 2027. The country plans reflected in the present Strategy are initially costed based on funds intended to be programmed between October 1, 2017-September 30, 2018. This includes prior year resources still available for programming, estimates of the FY 2017 allocations, and the FY 2018 President's Budget Request. The totality of funds, including those cited above and out-year budget requests, will responsibly meet the above criteria reflected in the Water for the World Act, while simultaneously addressing the policy priorities articulated by the Administration.

- **Multi-Year, Technical Funding Estimates:** The Water for the World Act of 2014 requires the Strategy's inclusion of costed, evidence-based and results-oriented country plans for the designated high priority countries. USAID's costing methodology is based on funds intended to be programmed between October 1, 2017-September 30, 2018. This includes prior year resources still available for programming, estimates of the FY 2017 allocations, and the FY 2018 President's Budget Request. Out-year resource requests will also responsibly meet the above criteria reflected in the Water for the World Act, while simultaneously meeting policy priorities articulated by the Administration.

In accordance with the above, USAID has developed multi-year, country-specific plans for each of the high-priority countries, which describe how the Agency will meet this Strategy in that country (in part through U.S. foreign assistance). The plans represent a coordinated approach to address water and sanitation, and also align with host country priorities, and complement programming by other U.S. government departments and agencies. Full-length versions of each country plan can be found at www.globalwaters.org. Overviews of these country plans appear on the following pages.

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AFGHANISTAN

Afghanistan's harsh conditions and rough terrain impede the expansion and maintenance of public infrastructure, including water supply and sanitation systems. Decades of conflict and weak governance have curbed investment in public infrastructure and made enforcing relevant sanitation and hygiene regulations difficult. Cities across the country are growing at rates double the current average in Asia. Afghanistan's urbanization and shifting demographics are driven by the increasing number of people displaced by fighting in the countryside, refugees who are returning from Pakistan and Iran, and rural residents who are looking for economic opportunities. Afghanistan also has no functioning sewage and wastewater treatment systems, and existing septage management systems are informal. Only 63 percent of Afghans have access to basic drinking water, and only 39 percent have access to basic sanitation.

USAID is assisting Afghanistan in meeting its water-supply and sanitation targets and improving hygiene behaviors, in alignment with the Global Water Strategy and the USAID Agency Specific Plan, through the Potable and Productive Water Project (PPWP), an integrated set of activities to address water, sanitation, and hygiene (WASH) needs and related challenges to water-resource management (subject to the availability of funds). Key priorities within the PPWP include improving the sustainability of investments and leveraging WASH activities to drive nutrition gains, enhance resilience, and stimulate employment opportunities. USAID is also supporting the U.S. Geological Survey (USGS) within the U.S. Department of the Interior in ensuring the long-term sustainability of drinking water supplies in the Kabul River Basin.

USAID coordinates closely with other donors active in the WASH sector in Afghanistan, including Finland, France, Germany, Greece, Japan, South Korea, and the United Nations Children's Fund (UNICEF). In some instances, USAID programs directly through the German Development Bank and UNICEF to leverage resources and avoid duplication of effort.

Overall, these activities are estimated expected to provide more than 700,000 Afghans with sustainable access to basic water supplies, and help more than one million Afghans gain access to basic sanitation by 2021.

The Afghanistan Country Plan is costed based on prior year resources still available for programming, the FY 2017 estimated allocation of $10.0 million, and the FY 2018 President's Budget Request of $5.7 million.

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DEMOCRATIC REPUBLIC OF THE CONGO

The Democratic Republic of the Congo (DRC), the second largest country in Africa, is endowed with large quantities of freshwater. However, water security is low because of economic and governance constraints. Economic growth is negative in real terms, which limits the government's basic infrastructure investments and maintenance. Constricted political space for civil society activity and limited social accountability, including on water and sanitation investments, further constrains the delivery of services. As a result, currently only 52 percent of the population has access to basic water and 29 percent has access to sanitation. Lack of access to water and sanitation, coupled with poor hygiene behaviors, are among the top five risk factors associated with death and disability in the country.

USAID is supporting the Government of the DRC to create and strengthen systems required to achieve the country's water and sanitation targets, in alignment with the Global Water Strategy and the USAID Agency Specific Plan. USAID is addressing water and sanitation needs through large scale investments in health services and systems. USAID/DRC is implementing these activities by using two different models: 1) drinking water, sanitation, and hygiene programming as a component of the Mission's Integrated Health Project; and 2) investing in stand-alone drinking water, sanitation, and hygiene programming through UNICEF. Specific interventions focus on direct service, behavior change, and policy implementation. The portfolio themes include strengthening water sector governance and advancing gender empowerment. Additional U.S. government activities in the DRC include USAID/Food for Peace's Development Food Assistance Program, and disease outbreak response, including for Ebola and cholera.

Donors provide nearly 99 percent of water sector financing in the DRC, and USAID coordinates closely with these other development partners to ensure effective and efficient programming. Donor coordination focuses on water infrastructure, resource management, governance, and water treatment to leverage resources and avoid duplication of effort.

Overall, USAID and other U.S. government activities are estimated to provide the Congolese with millions of liters of safe drinking water, and to help more than one million people gain access to basic water and sanitation services.

The Democratic Republic of the Congo Country Plan is costed based on prior year resources still available for programming and the FY 2017 estimated allocation of $10.6 million.

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ETHIOPIA

Twenty-nine percent of the Ethiopian population has access to basic water, while only seven percent has access to basic sanitation. Current and worsening drought conditions pose a threat to established drinking water and sanitation systems, and place added strain on basic services as populations move in search of water. Limited private sector engagement, policy constraints, and the lack of data for decision-making limit the sustainability of current service provision. These challenges motivate the strategic direction of USAID's water, sanitation, and hygiene activities.

USAID emphasizes three strategic priorities within its WASH investments: sustainability, sanitation, and local ownership. Subject to availability of funds, USAID's three flagship WASH activities — Growth through Nutrition, Lowland WASH and Transform WASH — reflect these priorities in scope, and support broader USAID objectives to reduce childhood malnutrition, increase resilience to drought and other weather-related shocks, and improve opportunities for private sector activity. USAID coordinates these activities closely with other donors and the Government of Ethiopia under the One WASH National Program (2013-2020), a government-driven, sector wide approach to address the WASH needs of rural, urban, and pastoralist communities, schools, and health posts.

Other U.S. government agencies that are implementing activities in Ethiopia to advance the Global Water Strategy and USAID Ethiopia Country Plan include the USGS, the U.S. Forest Service within the U.S. Department of Agriculture, the Centers for Disease Control and Prevention (CDC) within the U.S. Department of Health and Human Services (HHS), and the U.S. Department of State. The Department of State is training water and sanitation officials on wastewater/sewage management systems in collaboration with the U.S. Water Partnership, for example, as well as teaching Ethiopian officials to use geographic-information systems to map existing water resources and project needs.

Overall, USAID activities are estimated to provide more than 200,000 Ethiopians with sustainable access to basic water supplies, and help more than one million Ethiopians gain access to basic sanitation by 2020.

The Ethiopia Country Plan is costed based on prior year resources still available for programming, the FY 2017 estimated allocation of $15.3 million, and the FY 2018 President's Budget Request of $6.3 million.

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HAITI

Despite considerable investment, access to water and sanitation in Haiti is still the lowest in the Western Hemisphere. The main challenges in achieving sustainable management of water and sanitation in Haiti are limited government capacity, low user demand for improved water and sanitation services, lack of accessible finance, poor management of water resources, and geographic vulnerability to extreme events. As a result, 58 percent of Haitians have access to basic water sources, a decrease since 1990 when the access rate was 62 percent, while only 28 percent of Haitians have access to basic sanitation. Low levels of water and sanitation services and poor hygiene practices result in high levels of diarrheal disease and malnutrition throughout Haiti, and contribute to the severity and spread of the cholera epidemic that began in Haiti in October 2010, afflicting nearly 800,000 people to date and resulting in more than 9,000 deaths.

USAID is addressing these challenges by building water and sanitation infrastructure, increasing capacity to manage service delivery, and improving the enabling environment for the sustainable implementation, operation, and maintenance of water and sanitation services. Guiding principles within the portfolio include: 1) aligning with Haiti's new Cholera Elimination Plan; 2) supporting decentralization within the sector; 3) using market-based approaches, where feasible, and building private sector capacity; and, 4) increasing emphasis on sanitation, including the safe disposal of waste. The primary USAID activity to support these investments is the Haiti WASH Project (subject to the availability of funding), which works in priority cholera hotspots and areas that are recovering from cyclical disasters. Other USAID activities focus on rehabilitating water supply systems, promoting hygiene behavior change through community health workers and mass media, and supporting the promotion and sales of socially marketed household water treatment products. These activities seek to facilitate Haiti's transition from emergency response to the sustainable delivery of water and sanitation services, and are closely aligned with the Haitian government's National Cholera Elimination Plan and other funding from Spain, the Inter-American Development Bank, and the World Bank.

In addition to USAID's development programming, USAID's Office of Foreign Disaster Assistance (OFDA) and HHS/CDC have focused on response efforts. USAID/OFDA supported efforts to prevent the spread of cholera in 2010-2011 (and again immediately following Hurricane Matthew) by providing logistics support and relief commodities, while the HHS/CDC supports surveillance and response activities.

USAID's activities are estimated to provide more than 250,000 Haitians with sustainable access to basic water supplies, and help 75,000 Haitians gain access to basic sanitation by 2022.

The Haiti Country Plan is costed based on prior year resources still available for programming, the FY 2017 estimated allocation of $9.8 million, and the FY 2018 President's Budget Request of $9.9 million.

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INDONESIA

Indonesia faces a number of challenges in addressing water and sanitation gaps across its thousands of islands. While fresh water is readily available, population growth, urbanization, and expanding agriculture are increasing pressure on available resources and systems. Many cities and districts have insufficient budgets to manage water and sanitation infrastructure and expand access to the poor and underserved. As a result, 63 percent of Indonesians in the poorest wealth quintile don't have access to safe drinking water, and 34 percent don't have access to improved sanitation. Lack of access drives diarrheal disease, which causes 31 percent of mortality in infants under one year of age, and 11 percent of mortality in children under five years of age.

USAID supports Indonesia in the water and sanitation sector to meet its universal targets with a focus on the urban poor, to help these communities have access to more affordable, equitable, and high quality water and sanitation services. USAID focuses on generating demand, improving the management of water and sanitation services, and aligning with the Government of Indonesia's infrastructure investments to ensure our resources yield greater returns. USAID WASH activities will result in increased demand for improved water services and safely managed sanitation services, improved local capacity to provide such services, and strengthen the governance and finance upon which sustainable development depends. USAID coordinates these activities closely with the Governments of Australia, Canada, Germany, Japan, and the Netherlands, as well as the Asian Development Bank, UNICEF, and the World Bank. Overall donor investment has declined over time, which reflects the increasing level of investment in the sector by the Indonesian government.

Other U.S. government departments and agencies that are implementing activities in Indonesia to advance the Global Water Strategy and USAID Indonesia Country Plan include the U.S. Department of Interior's Bureau of Reclamation, and its International Technical Assistance Program, which works with USAID to strengthen Indonesia's national parks through technical assistance on managing protected areas, with an emphasis on restoration and the stewardship of fresh water resources.

Overall, these activities are estimated to provide more than one million Indonesians with basic or safely managed water supplies (500,000 of which must be from the poorest 40 percent of the population), and help 500,000 Indonesians gain access to basic or safely managed sanitation (all from the poorest 40 percent of the population) by 2021.

The Indonesia Country Plan is costed based on prior year resources still available for programming, the FY 2017 estimated allocation of $6.1 million, and the FY 2018 President's Budget Request of $7.0 million.

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JORDAN

Jordan is facing a growing water crisis. It is naturally arid, and forecasts suggest these conditions will worsen in the coming decades. While overall access rates to water and sanitation are high, population growth has further exacerbated an already stressed water sector, while the influx of Syrian refugees has placed an additional burden on the water supply. This is particularly true in the northern Governorates, which already suffer from strained water resources. Lastly, Jordan has limited renewable water resources, and groundwater for irrigation and drinking water is being drawn down at twice the rate of recharge for the aquifers, which furthers reduces the availability and quality of water.

To help Jordan achieve its water and sanitation objectives, and confront compounding water scarcity challenges, USAID builds sustainable water and wastewater infrastructure, improves water sector management and increases water conservation. Activities will reduce water losses, increase the treatment of wastewater, and improve the coverage and reliability of water and sanitation services. USAID and the Department of State are the main U.S. government actors in Jordan's water sector, though the Millennium Challenge Corporation has provided significant support in the recent past, through its recently concluded project to expand the As-Samra Wastewater Treatment Plant and improve water networks in Zarqa.

Other U.S. government departments and agencies including U.S. Department of Agriculture's U.S. Forest Service and the USGS within the U.S. Department of the Interior, also make regular contributions to support Jordan's water sector, but do not maintain an in-country presence. The Department of State and USAID share responsibility for coordinating the activities of non-resident U.S. government agencies on the ground. USAID/Jordan provides advice on water policy, and coordinates water interventions among other international donors. The Department of State focuses on the political and policy aspects of Jordan's water sector. This includes, for example, high level political support for regional projects like the Red Sea/Dead Sea Water Conveyance, as well as facilitating negotiations between Jordan, Israel, and the Palestinians regarding water issues. A number of donors are active in the water sector in Jordan, including the European Union, France, the UN Development Program (UNDP), and the World Bank. USAID collaborates with these partners to ensure investments are non-duplicative and complementary.

Overall, these activities are estimated to provide more than two million Jordanians with sustainable access to safely managed water, or with water quality improvements, and help more than 180,000 people gain access to safely managed sanitation by 2020.

The Jordan Country Plan is costed based on prior year resources still available for programming, the FY 2017 estimated allocation of $58.0 million, and the FY 2018 President's Budget Request of $60.0 million.

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KENYA

Access to water and sanitation in Kenya has not been keeping pace with population growth, as only 58 percent of Kenyans have access to basic drinking water and 30 percent have access to basic sanitation currently. Estimates suggest the population could double by 2050 relative to 2015 given current growth rates, while 30 million Kenyans (48 percent of the population) are expected to live in urban areas by 2030. These pressures place increased demands on institutions and infrastructure, and stretch limited sector finance that, to date, has not been able to keep pace with current demands. Additionally, Kenya is water scarce, with an uneven distribution of available water across the country, and variable rainfall that results in frequent droughts and floods. Since 2000, the Kenyan government and development partners have significantly increased overall spending on water. However, donor funding still makes up 64 percent of the total sector financing. Kenya's National Water Master Plan 2030 estimates that $14 billion in investment in water supply and $5.4 billion in investment in urban sewerage infrastructure are needed over the next 15 years. Given that development partners now contribute more than half of financing, a sharp increase in mobilizing new sources, including commercial ones, will be required.

USAID is layering investments and emphasizing market-based models in its two flagship WASH activities: Kenya Integrated WASH and Kenya Resilient Arid Lands Partnership for Integrated Development. Additionally, the WASH Finance project aims to close financing gaps to achieve universal access to water and sanitation services through sustainable and creditworthy business models, increased public funding, and expanded market finance for infrastructure investments. Together these activities address WASH needs and related challenges with the management of water resources, while stimulating private sector development and fostering improved governance. Activities are layered with global health and food security programming, and are connected to areas of chronic humanitarian need, to leverage resources for greater impact. USAID coordinates closely with other donors active in the WASH sector, including Denmark, France, Germany, Sweden, the African Development Bank, and the World Bank under a common sector policy framework and monitoring system.

In addition to USAID's investments, other U.S. government departments and agencies implement activities in Kenya. USAID has an interagency agreement with the USGS within the Department of the interior to support groundwater mapping through remote sensing and modeling, for example. The Department of State is training officials on the rehabilitation of the Nairobi River Basin in collaboration with the U.S. Water Partnership. Meanwhile, HHS/CDC works to enhance cholera preparedness for, prevention of and response to cholera.

By 2020, USAID's activities are estimated to provide more than one million Kenyans with sustainable access to basic water supplies and more than one million with access to basic sanitation.

The Kenya Country Plan is costed based on prior year resources still available for programming, the FY 2017 estimated allocation of $12.2 million, and the FY 2018 President's Budget Request of $2.0 million.

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LEBANON

Despite Lebanon's relatively abundant natural water resources, population growth, rapid urban expansion, water and weather related events and an influx of Syrian refugees have collectively caused a significant water deficit in Lebanon. Only 48 percent of the population has access to safely managed water, while 20 percent has access to safely managed sanitation. Unsustainable water use practices, poor management of wastewater, and water treatment problems collectively reduce the availability of drinking water. Much of the country's infrastructure remains outdated and vastly inadequate to provide reliable service delivery. Poor conservation practices, the need to expand the legal and regulatory framework that governs water usage, lax enforcement of regulations, and pollution are some of the major obstacles that face Lebanon's water sector. Furthermore, a history of regional conflict and limited attention to institutional capacity further complicates the situation of the water sector, placing Lebanon on the threshold of water scarcity.

USAID and other donors are providing technical and related services to the country's water sector to respond. Through the Lebanon Water Project (LWP) and a new $40 million project, USAID is improving access to safe drinking water, improving wastewater management, and promoting efficient irrigation in partnership with Lebanon's five public water utilities. USAID also engages with local communities, municipalities, civil society, and the local private sector as key partners for addressing challenges in the water sector. Key portfolio themes include promoting better governance of water and sanitation and strengthening institutions as a means to achieving long-term water security.

The LWP is coordinated closely with other donors — including Italy, the European Investment Bank, and the World Bank — that provide capital investments and technical assistance to the water sector in Lebanon. Together with the U.S. Department of Interior's USGS, USAID is supporting Lebanon to identify high potential sites rapidly for aquifer recharge through the Acceleration of Aquifer Storage and Recovery Program.

USAID's activities are estimated to increase new subscribers to public water services by 2,700, and enable 600,000 people to receive improved water service quality as a result of LWP by 2020.

The Lebanon Country Plan is costed based on prior year resources still available for programming, the FY 2017 estimated allocation of $23.0 million, and the FY 2018 President's Budget Request of $18.4 million.

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LIBERIA

The water, sanitation, and hygiene sector in Liberia faces governance, capacity, and finance constraints that hinder access to improved water and sanitation. Government responsibilities for the sector are spread across eight ministries and institutions with different mandates, while no regulatory authority exists to set and enforce sector standards. Public institutions have an inadequate number of staff in key positions, while government financial spending in the sector has not kept pace with even modest budget allocations. These compounding factors in the midst of post-conflict and post-Ebola epidemic recovery efforts have limited people's access to drinking water, sanitation, and hygiene, and have led to an over-reliance on donor funding. As a result, only 70 percent of Liberians have access to basic drinking water, and 17 percent to basic sanitation.

In support of the Government of Liberia's WASH Sector Strategic Plan, USAID is investing in comprehensive WASH programming to help Liberia achieve its water and sanitation goals (subject to the availability of funds). USAID focuses on addressing water infrastructure and sanitation service gaps, strengthening government institutions, and promoting essential hygiene behaviors through community-based health activities. Key portfolio themes include promoting gender equality, strengthening governance, managing urbanization, and recovering from the Ebola epidemic. Through the Liberia Municipal Water Project (LMWP), for example, USAID is providing improved access to water supplies access to 90 percent of the population in three County capitals with infrastructure managed by locally based entities that have the financial and technical capacity to sustain the service. In addition, through direct support to the Ministry of Health, USAID is also strengthening the institutionalization and scale-up of behavior change and hygiene promotion interventions in health systems and programs, which complement the Mission's community health activities. Support to the Ministry of Health will facilitate investment in WASH infrastructure in health facilities to provide quality service delivery in USAID-focused geographic locations.

Other U.S. government activities further advance the Global Water Strategy in Liberia, including USAID's Food for Peace Development Food Assistance Project funding and HHS/CDC activities. For example, drawing on unique expertise, HHS/CDC is evaluating and renovating WASH facilities at two County hospitals, and training staff to conduct quality control assessments on a locally produced chlorine solution to purify water.

USAID is the largest bilateral donor in the WASH sector in Liberia, and closely coordinates with other key development partners in Liberia, including Ireland, the African Development Bank, UNICEF, and the World Bank. All investments are harmonized through a coordination platform for development partners that works to ensure funds are non-duplicative.

Overall, these activities are estimated to provide 80,000 Liberians with sustainable access to basic water supplies, and help more than 3,600 people gain access to basic sanitation services by 2019. *The Liberia Country Plan is costed based on prior year resources still available for programming, the FY 2017 estimated allocation of $12.9 million, and the FY 2018 President's Budget Request of $2.5 million.*

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NIGERIA

Nigeria has made modest progress in expanding access to water, sanitation, and hygiene to its rapidly growing population of 183 million people, the largest on the African continent. Forty-eight percent of the population has access to basic drinking water sources, and 33 percent have access to sanitation. While the percentage of the urban population with access to basic water has increased, data show a significant decline in the proportion of urban households with access to piped water to premises, which dropped from 32 percent in 1990 to three percent in 2015. At the same time, the urban population has grown from 30 percent in 1990 to 48 percent in 2015, and this trend is expected to continue in the coming decades. Access gaps persist because of a combination of factors, including rapid urbanization, coupled with a growing demand for services; inefficient and ineffective service delivery; institutional and governance constraints; gender inequality; and weather and water related risks.

USAID is strengthening the governance of and institutions for urban water and sanitation in targeted Nigerian States where access rates are low and management challenges persist. USAID will fund the WASH Coordination Project, a partnership with the Coca-Cola Foundation, and the Mission's flagship WASH activity, Effective Water, Sanitation, and Hygiene Services (subject to the availability of funds). Key portfolio themes include: 1) expanding private sector opportunities to increase competition in urban WASH service delivery, and thereby drive efficiency gains; and, 2) leveraging large infrastructure investments through complementary activities to develop laws, regulations, commercial viability, governance, and management capacity.

Several donors support the Nigerian water and sanitation sector and focus on urban water infrastructure, including the African Development Bank, the French Development Bank, and the World Bank. USAID leverages these investments through complementary programming that emphasizes strengthening the enabling environment to increase WASH investments from both the public and private sectors and allows infrastructure investments to endure.

Overall, these activities are estimated to provide more than 2.5 million Nigerians with sustainable access to basic water services, and help 80,000 Nigerians gain access to basic sanitation by 2022.

The Nigeria Country Plan is costed based on prior year resources still available for programming, the FY 2017 estimated allocation of $10.4 million, and the FY 2018 President's Budget Request of $3.2 million.

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SOUTH SUDAN

South Sudan is afflicted by political instability, poverty, and food insecurity. With 43 percent of the population living on less than $1.90 per day, a weak economy, and ongoing internal conflict, South Sudan ranks among the most fragile states in the world. Fifty percent of South Sudanese have access to basic drinking water, 30-50 percent of water facilities are non-functional at any point in time, and only 10 percent of the population has access to basic sanitation. Weak water sector governance, limited funding and funding absorption capacity, human resource constraints, and limited data for decision-making are among the major drivers of low access rates.

In light of the changing socioeconomic and political context, USAID's development programing in South Sudan focuses on critical service provision in basic and emergency education and health. USAID invests in providing drinking water, sanitation, and hygiene in schools and hospitals, and supports emergency WASH for internally displaced people who are living under the protection of the United Nations (UN), and in nearby host communities. Portfolio priorities include promoting social accountability through citizen engagement in water and sanitation infrastructure and promoting gender-sensitive solutions to mitigate gender-based violence.

USAID coordinates these investments with other donors through a WASH Donor Group that works to identify needs, leverage resources, and avoid duplication of effort. Other major partners include Germany and UNICEF.

Overall, USAID water and development activities are estimated to provide more than 385,000 South Sudanese with access to basic water supplies, and help 145,000 people gain access to basic sanitation.

The South Sudan Country Plan is costed based on prior year resources still available for programming, the FY 2017 estimated allocation of $6.0 million, and the FY 2018 President's Budget Request of $8.0 million.

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UGANDA

Gaps in sanitation and drinking water services are large throughout Uganda. Population growth, lack of financing, governance challenges, and swelling refugee flows have all contributed to demand for water and sanitation infrastructure that outpaces service provision rates. Only 32 percent of Ugandans have access to a basic water supply, while 19 percent have access to basic sanitation and seven million Ugandans practice open defecation.

To help the Government of Uganda improve access to water and sanitation services, USAID will support of activities that increase access to sustainable water and sanitation, and promote the adoption of hygiene behaviors that are key to health and nutrition (subject to the availability of funds). USAID will focus on three priority themes: 1) behavior change in households, schools, and healthcare facilities; 2) institutional strengthening that enables better management and regulation of infrastructure; and 3) private sector activities that fill gaps in government-provided services. These themes feature prominently in USAID's anticipated flagship water and sanitation investment, Uganda Sanitation for Health, which will also drive nutrition gains in support of food security nutrition goals.

USAID coordinates closely with other donors active in the WASH sector to maximize the effectiveness of its investments, including Austria, Denmark, the European Union, Germany, France, the African Development Bank, and the World Bank, which support a $1.4 billion investment in the sector through the Joint Water and Environment Sector Support Program (JWESSP). USAID's investments are complementary and coordinated with the JWESSP.

Other U.S. government departments and agencies also play an active role in implementing activities that advance the Global Water Strategy and USAID Uganda Country Plan, including the U.S. Department of State, HHS/CDC, and USAID/OFDA and USAID's Office of Food for Peace. For example, through the Department of State's Bureau of Population, Refugee and Migration, the U.S. government is supporting emergency water needs for refugees, including the almost one million South Sudanese who are now living in northern Uganda.

Overall, activities under the USAID Uganda Country Plan are estimated to provide 750,000 Ugandans with sustainable access to basic water, and help 10,000 villages reach open defecation-free status. The results reported reflect targets at the time of this document's production, which could change on an annual basis.

The Uganda Country Plan is costed based on prior year resources still available for programming, the FY 2017 estimated allocation of $5.0 million, and the FY 2018 President's Budget Request of $1.9 million.

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WEST BANK AND GAZA REGION

Sufficient quantities of water are not available in the West Bank and Gaza to meet Palestinians' needs. West Bank and Gaza's water scarcity challenges stem from an inadequate sustainable supply of water, as well as inadequate existing infrastructure that does not have the capacity to deliver the required amounts of water. Roughly 88 percent of the population has access to basic water, and 30 percent to basic sanitation. The West Bank experiences frequent system operation failures and water losses because of aging and deteriorated pipes and illegal tapping, while in Gaza, 95 percent of water from the main aquifer does not meet basic standards for human consumption. Only 31 percent of the Palestinian population in the West Bank is connected to a sewerage network, and only five to ten percent of Palestinian wastewater is treated. Estimates suggest that 90,000 cubic meters of raw sewage flows from Gaza into the Mediterranean Sea, or percolates into the central aquifer every day, which increases the risk of outbreaks of waterborne disease.

Multiple activities are needed to assist the Palestinian Water Authority to meet its water and sanitation targets. USAID plans to invest in infrastructure, training, and to pilot new technologies. The program focuses on three components: 1) water supply; 2) sanitation; and, 3) institutional strengthening. Activities aim to reduce water losses, improve the reliability of service, and raise the average number of liters of drinking water available *per capita* per day.

USAID leverages complementary investments from other donors in water sector legal reform to ensure large-scale infrastructure investments are sustainable. Many donors are active in the West Bank and Gaza, which makes consultation and coordination important. Other water sector donors include the European Union, France, Germany, Japan, the Netherlands, Sweden, the UN, and the World Bank Group. USAID works closely with the Office of the Quartet,[12] the Local Aid Coordination Secretariat, and various strategy working groups that include representatives from the Government of Israel and the Palestinian Authority.

Senior White House and Department of State officials focus on the political and policy aspects of water issues in the West Bank and Gaza. This includes, for example, high level political support for regional projects like the Red Sea-Dead Sea Water Conveyance, as well as facilitating negotiations between Israel and the Palestinians regarding water issues.

Overall, these activities are estimated to provide more than 365,000 people with sustainable access to basic water supplies, and help nearly 22,000 Palestinians in the West Bank and Gaza gain access to basic sanitation.

The West Bank and Gaza Country Plan is costed based on prior year resources still available for programming, the FY 2017 estimated allocation of $53.0 million, and the FY 2018 President's Budget Request of $52.0 million.

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[12] The Quartet, set up in 2002, consists of the United Nations, the European Union, the United States and Russia. Its mandate is to help mediate Middle East peace negotiations and to support Palestinian economic development and institution-building in preparation for eventual statehood.

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Aligned Operating Units

In addition to high priority countries, USAID will continue to address water and sanitation needs and opportunities in other countries through programming from operating units that will align to this Global Water Strategy, the Water and Development Plan, and its Results Framework beginning in FY 2018. Aligned Operating Units that currently have water and development programing include[13]: ***Africa Regional; Bangladesh; Bureau for Economic Growth, Education and Environment; Bureau for Global Health; Cambodia; East Africa Regional; Ghana; Guatemala; India; Madagascar; Malawi; Mali; Middle East Regional; Mozambique; Nepal; Pakistan; Philippines; Rwanda; Sahel Regional; Senegal; Southern Africa Regional; Tanzania; West Africa Regional; and, Zambia.*** Here are illustrative spotlights on Aligned Operating Units that demonstrate ongoing programming in response to need and opportunity in alignment with the Water and Development Plan.

Aligned Country Spotlight: India

In India, 570 million people defecate in the open, which accounts for 59 percent of the world's population who practice open defecation. Every day, more than 500 children in India die from diarrhea-related illnesses. India loses over $106 billion per year (or 5.2 percent of GDP) from inadequate sanitation — more than any other country in the world. USAID is working directly with the private sector to help mobilize finance and expertise to address these challenges. USAID is supporting the Clean India Campaign in urban WASH investments that leverage U.S. university expertise, incubate and test new WASH technologies that are coming out of U.S. businesses and labs, and distill evidence to inform policy at the national and State levels. There are also a number of other active donors in the Indian WASH sector, including the Asian Development Bank, the Bill and Melinda Gates Foundation, and UNICEF. In December 2015, the World Bank approved a $1.5 billion loan focused on sanitation. USAID works closely with these donors to align approaches and leverage resources to maximize impact. These activities are estimated to provide more than four million Indians with sustainable access to improved water supply, and help more than eight million Indians gain access to an improved sanitation facility by 2020.

Aligned Country Spotlight: Mozambique

Mozambique has one of the highest rates of under-five mortality in the world, along with a high burden of diseases related to contaminated water and poor sanitation, such as diarrhea and cholera. The country has 1,300 health facilities for 27 million Mozambicans. Many of these facilities are in disrepair, and lack functioning water and sanitation systems. Weak governance and infrastructure gaps exacerbate inequalities between both urban and rural populations and rich and poor populations, which strains service delivery institutions. Low levels of water and sanitation services and poor hygiene practices result in high levels of diarrheal disease and malnutrition, which reduces the ability of Mozambicans to benefit from, and participate in, sustainable, long-term economic growth. The situation also fuels dissatisfaction with government services.

[13] Aligned operating units are illustrative based on prior year resources still available, FY 2017 estimated allocations, and funds requested in FY 2018.

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USAID will focus its investments on drinking water and sanitation sector targets, by providing support of activities that increase access to sustainable services (subject to the availability of funds). Key strategic priorities include leveraging funding through public private partnerships for WASH gains, promoting private sector involvement in water and sanitation service delivery, and increasing the availability of sustainable water and sanitation infrastructure in health care facilities and communities. The Government of Mozambique recently established a governance framework for private sector involvement in WASH service delivery, which provides an opportunity to test and scale-up innovative models. USAID coordinates closely with other donors active in the WASH sector, including the Netherlands, the United Kingdom, UNICEF, and the World Bank. Overall, these activities are expected to directly provide 60,000 Mozambicans with sustainable access to a basic water service, and help 40 health care centers gain access to basic water and sanitation facilities by 2020.

Aligned Country Spotlight: Zambia

An estimated 4.8 million Zambians lack regular access to clean water, and 6.6 million lack access to adequate sanitation facilities. Poor water and sanitation are a major factor in Zambia's high rates of childhood malnutrition (40 percent stunting) and mortality (seven percent of live births). In alignment with the Global Water Strategy and USAID Agency Specific Plan, USAID is assisting Zambia to address the aforementioned challenges through investments that promote sustainable access to safe drinking water and sanitation while strengthening water sector governance, financing, and institutions. USAID addresses these objectives in targeted rural areas through integrated WASH and agriculture investments, and a multi-donor WASH and nutrition project, Scaling Up Nutrition Technical Assistance. In addition to USAID's investment, the Millennium Challenge Corporation is supporting major infrastructure improvements and institutional strengthening in water supply, sanitation, and drainage in the capital, Lusaka. USAID also coordinates closely with other donors active in the WASH sector in Zambia, including the European Union, Germany, Ireland, Sweden, the United Kingdom, and UNICEF. In some instances, USAID co-finances activities alongside other donors, to leverage resources and avoid duplication of effort. Overall, these activities are expected to provide 1.7 million Zambians with sustainable water and sanitation services by 2021.

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Annex A: Additional U.S. Government Agency Plans

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International Trade Administration

INTERNATIONAL TRADE ADMINISTRATION

The International Trade Administration's (ITA) mission is to strengthen the competitiveness of U.S. industry through promoting trade and investment, ensuring fair trade, and enforcing trade laws and agreements. ITA's U.S. and Foreign Commercial Service staff are located in over 100 U.S. cities and 75 countries and work directly with U.S. firms across the water sector to help individual companies export their goods and services overseas, while industry analysts at ITA's headquarters in Washington, DC, monitor the competitiveness of the industry both at home and abroad. Through collaboration across the organization, ITA gathers valuable information about opportunities and trade barriers that exist in various foreign markets and disseminates it to public and private sector stakeholders. In addition, ITA staff employ their expertise in support of U.S. water and wastewater treatment companies at trade promotion events, including trade missions and trade shows, and through a variety of customized in-country services. Further, ITA officials regularly engage in commercial diplomacy with foreign governments to help resolve individual commercial disputes through staff-level meetings, and address industry-wide trade barriers through high-level bilateral and multilateral dialogues.

Contributions to the Global Water Strategy

ITA's work contributes to the Global Water Strategy's objectives to "Promote Sustainable Access to Safe Drinking Water and Sanitation Services, and Key Hygiene Behaviors" and "Strengthen Water Sector Governance, Financing, and Institutions" in many overseas markets. However, out of the priority countries identified by the President of the United States under the Senator Paul Simon Water for the World Act, at this time ITA views India and Indonesia as the primary overseas markets that would benefit from focused U.S. government intervention to help improve environmental and public health outcomes as well as increase commercial opportunities for U.S. water companies. In these as well as other markets, ITA's work includes the following:

India

- **Technical assistance** – ITA and the U.S. Environmental Protection Agency (EPA) jointly created the U.S. Environmental Solutions Toolkit (www.export.gov/envirotech_toolkit) in 2013. The Toolkit provides ready access to EPA's environmental regulations, related underlying research, and a list of U.S. companies that provide technologies and services necessary to implement similar environmental regulatory actions abroad. The Toolkit is used as a reference tool in bilateral activities by environmental consultants, U.S. EPA officials, and overseas regulators, to find solutions on addressing environmental concerns, such as water sustainability and sanitation problems.
- **Science, technology, and information** – ITA produces an annual *Top Markets Report* that includes case studies for key markets where the scope of opportunity for U.S. companies is limited by trade or other barriers. India has consistently topped the list of key markets covered in the report since 2014. In 2017, the included case study discusses India's regulatory environment, local initiatives to build wastewater treatment plans, efforts to improve water use efficiency, and plans to improve groundwater use monitoring. The report also includes water project tenders that are opportunities for U.S. firms to submit bids, and

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technologies and services in the water sanitation industries that are in demand in India. A public version of the report is available at www.trade.gov/topmarkets.

- **Diplomatic Engagement** – ITA has six offices in India (Mumbai, Chennai, Kolkata, Ahmedabad, Bengaluru, and Hyderabad) with Foreign Commercial Officers and Locally Employed Staff who regularly engage with the Indian government. They also work directly with U.S. water companies to assist them with entering the Indian market or expanding their exports there.
- **Support to partnerships, intergovernmental organizations and the international community**
  - ITA's Market Development Cooperation Program 2014-2017 award to the American Water Works Association (AWWA) has helped Indian utilities develop and meet AWWA standards for drinking water.
  - ITA typically leads a delegation of Indian officials and business representatives to the Water Environment Federal Technical Exhibition and Conference through its International Buyer Program to explore relevant U.S. technologies and work with U.S. exporters on approaches to water resource management.

Indonesia

- **Technical assistance** – ITA and the U.S. Environmental Protection Agency (EPA) jointly created the U.S. Environmental Solutions Toolkit (www.export.gov/envirotech_toolkit) in 2013. The Toolkit provides ready access to EPA's environmental regulations, related underlying research, and a list of U.S. companies that provide technologies and services necessary to implement similar environmental regulatory actions abroad. The Toolkit is a reference tool in bilateral activities used by environmental consultants, U.S. EPA officials, and overseas regulators, as to provide solutions on addressing environmental concerns, such as water sustainability and sanitation problems.
- **Science, technology, and information** – ITA produces an annual *Top Markets Report* that includes case studies for key markets where the scope of opportunity for U.S. companies is limited by trade or other barriers. Indonesia has consistently topped the list of key markets covered in the report in recent years. In the 2017 report, the included case study discusses Indonesia's regulatory environment, local government initiatives to improve water treatment and sanitation services infrastructure, including infrastructure project tenders that offer opportunities for U.S. firms to submit bids, and technologies and services in the water industry that are in demand in Indonesia. A public version of the report is available at www.trade.gov/topmarkets.
- **Diplomatic Engagement** – ITA has an office in Jakarta with Foreign Commercial Officers and Locally Employed Staff who regularly engage with the Indonesian government to conduct commercial diplomacy. They also work directly with U.S. water companies to assist them with entering the Indonesian market or expanding their presence there.

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Millennium Challenge Corporation

Facilitate the development of high-impact, sustainable water programs in our partner countries. For those partner countries that identify water as a binding constraint for achieving sustainable economic growth and poverty reduction, the Millennium Challenge Corporation (MCC) will:

a. Work with the country to analyze problem root causes and plan programs based on meaningful engagement with a range of stakeholders.
b. Ensure high-impact programs by conducting analyses of costs and benefits of the investment and calculating economic rates of return.
c. Incentivize sector efficiency and reduce service costs by designing programs that include elements of policy, regulatory and utility reform, including the adoption of more efficient commercial practices, tariff setting, asset management systems, and non-revenue water management.
d. Promote gender equality and social inclusion throughout its work by designing programs that provide women, the poor, and marginalized groups with improved access to water infrastructure.
e. Provide appropriate guidance, tools, and assistance for assessing and managing environmental and social implications on all water programs.
f. Help our partner countries unlock investment and growth opportunities for the private sector, and catalyze critical financing for infrastructure.

Work diligently with partner countries to manage funds wisely and transparently. The MCC oversight model will help ensure U.S. taxpayer dollars are being used to fund quality water programs that will be sustainable in the long run while allowing for country-led development. The MCC will:

a. Establish several levels of controls on all water construction projects to ensure quality and design specifications, and environmental management plans are followed.
b. Monitor and track financial and other risks related to implementing water programs and make adjustments to programs as needed to ensure cost-effectiveness.
c. Ensure that gender and social concerns in water sector policy, utility reform and infrastructure improvements are addressed. This could include establishing and operationalizing gender equality and social inclusion units in water agencies and utilities.
d. Monitor recruitment practices and/or labor conditions for workers, particularly construction workers, for any exploitative practices and any signs of trafficking in persons (forced labor).

Estimate, track, and evaluate the impacts of water programs using technically rigorous, systematic and transparent methods. The MCC will:

a. Assume the obligation to report on and accept responsibility for all [of its] funded water activities and attributable outcomes.

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b. Disclose these findings in a public and transparent manner, and share the information (microdata and reports) generated in the implementation and evaluations of its water programs.
c. Improve the understanding of the causal relationships and effects of its water interventions, particularly in terms of poverty reduction and growth, and to facilitate the integration of monitoring and evaluation findings in the design, implementation, analysis, and measurement of current and future interventions.
d. Measure the impact and promote transparency of our water programs by conducting impact evaluations that measure outcome changes as a result of MCC investments, or performance evaluations that estimate the contribution of MCC water programs in outcome trends, including farm and household incomes.

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National Aeronautics and Space Administration

One of the main strategic goals of the National Aeronautics and Space Administration (NASA) is to advance our scientific understanding of Earth as a system and its response to natural and human-induced changes and to improve our ability to predict climate, weather, and natural hazards. In addition to advancing America's leadership in space, NASA plays a significant role in the development and application of technologies and solutions for improved water management and sustainability. The NASA Earth Science Division portfolio is organized around four programmatic areas: flight, research, applied sciences, and technology. Together these areas include programs and projects responsible for: Earth science missions, including observing systems from satellite, aircraft, the International Space Station and other platforms; conducting and sponsoring research to advance scientific understanding of Earth as a system; collecting and disseminating new observations; developing new technologies, predictive capabilities and computational models; and facilitating the demonstration of innovative and practical uses of the program's data and results for societal benefit. In addition, NASA develops partnerships with other national and international organizations to enhance economic security and environmental stewardship to benefit society.

NASA's efforts contribute to the strategic objectives of the United States Government Global Water Strategy. The increased availability of satellite and aircraft based remote sensing has led to major advances in the monitoring and forecasting of availability of water across many scales. When combined with modeling and in situ data, satellite observations enhance the mapping, analysis, and forecasting of droughts, floods, water use, water pollution and water availability. By quantifying and spatially representing the water cycle and water quality components, water managers can more confidently address issues related to water security, including in transboundary basins. This requires technical experts to design systems with regional partners and water managers to combine local knowledge and data sources.

NASA is providing NASA Earth science information products to improve policy-making, resource managing, and disaster response. Some examples of how NASA Earth science information have been utilized in such contexts include the NASA/USAID SERVIR program and the Forecasting for Africa and the Middle East initiative. SERVIR is one of the important ways in which NASA works with international and regional partners to develop satellite data applications to address and inform critical natural resource management challenges. With activities in more than 47 countries, SERVIR has developed over 70 custom tools, collaborated with more than 200 institutions, and trained close to 3,000 data users, improving the capacity to develop local solutions.

NASA is also engaged in several international partnerships focused on improving awareness, increasing access to information, and supporting analysis for water sustainability. Programs such as the Group on Earth Observations Global Water Sustainability (GEOGLOWS) initiative leverage NASA Earth Science activities to bring global satellite capabilities and regional expertise together to build new capabilities.

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As stated in the Global Water Strategy, many countries important to the U.S. are likely to experience water problems that will increase disease, undermine economic growth, promote insecurity and state failure, and generally reduce their capacity to advance priorities that would support U.S. National interests. NASA is helping to address these water problems by supporting the strategic objectives of the Global Water Strategy in the following ways:

Objective 1. Improving water quality monitoring with space-based Earth observations.
Satellite data can be of significant help in identifying water quality challenges. For example, SERVIR is providing science, technology, and information capacity building for a variety of international entities, including monitoring harmful algal blooms in Guatemala, and partnering with Kenyan and Ugandan ministries to monitor drinking water sources, such as Lake Victoria. NASA will continue several activities developing and providing remote sensing monitoring of inland water bodies enabling improved management of freshwater.

Objective 2. Improving water supply monitoring and management with Earth observations.
NASA's Water Resources and Capacity Building programs use NASA's free and openly-available satellite data for advanced hydrologic modeling and hazard assessments for improved water management by governmental agencies in various countries. NASA is providing science, technology, and information products to many partners around the globe so they can better prepare for and respond to disasters and to help the partners become self-sufficient and robust providers of water-related services. NASA has several ongoing capacity building activities developing regional products and services in various countries, including Ethiopia, Kenya, Uganda, Bangladesh, Nepal, Pakistan, and Afghanistan.

Objective 3. Build awareness of and improve accessibility to NASA's freely and publicly available satellite data.
Capacity building initiatives enable awareness and independent analysis of precipitation, evapotranspiration, groundwater, and streamflow conditions along transboundary rivers, resulting in better and actionable information to mitigate floods in downstream countries. This can include mitigation of disasters, such as floods, in adjacent countries. For example, Bangladesh can now detect and manage floods sooner, in part due to the use of satellite-based flood forecasting of water levels in upstream India. Satellite data are now being accessed and applied for improved transboundary water management in various South Asian countries, including Afghanistan, Pakistan, Nepal, Bangladesh, and India.

Objective 4. Strengthen capacity of local public/private institutions around the world to utilize NASA data for water resource management.
NASA will continue building capacity of national institutions to manage their own water resources, especially for water quality monitoring and irrigation scheduling during low flow periods. The modeling capabilities supported by SERVIR will ensure that local institutions will have the technical knowledge to allow them to issue irrigation water permits for improved agricultural production and sustainable use of available water.

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National Institute of Standards and Technology
U.S. Department of Commerce

National Institute of Standards and Technology

The National Institute of Standards and Technology (NIST) was founded in 1901 and is now part of the U.S. Department of Commerce. NIST is one of the nation's oldest physical science laboratories. Congress established the agency to remove a major challenge to U.S. industrial competitiveness at the time—a second-rate measurement infrastructure that lagged behind the capabilities of the United Kingdom, Germany, and other economic rivals. Our mission is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improves the quality of life. Our vision is to be the world's leader in creating critical measurement solutions and promoting equitable standards. Our efforts stimulate innovation, foster industrial competitiveness, and improve the quality of life. NIST's core competencies are measurement science, rigorous traceability, and development and use of standards.

To meet our mission, NIST conducts standards-related programs, and provides knowledge and services that strengthen the U.S. economy and improve the quality of life. NIST provides measurements, standards, and data to ensure availability and sustainability of our water resources. NIST technical programs are focused on water quality, water treatment and infrastructure (premise plumbing and distribution system renewal), and community resilience. Technical programs support water and energy efficiency and consumption estimation for currently marketed technologies, water flow meter calibration services, critically evaluated thermophysical property data, as well as reference material standards for water quality measurements. Additionally, NIST manages a multi-faceted program, assisting communities and stakeholders on issues related to buildings and the interdependencies of physical infrastructure systems.

NIST works with standards development organizations to support consensus standards development. The National Technology Transfer and Advancement Act, OMB Circular A-119, and other federal laws, regulations, and international agreements guide the U.S. government's role in the development and use of standards and conformity assessment. NIST fosters standards adoption, and works with the stakeholder community to enable compliance and conformity assessment accreditation bodies and ensuring adherence to standards specified in international agreements.

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The Overseas Private Investment Corporation

The Overseas Private Investment Corporation (OPIC) is a self-sustaining U.S. government agency established in 1971. OPIC provides businesses with the tools to manage the risks associated with foreign direct investment and fosters economic growth in developing and emerging market countries. OPIC fulfills its mission by providing projects with loans, loan guarantees and political risk insurance. OPIC also offers financing for private equity investment funds that target developing countries. OPIC's tools not only allow businesses to gain footholds in the developing world, but also advance U.S. foreign policy and national security objectives. OPIC's portfolio also supports small businesses, women-owned enterprises and projects in disadvantaged areas. Currently, the agency has an active portfolio of nearly $22.5 billion and a potential FY 2017 project pipeline of more than $3 billion.

Projects requesting OPIC financing or political risk insurance include those in regions that lack sufficient access to safe drinking water or adequate water infrastructure. OPIC currently supports water sector projects that include a desalination project in Algeria, an irrigation project in Sub-Saharan Africa, a water pipeline project in Jordan and a water-bottling project in the West Bank. OPIC projects are evaluated up front and monitored during operations to ensure that they are environmentally sound, safe for their workers, and sustainable long term. As a catalyst for private sector investment and a proponent of beneficial infrastructure projects, OPIC supports investments that forge long lasting ties with underserved communities in order to address issues such as access to safe, sustainable water resources.

Contributions to the Global Water Strategy

1. Support U.S. businesses seeking to invest in water projects in emerging markets. OPIC currently:
    a. Provides financing and guarantees to U.S. businesses and private equity funds that are unable to secure adequate financing in the private market.
    b. Increases investor confidence and, thus, access to challenging regions with restricted, underdeveloped water resources by offering political risk insurance.
    c. *Example*: OPIC provided financing and political risk insurance to support the construction of a 202-mile pipeline to bring water from an aquifer in southern Jordan to Amman. The pipeline, inaugurated in 2014, has the capacity to transport 100 million cubic meters of potable water per year.

2. Mobilize and leverage U.S. resources to address global water challenges. OPIC currently:
    a. Increases opportunities for U.S. project sponsors and mobilizes private sector investment through OPIC's participation in projects that address regional water needs.
    b. Leverages the power of the U.S. government's commitment to OPIC-backed, private sector projects in order to spur sustainable investment in emerging markets.
    c. Acts to resolve issues that arise between the U.S.-supported water projects and host country entities as appropriate in order to support project viability.

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d. *Example*: OPIC's support for the Middle East Investment Initiative resulted in funding for a project on the West Bank that provides safe bottled water for area residents who had previously relied on less sanitary water storage tanks.

3. Support for U.S. technologies and approaches. OPIC currently:
    a. Promotes the use of U.S. goods and services that support a project's compliance with OPIC's worker and environmental standards.
    b. Supports the deployment and implementation of the latest U.S. water technologies.
    c. *Example*: OPIC facilitated U.S. procurement of reverse osmosis equipment and engineering services through General Electric's Water and Process Technologies unit for an Algerian desalination plant, which provides safe water to 350,000 families in and around Algiers.

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United States Air Force

Mission: The mission of the United States Air Force is to fly, fight and win in air, space and cyberspace. The Air Force (AF) brings to the Nation's military portfolio five interdependent and integrated core missions: (1) air and space superiority; (2) intelligence, surveillance, and reconnaissance; (3) rapid global mobility; (4) global strike; and (5) command and control. Through these core missions, the AF provides global vigilance, global reach, and global power for America.

Contributions: The AF Weather functional community contributes to the AF mission by conducting global weather operations to provide accurate, timely, relevant and consistent air and space environmental information to AF and specified Army units, including their respective Reserve components, and as directed, joint forces, coalition forces, and other agencies, such as those combat support agencies under the purview of the Under Secretary of Defense for Intelligence. Air Force weather operations exploit weather information to maximize the application of military and national security instruments of power. The weather effects information allows the warfighter an asymmetric advantage, producing tailored information available around the globe, on-demand, and in all security enclaves. The AF considers the full range of weather operations from climate to microscale weather events, prepared to support operations ranging from humanitarian assistance in partnership with departments outside the Department of Defense (DoD) to theater campaign plans, and major contingency operations to local field training events exploiting our capability. Early warning of adverse hydrological, weather, and climate conditions is an essential element of how we plan and respond to reducing disaster risk and managing humanitarian emergencies.

AF Contributions to the Global Water Strategy

- Provide global short-term weather forecasting capability (i.e. atmospheric and hydrological modeling) to DoD and the Department of State (DoS) agencies as to maximize the impact of the Global Water Strategy.
- Provide access to climatic data services to DoD and DoS in order to understand the global, historical perspective.
- Provide global climate monitoring services such as temperature and precipitation and drought conditions to understand current trends.
- Provide global climate prediction services such as precipitation, temperature, and drought conditions for long-term planning purposes.
- Provide assured information/data access via multiple security enclaves for security and diplomatic analysis.

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US Army Corps of Engineers®

U.S. Army Corps of Engineers

The mission of the US Army Corps of Engineers (USACE) is to deliver vital public and military engineering services, partner in peace and war to strengthen our Nation's security, energize the economy, and reduce risks from disasters. USACE can provide unique technical and managerial expertise to address domestic and international problems related to water resources, infrastructure development, and environmental protection and restoration. USACE applies these capabilities in support of U.S. government departments and agencies, nongovernmental organizations, international organizations, and foreign governments to address problems of national significance to the United States.

USACE has authorities and skills to provide engineering and technical support to the Department of State and U.S. Agency for International Development and other federal agencies whose international missions include some aspect of water security. USACE also supports humanitarian assistance and disaster relief projects and activities on behalf of the Combatant Commands of the U.S. Department of Defense.

Another category of USACE support is to international organizations, foreign governments, and non-governmental organizations. This support seeks areas of mutual benefit gained by partnering or working with non-USG organizations so as to leverage the skills and resources of all parties to achieve a mutually desired outcome. Such activities are coordinated and must be consistent with Department of Defense goals and, if international, goals and policies of the Department of State. This latter category of support is a special provision authorized through Section 234 of the Water Resources Development Act of 1996, as amended.

USACE Contributions to the Global Water Strategy
Insofar as may be consistent with its mission and authorities, USACE may contribute to the Global Water Strategy in the following areas:

1. Promote sustainable access to safe drinking water and sanitation services, and key hygiene behaviors.

- Provide planning, design, construction management, and oversight of potable water and sanitation projects.

2. Encourage the sound management and protection of freshwater resources.

- Provide capacity building in the areas of water resources management; including:
  - Technical reviews, assistance, and advice on comprehensive water resources development;
  - Assistance and training in water infrastructure risk identification, operation and maintenance; and operation of major river systems;
  - Training in the use of up-to-date technical tools and skills to plan and optimally manage existing water resources assets and properly plan and invest in future water resources infrastructure; and

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- Providing comprehensive river basin and reservoir modeling and related assistance.

3. *Reduce conflict through promoting cooperation on shared waters.*
   - Support Public Participation, Collaboration, and Conflict Transformation initiatives related to water resource management.

4. *Strengthen water sector governance, financing, and institutions.*
   - Provide capacity building in the areas of disaster preparedness and response.
   - Provide capacity building in the areas of water resources management for local government water ministries and agencies.

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U.S. Department of Agriculture

The U.S. Department of Agriculture (USDA) provides leadership, expertise, and programs to benefit U.S. agriculture, forestry, and other water users, and helps the United States supply high quality products to the world. USDA contributes to domestic and international efforts to increase access to clean water and improve management of watersheds and water resources through its international food assistance and capacity building programs; basic and applied research programs; environmental markets programs; data and information sharing; and the promotion of science-based policies and regulations that expand U.S. markets and trade. USDA has a long institutional history of collaborating with foreign governments, multilateral organizations, non-government partners, and other stakeholders to achieve its mission. All of these USDA efforts will continue in FY 2018 and, where practical, USDA's partnerships may be expanded and/or strengthened to meet the goals of the Global Water Strategy. USDA will collaborate with the private sector, universities and research institutions, international organizations and others, as appropriate, to implement the Global Water Strategy.

USDA Coordination for the Global Water Strategy

The Secretary of Agriculture provides leadership on agriculture, food, nutrition, natural resources, rural development, and related issues based on sound public policy, the best available science, and efficient management. Water-related expertise, programs, and tools exist throughout USDA because water resources are fundamental to agriculture and other land uses. The USDA Foreign Agricultural Service (FAS) assists the USDA Secretary in coordinating agricultural trade and various international cooperation policy (7 USC §5693 and USDA Departmental Regulation 1051-002). FAS coordinates USDA's participation in the Interagency Water Working Group, led by the Department of State, and has offices at over 90 American Embassies covering 197 countries. In high priority countries where USDA has coverage, USDA Foreign Service Officers, Locally Employed Staff, or other USDA agency staff could contribute to country-level teams coordinating the Global Water Strategy.

Contributions to the Global Water Strategy

USDA's objectives for its international capacity building and development programs and international research collaborations already generally align with the goals and objectives of the Global Water Strategy. With a caveat that USDA's relevant programs, from year to year, do not necessarily engage all high priority partner countries/regions for the Global Water Strategy, USDA anticipates the following programmatic, technical, and in-kind contributions:

- **USDA will implement and, to the degree practical, align its international food assistance and trade and scientific fellowship programs with the Global Water Strategy**, including the Food for Progress Program, McGovern-Dole International Food for Education and Child Nutrition Program, Norman E. Borlaug International Agricultural Science and Technology Program fellowships, and Cochran Program fellowships. *Strategic Objectives 1 and 2*

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- **USDA will seek opportunities to leverage its existing relevant domestic investments in research, extension, education and natural resources management through international cooperation.** USDA will align its cooperative research activities with the Global Water Strategy when applicable and appropriate. *Strategic Objective 2*

- **USDA will support the Global Water Strategy by making available, through consultations or other cooperative activities, its existing technical and policy expertise in sustainable agriculture, forestry, environmental markets and natural resource management, emergency management, nutrition, and rural development**. USDA's expertise and programs can concurrently meet the needs of U.S. agriculture and forestry and, in some cases, support international efforts to improve water resources, availability, and management. USDA also provides expertise to many USAID Bureaus via interagency agreements. *Strategic Objective 2*

- **USDA will share its publicly available information and analyses on global production, supplies, and demands of agricultural and forest commodities, and thereby continue to enable U.S. and foreign stakeholders to make better business and policy decisions for food security, nutrition, water, and other natural resources management.** For example, USDA will continue to contribute to the Agricultural Market Information System to improve data collection and provide earlier warning of commodity price volatility that could affect water costs, and vice versa. Likewise, USDA often leverages its tools and U.S.-based programs to help accelerate international U.S. efforts. For example, through the National Agricultural Library and the Water and Agriculture Information Center, USDA electronically distributes scientific findings, educational methodologies, and public policy issues related to water and agriculture to scientists throughout the world. USDA also has decades of experience in international geospatial modeling initiatives.

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U.S. Department of Commerce National Oceanic and Atmospheric Administration

The U.S. Department of Commerce National Oceanic and Atmospheric Administration's (NOAA) mission is to understand and predict changes in climate, weather, oceans and coasts, to share that knowledge and information with others, and to conserve and manage coastal and marine ecosystems and resources. Water is a common thread that runs through NOAA's mission areas. Both domestically and globally, NOAA supports scientifically-based knowledge, forecasts, and information systems - including early warning systems - to improve understanding of drivers of persistent drought or flood events, changing precipitation patterns, and potentially rapid transitions in water resources supply and demand, as well as impacts of changes in water quality and quantity on coastal communities and ecosystems.

Contributions to the Global Water Strategy

NOAA's contributions to the Global Water Strategy falls under Item 3 of the U.S. government Strategic Approach: in-kind support to science, technology, and information to advance Strategic Objective 2: *Encouraging the Sound Management and Protection of Freshwater Resources*, and Strategic Objective 3: *Reduce Conflict through Promoting Cooperation on Shared Waters.* Principally, this is achieved by improving U.S. and global capacity to understand and anticipate changing hydro-meteorological conditions. Strengthening this capacity can save lives, reduce costs, and maximize the impact of U.S. development and diplomatic interventions.[14] NOAA will make its contributions both through its domestic programs and its ongoing contributions through international and intergovernmental bodies, some of which are described below:

- NOAA's National Weather Service (NWS), together with the U.S. Geological Survey, contributes to global water science and policy through its leadership role on the World Meteorological Organization's (WMO) Commission for Hydrology (CHy). The CHy comprises WMO Members who advise on basic hydrological observing networks, water resources assessment, flood forecasting and warning, flood and drought management and adaptability to climate variability and change, and promotes the exchange of technology and capacity building. Our participation in the CHy provides economic benefits to the U.S. through the global exchange of weather and water data to enhance our national flood forecasts and warnings for the protection of lives and property. NWS also provides leadership to the Group on Earth Observations Global Water Sustainability (GEOGLOWS) project, which is designed to expand capacity for water-related observations, modeling, and decision-support applications through development projects, training and partnerships among governments, academia, and participating non-governmental and international organizations.

- NOAA's Office of Oceanic and Atmospheric Research (OAR) supports programs that result in the enhanced understanding of the mechanisms of the global water cycle, in particular the role of the ocean as a driver of precipitation and freshwater availability,

[14] GWS Objective 2, page 7.

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floods, and droughts. OAR's work supports broader access to global data, development of next-generation observing technologies and data management, enhanced understanding of the mechanisms of drought, extreme precipitation and water hazards, and improving early warning of water availability and water-related hazards. NOAA's multilateral partnerships leverage U.S. and international capabilities to support the Global Ocean Observing System, e.g. global Argo float and the tropical moored buoy system in the tropical Atlantic, Pacific, and Indian Ocean. For example, in the Pacific, the observing system is essential to projecting the impact of El Nino and the Southern Oscillation that significantly disrupts normal patterns of weather and water variability, affecting agriculture, transportation, water management, resource management, energy production and the lives of millions of people globally.

- NOAA's National Environmental Satellite, Data, and Information Service (NESDIS) monitors and distributes remote sensing satellite products for oceans, coasts, and inland waters worldwide through its Coastwatch/Oceanwatch program. In addition, NOAA's Joint Polar-orbiting Satellite System (JPSS) program produces global water-related information products from the Suomi National Polar-orbiting Partnership (Suomi-NPP) and also creates products from a sensor on Japan's water observation satellite – Global Climate Observing Mission-Water 1st (GCOM-W1)--to observe critical variables in the global water cycle, including rain rate, snow cover and equivalent, sea-ice concentration, soil moisture, and precipitable water. NOAA/NESDIS also provides leadership and actively contributes to the Group on Earth Observations (GEO) including GEOGLOWS, Committee on Earth Observation Satellites (CEOS), and World Meteorological Organization's Coordination Group for Meteorological Satellites (CGMS) activities to broaden access to global data, develop next-generation observing technologies and data management to better monitor water resources and improve forecasting worldwide.

- NOAA also has experience with transboundary water issues in shared basins, particularly during drought. In particular, NOAA has strong hydro-meteorological observation and modeling capabilities, and these can be brought to bear in a capacity building and training context, often in partnership with the UN and other organizations like GEO. This includes developing early warning information systems for weather and climate extremes, data sharing, and coordination of user networks to reduce impacts of extremes along respective borders such as the International Drought Management Programme at the WMO, which NOAA helped create, and the nascent Global Drought Information System (GDIS) under the GEO workplan. NOAA also leads and coordinates the National Integrated Drought Information System (NIDIS), which makes important contributions to water management strategies in shared basins.

- NOAA is also an important contributor in other water supply/demand and water/food security-related matters across international boundaries, such as the USAID Famine Early Warning System Network, which has significant implications for social fragility and potential disruption.

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U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

The Centers for Disease Control and Prevention (CDC) works 24/7 to protect America from health, safety and security threats, both foreign and in the United States. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, caused by human error or deliberate attack, CDC fights disease and supports communities and citizens to do the same. CDC increases the health security of our nation and the world. As a health protection agency, CDC saves lives and protects people from health threats, including those related to water. To accomplish our mission, CDC conducts critical science and provides health information that protects our nation and the world against dangerous and costly health threats, and responds when these arise.

CDC works globally to prevent, detect, and respond to waterborne and water-related diseases through multiple approaches. The agency has decades of field and laboratory experience and unique expertise to contribute to water, sanitation and hygiene (WASH) programming. With strengths in disease surveillance, laboratory analysis, WASH interventions, and monitoring and evaluation, CDC identifies the most effective interventions in diverse situations ranging from emergency response to longer term development. CDC provides technical assistance and guidance to implementing partners to scale up the most appropriate interventions for specific settings or programs. Those include complex humanitarian emergencies and natural disasters, household water storage and treatment (HWTS), rural piped water supplies and sanitation systems, WASH in health care facilities and schools, and larger urban water system and sanitation infrastructure projects.

In summary, CDC's larger role is to provide the evidence base to identify the most effective WASH interventions and the guidance and technical assistance for scaling up those interventions. Throughout this process, the end goals are the same—protecting the United States from threats and instability that emerge overseas while also building global capacity to better prevent and respond to water-related health risks.

CDC may support the implementation of the Global Water Strategy in the following ways:

- Technical assistance and collaboration with partners including U.S. governmnet agencies (e.g., USAID, including OFDA, MCC, State Department), Ministries of Health and Water, WHO, UNICEF, universities, non-governmental organizations, and development banks to design, implement, and evaluate WASH interventions, and leverage resources. Potential activities include:
    a. Perform studies across the globe showing reduced diarrheal disease through HWTS programs in areas that lack treated water service, establishing the evidence-base to implement HWTS programs.
    b. Respond to waterborne disease outbreaks, including cholera and typhoid fever, in affected countries and build local capacity to prevent and prepare for these outbreaks through training and technical assistance.

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c. Assess and support WASH improvements in health care facilities, including medical waste treatment.
d. Increase access to chlorinated water in areas affected by cholera, including increasing bulk chlorination of water supplied at distribution points or by truck, supporting installation of chlorination equipment on small water systems, and supporting HWTS programs using locally produced chlorine products.
e. Support oral cholera vaccine (OCV) evaluations including surveys of OCV coverage, cost, and effectiveness and the integration of OCV with WASH programming.
f. Support cholera surveillance, laboratory diagnostics, and cholera preparedness.
g. Implement a study of the health impact of large scale urban water and sanitation improvements.
h. Implement studies of household-based and community-based solar sanitation.
i. Support studies of the acceptability, feasibility, microbiologic effectiveness, and cost of fecal sludge treatment for both refugee and community settings.
j. Support studies of health impacts of handwashing, such as reduced diarrhea and respiratory illness, in children receiving hygiene promotion and soap.

- Collaborate with global public health leaders, such as WHO, UNICEF, and academic institutions to strengthen capacity through training and developing global guidance documents to improve water sector institutions, potentially including:
    a. Train staff from Ministries of Water and Health to strengthen WASH support to rural communities and improve WASH in health facilities.
    b. Develop rapid assessment toolkit for WASH in emergencies to standardize information collected by the UNICEF/WHO Global WASH Cluster and response partners.
    c. Develop WASH component for CDC's new Global Enteric Disease Outbreak Response Capacity Building Toolkit.

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U.S. Department of the Interior
Bureau of Reclamation

Agency Mission
The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public. Through leadership, use of technical expertise, efficient operations, responsive customer service and the creativity of people, Reclamation will seek to protect local economies and preserve natural resources and ecosystems through the effective use of water.

How/Where Agency works and areas of focus
Established in 1902, the Bureau of Reclamation is best known for the dams, power plants, and canals it constructed in the 17 western states. These water projects led to homesteading and promoted the economic development of the West. Reclamation has constructed more than 600 dams and reservoirs, including Hoover Dam on the Colorado River and Grand Coulee on the Columbia River. Today, Reclamation is the largest wholesaler of water in the country. We bring water to more than 31 million people, and provide one in five Western farmers with irrigation water. Reclamation is also the second largest producer of hydroelectric power in the United States, producing enough electricity to serve 3.5 million homes.

Today, Reclamation is a contemporary water management agency working to help the Western States, Native American Tribes and others meet new water needs and balance the multitude of competing uses of water in the West. Our mission is to assist in meeting the increasing water demands of the West while protecting the environment and the public's investment in these structures.

The Bureau of Reclamation will implement the Global Water Strategy in three ways:

1. Enhance the efficiency and sustainability of water-related infrastructure. Bureau of Reclamation capabilities that fulfill this goal include:
   - Dam and canal safety and inspection programs
   - Maintenance, modernization, and replacement of existing structures
   - Hydropower design, operation and maintenance
   - Reservoir sedimentation management
   - Multiple-purpose reservoir operations
   - Flood mapping

2. Encourage effective and sustainable water resources management. Bureau of Reclamation capabilities that fulfill this goal include:
   - Long-term planning and forecasting
   - Water resources research and technology transfer
   - River basin management decision-support systems
   - Drought modeling and mitigation training
   - Water conservation, recycling and reuse
   - Desalinization

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- Address invasive and endangered species issues
- Restore and protect fish and wildlife habitat

3. Promote cooperation over shared waters. Bureau of Reclamation capabilities that fulfill this goal include:
   - Cooperation over transboundary, including international, water resources
   - Resolve challenges and conflicts in water management, including water rights settlements
   - Environmental impact and cultural resource effect assessments

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U.S. Department of the Interior
U.S. Geological Survey

Agency Mission and Vision
The U.S. Geological Survey (USGS) serves the Nation by providing scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect the quality of life. As the Nation's leading water, earth, and biological science and civilian mapping agency, the USGS monitors natural resource conditions and provides reliable and timely science-based information used by natural resource policy makers and managers. Our diverse expertise enables us to carry out large-scale, multidisciplinary investigations, responding quickly to emerging environmental issues and problems.

How/Where Agency Works and Areas of Focus in Water Resources
The USGS supports U.S. foreign policy through agreements with U.S. Department of State, USAID, or international entities such as the World Bank to provide reliable, impartial, timely information needed to understand global water resources. This information is used by decision-makers to: (1) minimize the loss of life and property as a result of water-related natural hazards such as floods, droughts, and landslides; (2) effectively manage groundwater and surface water resources for military, domestic, agricultural, commercial, industrial, recreational, and ecological uses; (3) protect and enhance water resources for human health, aquatic health, and environmental quality; and (4) contribute to wise physical and economic development of resources for the benefit of present and future generations.

USGS will implement the Global Water Strategy in three ways:

1. Strengthen scientific and technical understanding of international water supply and demand:
   - Assess water availability, water quality, water use, floods and droughts at scales ranging from single data-collection sites to regional, national, and international levels.
   - Implement and-or teach others to implement state-of-the-art methodologies for acquiring water resources information, including methods of data collection, quality assurance, data management, laboratory analysis, data analysis and simulation modeling.

2. Improve global monitoring and management of water resources:
   - Monitor and predict surface water, groundwater, and surface water/groundwater interactions.
   - Apply hydrologic models to predict the consequences of water-related management actions (e.g., altered flow regimes caused by reservoir operations and diversions, groundwater withdrawals and coastal saltwater intrusion, exposure to agricultural chemicals, etc.).
   - Implement and-or teach others to implement ground-based and remotely-sensed hydrologic data collection to determine water quantity and quality.
   - Implement and-or teach others to implement state-of-the-art hydrologic system management through numerical modeling and geographic information systems.

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3. Promote and provide scientific support to transfer technology on a voluntary and mutually agreed basis and build capacity:
   - Share earth science expertise and increase international capacity to monitor and manage water resources.
   - Partner with foreign governments and international organizations to transfer technology on a voluntary and mutually agreed basis and strengthen institutional capacity for science-based decision making.
   - Play an active role in international hydrologic science organizations such as UNESCO's International Hydrological Programme, the World Meteorological Organization, and International Atomic Energy Agency to promote international and transboundary science-based natural resource management decision making.

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U.S. Department of the Treasury

The Treasury Department's mission is to maintain a strong economy and create economic and job opportunities by promoting the conditions that enable economic growth and stability at home and abroad, strengthen national security by combating threats and protecting the integrity of the financial system, and manage the U.S. government's finances and resources effectively.

Treasury has an indirect involvement in global water issues, coming through its role as the U.S. government agency responsible for U.S. participation in the Multilateral Development Banks (MDBs). Treasury also leads on U.S. participation in the Global Environment Facility (GEF), a multi-donor trust fund that provides grants for global environmental projects. Treasury manages an interagency review process (involving agencies such as the Department of State, USAID, and EPA) for MDB and GEF projects, and expresses the U.S. view through the voice and vote of the U.S. Executive Directors on upcoming projects at the MDBs. Treasury supports application of best practices in the disclosure and mitigation of the environmental and social impacts of proposed MDB investments in the water sector, including the development of large dams. Similarly, Treasury encourages the MDBs to promote sustainable financing practices for investment in the water sector.

Contributions to the Global Water Strategy

The Department of the Treasury will implement the strategic objectives of the Global Water Strategy in the following ways:

1. Promote sustainable access to safe drinking water and sanitation services and key hygiene behaviors:

   The MDBs have developed water and sanitation strategies that guide their activities in this sector, and Treasury encourages the MDBs to support investments in developing countries focused on providing access to adequate drinking water and sanitation, wastewater management and treatment, and control and cleanup of water pollution. Treasury manages an interagency review process for the World Bank Group's environmental, health, and safety guidelines that set standards for pollutant emissions and water quality.

2. Encourage the sound management and protection of freshwater resources:

   The MDBs have developed strategies guiding their activities regarding freshwater management, and Treasury encourages the MDBs to support investments in developing countries focused on integrated water resources management and sustainable irrigation. Treasury manages an interagency review process for MDB environmental and social safeguards policies that govern the analysis and mitigation of project impacts. Treasury also

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encourages the GEF to support global, regional, and national efforts to conserve important fish stocks, an important source of food domestically and abroad.

3. Reduce conflict through promoting cooperation on shared waters:

   The MDBs have developed programs supporting cooperation on shared water resources, and Treasury encourages the MDBs to support investments in river basin associations and other programs that promote cooperation. Treasury also encourages the GEF to fund projects that help countries jointly manage their transboundary surface water basins, groundwater basins, and coastal and marine systems, thereby reducing conflict in those regions.

4. Strengthen water sector governance, financing and institutions:

   Treasury encourages the MDBs to invest in technical assistance programs that promote sound water sector governance, financing and institutions.

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U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency's (EPA) mission is to protect human health and the environment. EPA's Office of Water (OW) is the national water program that promotes safe drinking water and sanitation for the benefit of public health and the environment. The Office of Water ensures the quality of drinking water, and restores and maintains watersheds, and their aquatic ecosystems to protect human health, support economic and recreational activities, and provide healthy habitat for fish, plants and wildlife.

EPA-OW is responsible for implementing the Clean Water Act, the Safe Drinking Water Act, and portions of the Resource Conservation and Recovery Act, Coastal Zone Management Act, Marine Protection, Research and Sanctuaries Act, and several other statutes. The agency's technical and legal framework and regulatory expertise in the area of water quality has often been called upon to support federal agencies, principally, the Department of State/USAID, the Millennium Challenge Corporation, Department of Treasury, Department of Commerce, and the U.S. Trade Development Agency, as well as international organizations of strategic importance to the United States. EPA provides support to these lead agencies in promoting sustainable access to safe drinking water and sanitation, strengthening water sector governance and financing institutions, and supporting economic and social development.

The EPA intends to harness opportunities to advance the Global Water Strategy in the following areas:

1. **Support the engagement of the U.S. in global water governance and water quality issues, subject to the availability of funds.**
   a. Working with the Department of State, advance U.S. interests with collateral environmental and foreign policy benefits by engaging in and tracking global water governance processes in the Organization for Economic Development and Cooperation (OECD), the World Health Organization (WHO), and the UN Environment (UNEP). Provide technical and policy guidance that are synergistic with domestic programs to ensure policy coherence between the U.S. and foreign programs.
   b. Provide best practices and lessons learned for transboundary water management, and support activities under the Great Lakes Water Quality Agreement and other U.S.-Canada and the U.S.-Mexico transboundary issues in the restoration and protection of shared waters.

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c. Provide technical evaluation and expertise on water governance in legal, regulatory, and economic frameworks from a basin and urban systems approach in integrated water resources management; sharing good governance and multi-stakeholder engagement and participation processes from the United States.
d. Support institutional capacity building on legal framework, national-to-local level implementations of technology-based permitting system using Best Available Technology (BAT) to reduce point-source pollution, and Best Management Practices in diffuse pollution controls.
e. Catalyze global partnerships to improve water quality and prevent land-based sources of pollution to fresh and marine waters ('Ridge to Reef') on nutrient management, wastewater, and marine litter.
f. Promote the implementation of legal and voluntary frameworks in water conservation such as payment of environmental services (PES), the polluter- and consumer-pays principles, water quality standards, and market-based regulatory mechanisms in the protection of water quality to support human health and the ecosystem.

2. Strengthen global water quality standards and monitoring with the WHO and the UN Environment, subject to the availability of funds.

a. Support domestic and foreign training on a reimbursable basis on water quality monitoring, laboratory capacity building, water safety plans (WSP) to protect drinking water supply from source to tap, in risk assessment and management of contaminants.
b. Exchange with governments and the international community on water quality assessments, monitoring, and development of health criteria, early warning systems, and international standards/guidelines such as the WHO drinking water, wastewater reuse, sanitation safety plans (SSP), and emerging contaminants (i.e., cyanobacteria) to achieve health and safety targets.
c. Provide technical expertise on water quality, fit-for-purpose water resources, water technologies and verifications, and improvement in water-energy efficiency and nexus issues.
d. Review and participate in the global development of Sustainable Development Goals' indicators related to water.

3. Foster economic growth for water and wastewater sectors in infrastructure financing and support key commerce-oriented international platforms, subject to the availability of funds.

a. Identify export promotion opportunities and facilitate demonstrations and voluntary transfers of mutually-agreed terms of U.S. technologies abroad to expand U.S. markets as demand for clean water and access increases.
b. Develop sustainable and innovative water infrastructure financing mechanisms by transferring U.S. revolving funds structure in enhancing public-private partnerships.
c. Review and share U.S. knowledge in ecosystem valuations, green infrastructure and financing, water quality trading, and PES for water quality protection/restoration, water and ecosystem conservations.

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Annex B: Supporting Data for the Selection of Water for the World High Priority Countries

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As required by the Water for the World Act of 2014, not fewer than ten countries have been designated as high priority countries to be the primary recipients of foreign assistance related to affordable and equitable access to safe water, sanitation, and hygiene on the basis of the criteria set forth in section 136(f)(1) of the FAA, in the context of U.S. foreign policy interests . Using the criteria below, USAID quantitatively assessed level of need and cross-walked the data with qualitative reviews of opportunity. These data were then used in the selection of FY 2018 high-priority countries. The selection of the 13 high priority countries reflects prior year resources still available, estimated FY 2017 resource allocations and resources requested for FY 2018. The standardized indicators used to inform future annual designations may be revised as new data and new analyses become available.

- **WASH Needs Index.** Need is defined by a drinking water, sanitation, and hygiene needs index. The index is calculated using publicly available, country-level statistics on drinking water and sanitation access rates and the causes of childhood mortality. Basic and safely managed drinking water access, basic sanitation access, and open defecation rates are drawn from the World Health Organization and the United Nations International Children's Emergency Fund's Joint Monitoring Programme database (washdata.org). Estimates of the number and proportion of under-five mortality due to diarrheal disease are drawn from the WHO database on the causes of childhood mortality www.who.int/healthinfo/global_burden_disease/estimates/en/index3.html.

- **Host country government commitment, capacity, and ability to work with the United States.** Factors used to assess this criterion include the presence of a USAID bilateral Mission and foreign assistance funding; presence of a national sector plan or strategy; level of political prioritization to implement sector plans and strategies; and host country financial commitments to the water and sanitation sector. Data on national policies and commitments is drawn from the UN Water Global Analysis and Assessment of Sanitation and Drinking Water Survey (GLAAS) (http://www.who.int/water_sanitation_health/monitoring/investments/glaas), and consultations with host country governments.

- **Opportunities to leverage U.S. support.** Opportunities are assessed using data on countries' capacity for absorbing official donor assistance from the UN Water GLAAS survey and consultations with donor working groups, the private sector and other U.S. government equities.

- **The likelihood of making significant improvements on the health and educational opportunities available to women and girls.** Information used to assess this likelihood includes the World Economic Forum's Global Gender Gap Rank (reports.weforum.org/global-gender-gap-report-2016) and information in the UN Water GLAAS survey on the presence and implementation of sector policies that explicitly consider women and girls.

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