

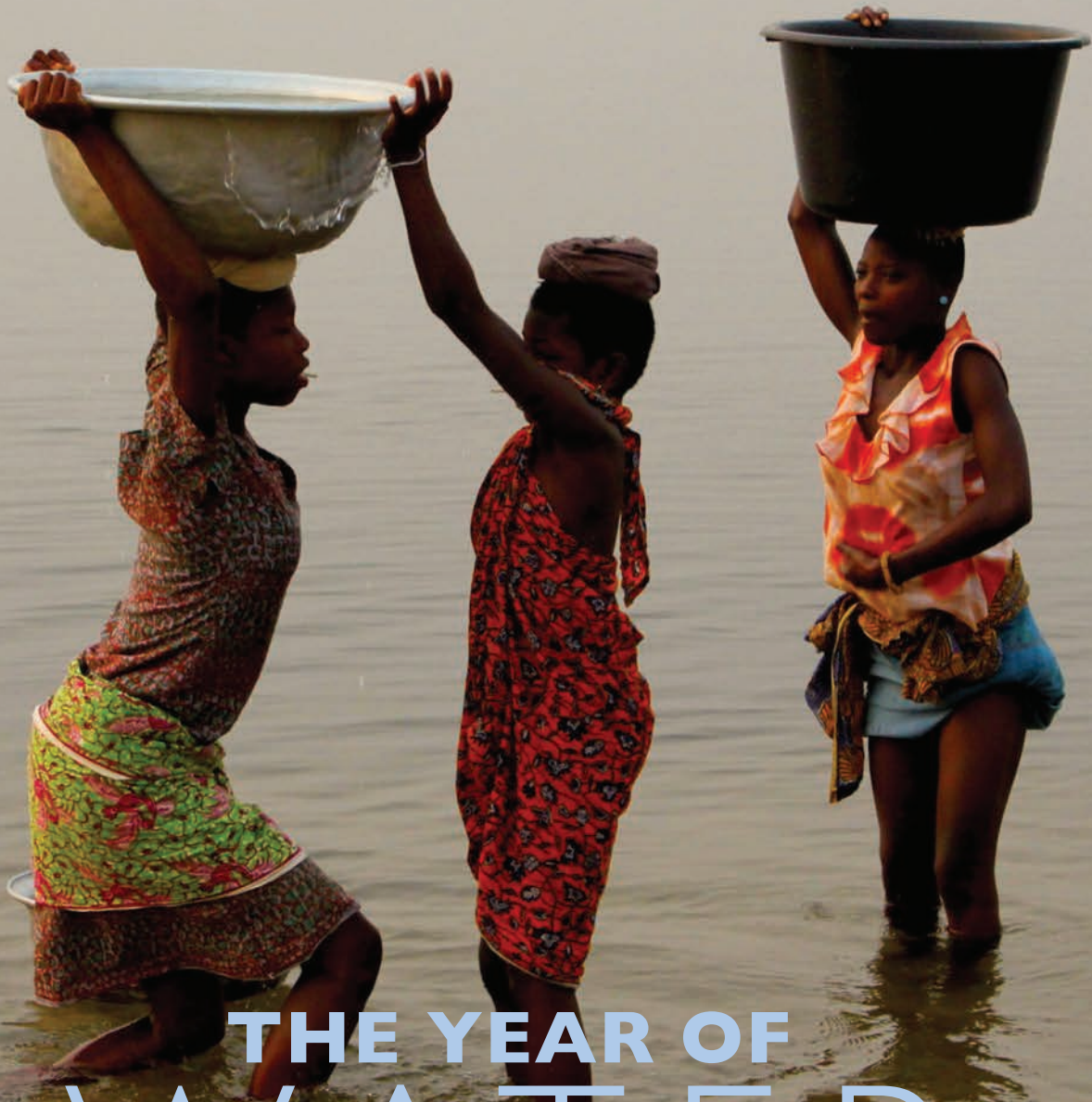


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VOLUME IV ISSUE I MARCH 2013

# GLOBALWATERS



THE YEAR OF  
**WATER**  
**COOPERATION**



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**T**his month, we celebrate World Water Day and its theme of cooperation. It will be a great opportunity to reaffirm our work to save lives, feed hungry families, and reach out in new ways to improve lives around the world.

In honor of World Water Day, we bring you heartwarming snapshots of committed individuals working together in every corner of the globe. We take a look at some of the collaborative work being done by USAID with those most in need. Last April, USAID joined the Sanitation and Water For All Partnership, which brings together developing countries with donors, multi-lateral agencies, and civil society to work to achieve the Millennium Development Goals for water and sanitation in the most at-risk countries. We strongly believe initiatives that bring together a wide swath of stakeholders hold the key to a better future.

That is why it is so inspiring to learn that more and more people and organizations are stepping up to ensure a water-secure future. Our Real Impact story this issue looks at innovative financing of water projects, from microfinance to public-private partnerships. With corporations like The Coca-Cola Company teaming up with

USAID to help communities build their own latrines, commercial banks and utilities financing household water connections, and impoverished villagers pooling their savings to collectively upgrade their water infrastructure, one thing is clear: More and more people are coming to the important realization that a safer, healthier future is a truly worthwhile investment.

Governments, too, are doing more to ensure the water security of their citizens. The Middle East is the most water-scarce region in the world, and climate events and declining water resources pose some of the biggest threats to its future. We look at cutting-edge new collaborations with USAID that promote improved water governance in this part of the world. From developing high-tech information models that enhance government decision-making to empowering associations of small-scale farmers to better manage their water resources, these initiatives are changing the ways that water is governed.

We hope you enjoy this issue. Happy World Water Day!

*The Water Office*  
[waterteam@usaid.gov](mailto:waterteam@usaid.gov)

**A LONG JOURNEY:** People in Kenya walk long distances in search of water. Climate change has had a negative impact on the people of Kenya, especially pastoralists.

*Photo Credit: Tim Cronin/IFOR*

# 04

## On The Waterfront

### Sharing Strengths:

World Unites for a Water-Secure Future



# 12

## Real Impact

### Pooling Resources Pays Dividends



# 18

## In Focus

### Governance in a Water-Scarce Middle East



# 10

## Currents

- ▶ Asia Water Week
- ▶ USAID Panel on Sustainability, Scale, and Impact
- ▶ USAID Water Office Develops Knowledge Management Strategy
- ▶ Indonesia Partnership Provides Thousands with Clean Water
- ▶ Water Resources and Climate Change Adaptation Program in East Africa

# 22

## Resource Center

- ▶ In Print
- ▶ Online
- ▶ On Video

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# SHARING STRENGTH

World Unites for a Water-Secure Future



**WORKING TOGETHER:** Women carry jugs of water in India.

*Photo Credit: Andre J. Fanthome*

# GTHS

## ure Future

Bedouins travel miles on camelback in search of it. Farmers plan their year around it. Children spend hours fetching it. Millions die because of unsafe supplies of it. Water is essential for all of us. But too often, this shared need creates divisions instead of fostering cooperation.



ON THE WATERFRONT





In recognition of the importance of working together, the United Nations declared 2013 the International Year of Water Cooperation. Water cooperation is accordingly the theme of World Water Day on March 22. It was cooperation between donors, civil society organizations, the private sector, governments, and individuals that enabled the global community to meet the Millennium Development Goal to reduce by 50 percent the number of people without access to safe drinking water in 2010, five years ahead of schedule. Indeed, cooperation enables donor agencies including USAID to meet a wide range of water-related development goals such as increasing agricultural productivity, boosting child health, improving the environment, empowering communities, and fostering peace and coexistence.

While water cooperation has a long history, recent technological innovations have enabled more people to engage in the challenges around water quantity and quality. Since the growth of global media, millions can now see and understand the hardships facing people across the world. Social media has launched thousands of dialogues around water issues, and methods like crowdsourcing have enabled even those with limited means to make a difference.

**Social media has launched thousands of dialogues around water issues.**

USAID's Every Child Deserves a 5th Birthday campaign is testament to the power of these innovations to connect people for change. This campaign brings together corporations, governments, nongovernmental organizations, faith groups, and donor organizations to work

together to decrease child mortality from preventable causes, including water-borne diseases and diarrhea. The initiative has engaged scores of people around the world through social media. Thousands of men and women—celebrities, public figures, and concerned citizens from almost every country—have tweeted messages of hope, declared their support on Facebook, and

(Top) **PIPELINE TO PROGRESS:** Members of this Ghanaian community work together to build a system of water pipes on top of the highest mountain in the Mafi Seva region.

*Photo Credit: Erberto Zani*

(Left) **CIRCLE OF HOPE:** A group of women living with HIV learn about sustainable farming and water in Northern Zambia.

*Photo Credit: Nathaniel Segaren*

(Right) **FRUITFUL COOPERATION:** Kenyan women participate in a community development program that assists in fostering peace and reconciliation among the different ethnic groups through development activities including water projects.

*Photo Credit: Edward Reilly*

ON THE WATERFRONT



(Left) **COORDINATING FOR CHANGE:** Women scoop dirt for new water pipes in Ghana. *Photo Credit: Erberto Zani*

(Right) **WATER FIESTA:** People gather for the Fiesta del Agua (Water Festival) in San Pedro de Casta, Huarochiri, Lima Province, Perú. *Photo Credit: Erberto Zani*





uploaded photos of their 5th birthday to raise awareness of these important issues.

In April 2012, USAID joined the Sanitation and Water for All Partnership (SWA), which promotes global water and sanitation goals through cooperation. The Partnership brings together rich and poor countries along with donors, civil society, and governments to foster universal access to sustainable drinking water and sanitation. SWA works to enable governments and

**With USAID facilitation, Israelis and Palestinians are working together to treat wastewater, promote water conservation, and engage in dialogue.**

donors to help those most in need. USAID Administrator Rajiv Shah said that this cooperative approach was key and that, “Working together, we can not only reach full coverage, but we can also do it in the most effective, efficient, and collaborative way.”

Cooperation is a key element to fostering peace and coexistence. USAID/Afghanistan’s Pastoral Engagement, Adaptation, & Capacity Enhancement (PEACE) Project has trained hundreds of Afghan tribal leaders to mitigate conflicts between pastoralists over issues including water resources. By working together, these pastoralists have improved their income and quality of life. In the Philippines, USAID helped former militants become fish farmers through its “Arms for Farms” program, thus enhancing peace in the region. And in the Middle East, with USAID facilitation, Israelis and Palestinians are working together to treat wastewater, promote water conservation, and engage in dialogue.

As populations grow and water resources dwindle, the need for water cooperation will increase. But through cooperation between presidents and pastoralists and farmers and faith leaders, millions around the world can meet these challenges together.

**More Information**

**World Water Day website**

**Sanitation and Water for All partnership**

**Every Child Deserves a 5th Birthday**

Credit: Felipe Varela Travesi



Photo Credit: Lucan Jans

## ASIA WATER WEEK

Over 340 million people in Asia lack access to safe water supply and over 680 million lack access to sustainable services. The Asian Development Bank hosted Asia Water Week 2013 on March 13-15, 2013 in Manila, Philippines. The event celebrated the theme “Securing Water for All.” Discussions at the conference centered on ways to improve Asia’s water sector and advance policy reform. Conference panels covered crosscutting topics including climate change, the water-food-energy nexus, and disaster management. Also featured were discussions on water supply and sanitation, water resources and the environment, and agriculture and irrigation. The theme of water security was examined through three

targeted components: basin water management, urban water services, and rural water services. The event encouraged idea and knowledge sharing on water sector issues and technologies. Innovative initiatives in the water sector were announced and notable contributions in the water sector were recognized. The conference highlighted the need for sustained public funding and increased mobilization of private sector investment and expertise.

## USAID PANEL ON SUSTAINABILITY, SCALE, AND IMPACT

On December 13, 2012, USAID hosted a series of water sessions and a “mixer” that drew more than 100

participants. A panel comprised of USAID water staff based in Liberia, Kenya, Indonesia, and Nigeria shared insights from the field about programming for sustainability, bringing successful projects to scale, and ways to make the greatest impact. Presentations centered around keys to sustainability in water projects, including building capacity on the ground, balancing hardware with software, improving governance, and creating an enabling environment. Participants from USAID, other USG agencies, WASH organizations, and USAID implementing partners engaged the panelists in a question and answer session about their projects in the sector. One of the breakout sessions examined ways to better facilitate knowledge management and allowed participants



Photo Credit: USAID

to analyze the pros and cons of current information vehicles. The event helped participants to identify areas most in need of information sharing and sought to explore opportunities to fill gaps in knowledge between the Missions and USAID’s Water Office.

## **INDONESIA PARTNERSHIP PROVIDES THOUSANDS WITH CLEAN WATER**

In January, USAID’s Indonesia Urban Water, Sanitation and Hygiene (IUWASH) project announced an expanded partnership with the Bank Syariah Mandiri to help 40,000 low-income families in Indonesia obtain household water connections by providing them with loans. New water utility customers typically pay high upfront connection costs that are not affordable to low-income families. Under the expansion, customers will pay back loans in 12 to 36 monthly installments. Already, the partnership has helped finance 3,750 household water connections in the Kudus District of Central Java and

the Mojokerto District of East Java. USAID/Indonesia Mission Director Andrew Sisson said, “Water is a basic human need, but for many, accessing safe, clean water is not a reality. The United States, through USAID, is very pleased to support microfinance partnerships that offer a path for low-income households to afford clean water connections in their homes.” The \$37 million project works in 54 cities and districts nationwide to increase access to clean water for 2 million people and improve access to sanitation services for 200,000 people. IUWASH plays an important role in the U.S.-Indonesian Comprehensive Partnership, which works to improve bilateral relations between the United States and Indonesia.

## **WATER RESOURCES AND CLIMATE CHANGE ADAPTATION PROGRAM IN EAST AFRICA**

In January, USAID and implementing partner Tetra Tech launched the Planning for Resilience in East Africa through Policy, Adaptation, Research, and Economic Development

(PREPARED) project. The project works to increase access to sustainable water supply in East Africa. With a budget of \$24 million, PREPARED will work in Kenya, Uganda, Burundi, Rwanda, and Tanzania to promote sustainable economic growth, strengthen transboundary freshwater ecosystems, increase climate change resilience, and improve the quality of life for East African communities. “This contract will increase the access to and sustainability of water supply in East Africa, helping to create the conditions for long-term, sustainable development,” said Tetra Tech Chairman and CEO Dan Batrack.

## **USAID WATER OFFICE DEVELOPS KNOWLEDGE MANAGEMENT STRATEGY**

Knowledge management (KM) encompasses getting the right knowledge to the right people at the right time. USAID’s Water Office has developed a strategy for knowledge management to maximize the value of its information and knowledge, support its partners and beneficiaries, and lead to improved effectiveness and impact. The strategy presents the goals, objectives, and activities through which USAID’s Water Office will capture knowledge that is critical to the Agency, constantly improve it, and make it available in the most effective manner to those who need it. USAID’s Water Office KM Strategy has four goals: Creating knowledge and turning data into useable information; capturing knowledge by collecting and cataloguing data and information; sharing knowledge by disseminating and promoting knowledge products while fostering a knowledge sharing culture; and learning by applying good practices and lessons learned to future activities.

# POOLING P



**BUILDING TRUST:** VSLA meetings begin by publicly counting the money in the cash box, a practice that ensures transparency and builds trust among members.

*Photo Credit: Tatiana Tang, CARE Madagascar*

# ING RESOURCES AYS DIVIDENDS

For Paul Othim and Rose Achieng of Kisumu, Kenya, easy water access was a pipe dream. Paul would spend \$14 a week, a significant portion of his modest mechanic's income, to buy water for his large family. He was more fortunate than some of his neighbors. Rose, a mother of three, could not even afford this and spent hours hauling water-filled jerry cans between hyacinth-infested ponds and her tin-roofed shack.

But Rose, Paul, and 8,500 of their neighbors achieved the impossible when the Sustainable Water and Sanitation in Africa initiative (SUWASA), a USAID project implemented by Tetra Tech and Development Innovations Group (DIG), helped them to finance household water connections. SUWASA worked with commercial banks to enable commercial water utility companies to expand water access in Kenya. Now thousands of low-income Kenyan families can, for the first time, afford clean water for drinking, cooking, and washing.

Innovative financing initiatives such as SUWASA are on the rise as a wide variety of actors realize it is in their interest to increase access to water and sanitation and work to achieve the Millennium Development Goals. In 1970, the U.S. Government provided 70 percent of the financing for American foreign assistance. Today it provides just 20 percent of the financing as various stakeholders do more to close the financing gap. Increasingly, the global community is recognizing that, to achieve these goals, financing must come from a variety of sources, including govern-

ments, the private sector, and individuals. Development agencies like USAID are now able to accomplish more, leverage the resources of their partners, and better address growing health, livelihood, and development challenges. For banks and corporations, development is a worthwhile investment. And for the millions like Paul and Rose, these initiatives have made the difference between surviving and thriving.

## SHARING RISKS AND REWARDS

USAID established its Development Credit Authority (DCA) in 1999 to reduce local credit constraints and support initiatives like those led by SUWASA. DCA partially guarantees loans to encourage commercial banks to invest in projects that help reduce poverty. Worldwide, DCA has made over \$2.7 billion in commercial capital available, including nearly \$200 million in private capital leveraged in the water sector alone. Notably, 98 percent of borrowers have repaid these USAID-backed loans.

“DCA guarantees allow commercial banks to adjust their mental math and encourage them to lend to often-neglected sectors that stand to present the largest development gains,” said Anthony Cotton, Africa team leader for DCA.

In Kenya, these guarantees have the potential to make a big difference. The Kenyan government transferred management of water utilities from municipalities to decentralized water service boards with the 2002 Water Act, but commercial banks remained reluctant to lend to the water sector due to perceived risks and inefficiencies.

DCA guarantees in Kenya have opened new sources of financing from private banks for SUWASA's on-the-ground work. For example, in the Kisumu, Kenya project, an obstacle for water utilities seeking to expand their operations was their customers' inability to pay the \$100 upfront charge for a private water connection.

“The Kisumu water company had invested in a treatment plant to double the supply of water to the city and had a strategic plan to extend the net-

work to low income areas,” said Eric Adams, SUWASA Kenya team leader for DIG. “Our project linked financing from the bank to the company to the consumer to create a sustainable business model where everyone wins.”

A loan from private lender K-Rep Bank, enhanced by a USAID DCA guarantee, enabled the utility to front the connection costs of 1,500 low-income households, passing along their financing expenses to customers in a manageable monthly rate. Even with the financing charge, customer water bills were cut in half. A similar project in Nakuru, Kenya, involving public prepaid meters, reduced customer payments by 80 percent.

“By leveraging bank financing, water companies can scale high-impact proj-

ects and truly change people's lives,” said Mr. Adams.

## ENCOURAGING PRIVATE FINANCING

Halfway around the world, another DCA-supported project is helping connect private lenders to water utility projects. Established in 2008 by Japan's International Cooperation Agency, the Development Bank of the Philippines, and USAID, the Philippine Water Revolving Fund (PWRF) is a co-financing arrangement that has mobilized more than \$100 million to support the development of new or improved water access for 2 million people.

In 2004, a policy directive in the Philippines mandated sweeping reforms in the financing of water service providers and laid the groundwork for private financing of water projects. Previously, utilities relied on government financing alone. “This new policy was the impetus to support the flow of private finance,” said Amanda Femal, USAID's Asia team leader for DCA.

Yet, as in Kenya, uncertainty about the risks and profitability of the water sector meant that funding from private institutions was limited.

DCA credit assurances coupled with USAID's technical assistance on project development, water project appraisal, and the development of a water utilities credit rating system gave private banks the confidence

**FINANCING CHANGE:** The VSLA secretary records member contributions into registers designated for each individual. Over 50 percent of VSLA members are mothers with young children.

*Photo Credit: CARE Madagascar*



they needed to lend money to fill this gap. In one agreement, a loan of approximately \$13 million from the Development Bank of Philippines and the private Bank of the Philippine Islands allowed the Puerto Princesa City Water District to refurbish the city's water system, which serves 117,000 and by 2014 will provide new water distribution services to an additional 48,000 people.

“Private banks are now actively originating loans and starting to close deals without credit risk guarantees,” said Alma Porciuncula, Philippine Water Revolving Fund chief of party.

## CORPORATE STRENGTH

Investing in development is not just about money, though. In addition to working with banks to finance water projects, USAID joins forces with private companies to achieve mutual water goals. The companies not only leverage funds, but also publicity, networks, and know-how.

The Water and Development Alliance (WADA), launched in 2005 with equal investments from USAID and from The Coca-Cola Company, is a prime example. The partnership began after Coca-Cola started investigating ways to mitigate risk to the watersheds in which their bottling plants were located. “They began asking questions such as, ‘If the community around our bottling plants does not have education about water and sanitation, how does that impact our operations?’” said Naabia Ofosu-Amaah, president of the Global Environment and Technology Foundation, which facilitates WADA activities.

USAID was a natural fit to partner with Coca-Cola on watershed protection activities, productive use of water, and WASH issues. Investments of \$31 million in 24 countries have

yielded benefits for Coca-Cola as well as for thousands of people who live and work near their plants. In Senegal, WADA has focused on community-led total sanitation and creating open-defecation free communities. The program helps communities build latrines and learn about ways to ensure sanitary conditions to protect their water sources.

To incentivize achieving open defecation free certification, WADA pays for an improved water access point for the village.

“The value of the project is that staff are managing an integrated water, sanitation, and hygiene program; this is not just a well and latrine building project,” said Emily Rupp, the Global Development Alliances representative at USAID/Senegal.

WADA has seen results by involving local non-governmental organizations and engaging community members. Now villagers across the world have taken ownership over their water and sanitation. “We have accomplished something important, something we need to build on,” said Famara Diedhiou, a governing committee leader from the village of Francounda Bodiancounda.

Another beverage giant, PepsiCo, is likewise joining forces with USAID to engage those in need, optimize its value chain, and improve lives. The goals of that venture, Enterprise EthioPEA, are lofty: Increase food production, improve water resource management, and address malnutrition. But the means of accomplishing these aims comes down to a tiny legume: The chickpea.



**INVESTING IN DEVELOPMENT:** The Development Bank of the Philippines and the Bank of the Philippine Islands sign a co-financing scheme with the Puerto Princesa City Water District worth nearly \$12 million.

Photo Credit: DAI

Through Enterprise EthioPEA, PepsiCo is integrating 10,000 small-scale Ethiopian chickpea farmers into the supply-chain of their Sabra hummus. The partnership works to improve irrigation techniques and is expected to increase yields two-fold. These efforts will not only boost PepsiCo's profits, but will significantly increase the incomes of thousands of farmers and their families.

## FOSTERING INNOVATION

Like any investment, development investments must be judged by their potential payoff. USAID's Development Innovation Ventures (DIV) program works to find cutting-edge solutions that make the greatest impact per dollar.

“DIV is looking for solutions that will be more cost-effective than standard practice, and scalable to reach millions of people,” said Carolyn Edelstein, a program specialist at DIV.

In 2012, DIV and the Bill and Melinda Gates Foundation launched WASH for Life with \$17 million over four years to find, test, and put into practice new approaches to provide sustainable water, sanitation, and hygiene.

One of the first proposals to be awarded seed funding was developed by Sanergy, a Nairobi-based company that converts human waste into fertilizer and biogas, gas produced by the breakdown of organic matter. A \$100,000 grant allowed Sanergy to begin a pilot project by funding the construction of a waste-processing facility and 60 latrines in a Nairobi slum, where open sewage poses a chronic health hazard. The sanitation buildings are franchised to local entrepreneurs and youth groups, which earn revenues from issuing a small per-use charge and the sale of complementary products. Sanergy intends to push forward and scale up to more than 3,000 sanitation centers that will reach 500,000 people and widely reduce the risk of diarrheal disease.

## CHANGE THAT LASTS

As innovative financing gains prominence, USAID faces a new challenge: Ensuring that these new ventures are sustainable.

“USAID is looking carefully at sustainability issues in the water sector and how to create a financing stream that really works over the long haul,” said Heather Skilling, a water and sanitation specialist for USAID. “It’s one thing to determine the costs around putting something in place, but another to consider the costs of building service that will last.”

In the long term, said Ms. Skilling, true change in developing countries must take into account ways to generate a continuous financial flow to ensure that development gains can be sustained. “And that means looking well beyond the ribbon cutting.”

*K. Unger Baillie*



**COUNTING PROGRESS:** A VSLA member counts the number of stamps in her register to determine the amount of money she has saved during the saving cycle.

Photo Credit: Tatiana Tang, CARE Madagascar



# MICROFINANCE BRINGS SAVINGS TO VILLAGES

When Sylvain, a farmer and local leader in Madagascar, found he didn't have the sand needed to complete the water infrastructure for his commune, he turned to a new source of social capital for help: A group of Village Savings and Loan Associations (VSLAs). This popular trend in microfinance is a rudimentary form of banking that brings together community members to save and manage their money collectively. These groups help households improve financial resource management, and provide access to short-term loans at reasonable interest rates for investments in projects like high quality water and sanitation services.

As president of his VSLA, Sylvain was able to link the resources of his VSLA together with those of 13 others, with 293 members in all, to help him acquire the necessary supplies for the stalled project. These groups hold weekly meetings at which time individuals bring their savings contributions and discuss possible investments and loans. VSLAs also pay dividends to members from the interest on loans, creating a new source of income. When Sylvain's wife fell ill, he used his dividends to pay for critical treatment at a private clinic in a nearby village. Sylvain said this may have saved her life. "I would not have dared to borrow 100,000 Ariary (\$50) from someone in the village, nor would I have had that much in savings at home," he said.

USAID's Rural Access to New Opportunities for Health and Prosperity (RANO HP) project has increased demand for clean water and sanitation in the region by providing improved access to savings and credit. The project has also helped locals to better manage their water supply systems by creating water and sanitation business plans. To date, Rano HP has started 225 VSLAs.

VSLAs bring together small groups of people, usually 15 to 25 households. As the name suggests, the model is based on savings rather than debt and leaves the spending control in the hands of members instead of professionals. These groups can be empowering for members, particularly women, by improving their capacity to manage money and creating access to microloans generated from each group's savings. In fiscal year 2012 alone, the project supported the creation of 107 new VSLAs with 1,982 members, 1,188 of whom are women, with savings of \$24,758 and credit of \$14,721.

"What is really interesting and powerful is that they (VSLAs) are self generating," said Jonathan Annis, the project's technical coordinator. "The cohesion between the people is really strong. They trust one another and are willing to experiment together."

Humanitarian agency CARE started this type of banking in Niger in 1991. It was designed to help the poorest save, since many are distrustful of debt and not attractive to traditional microfinance institutions. This financial structure works well in a country like Madagascar, where 80 percent of the estimated 21 million people who live there make less than \$1.25 a day.

A consortium led by Catholic Relief Services that includes CARE, Voahary Salama, Caritas Madagascar, and two local private companies implements RANO HP. The program's goal is for rural communities in Madagascar to have broad access to sustainable water and sanitation services. One of its key activities is to use improved access to savings to encourage people to invest in water and sanitation. Health workers have also taken advantage of the associations' weekly meetings to provide education on sanitation and hygiene. In 2012, the project reported that 2,417 VSLA members had adopted one or more of the three key water, sanitation, and hygiene messages it promoted. Throughout the life of the project, VSLAs have helped approximately 2,000 families to build their own latrines without subsidies from the project.

RANO HP will end in June 2013, and in preparation, Mr. Annis said they are trying to increase communication and mutual support between VSLAs within a geographic area to increase their sustainability. They are also developing communication and marketing tools for traditional microfinance institutions to help encourage continued household investments in sanitation beyond the life of the project.

*S. Hoye*

## More Information

[SUWASA homepage](#)

[Development Innovation Ventures \(DIV\) website](#)

[USAID Development Credit Authority on Twitter](#)

# GOVERNANCE



**A FAMILY AFFAIR:** Abidi Mohamed is one of 200 smallholder farmers working with Green Farm through USAID's Morocco Economic Competitiveness project. *Photo Credit: Oussama Benbila, USAID/MEC*

# IN A WATER-SCARCE MIDDLE EAST



From the Euphrates to the Tigris and the Jordan to the Nile, water has played a crucial role in the development and longevity of civilizations across the Middle East. For thousands of years, managing the water supply in the Middle East has been integral to ensuring the stability of communities, countries, and regions. In ancient Egypt, the Pharaohs prayed to Hapi, the god of the Nile, that the river's waters would flow freely. In Yemen, the earthen Ma'rib Dam, more than 50 feet high, nearly 2,000 feet long, and flanked by spillways, delivered water to a system of irrigation canals for more than a thousand years. Today, Middle Eastern leaders work with USAID to harness cutting-edge scientific methods to ensure there is enough water to meet their countries' needs.

Home to over 5 percent of the world's population, the region has only about 1 percent of the world's renewable fresh water. Lack of drinking water, rising food costs, water-borne diseases, and rolling blackouts jeopardize health, livelihoods, and security in the region. While population growth plays a role in the increased demand, agriculture accounts for more than 80 percent of water use throughout the region. As water resources dwindle, governments and citizens alike are being forced to ramp up efforts to avoid serious shortages.

## DATA-DRIVEN DECISION-MAKING

USAID has been working for several decades to build local capacity to manage water resources in the Middle East. But never have these initiatives been more important. "Population growth and increasing demands for food, housing, and jobs place extreme pressures on water resources, increasing the need for inclusive stakeholder engagement supported by sound understanding of the economic, social, hydraulic, and hydrologic factors that influence the sharing of scarce water resources," said Mark Peters, regional water advisor at the USAID Office of Middle East Programs (OMEP).

That is where USAID comes in. The Agency works with governments across the region to increase the effectiveness of their water use and allocation decision-making. One key way is by increasing access to accurate data on groundwater resources, vegetative cover, projected water demands, and climate events which affect water availability. This has proven critical, as the region's governments have not traditionally relied on verifiable and agreed-upon data in making water decisions. In Jordan, for example, the government has only a small number of meteorological stations to track and forecast water availability. "Accurate data, with no gaps in physical coverage, is essential to decision-making related to water use," said John Harris, OMEP's development outreach and communication specialist.

In Morocco, sound data has made all the difference. USAID's Morocco Economic Competitiveness (MEC) program works with government irrigation agencies and river basin management agencies in the Doukkala-Abda and Oriental regions of Morocco to help them build and manage information systems. These information systems enable accurate modeling and forecasting of water availability at the watershed level and the allocation

**SUSTAINING CIVILIZATIONS:** The ancient Ma'rib Dam provided people in Yemen with water for hundreds of years.

Photo Credit: Pool DEVILLE/AFSM

of water to farms, helping each agency to better provide water services to 100,000 hectares of irrigated farmland. “Improving water use efficiency in irrigated agriculture in the two regions is a crucial factor for agricultural sustainability,” said Andrew Watson, MEC chief of party.

Initiatives like MEC that enable governments to make water decisions based on data are beginning to make waves throughout the Middle East. USAID, NASA, the World Bank, the International Center for Biosaline Agriculture, and national agencies in Jordan, Lebanon, Tunisia, Egypt, and Morocco now work together to develop a suite of advanced land surface models to provide regional-scale hydrological data that is relevant to water resource planning and management. The outputs of these satellite data models are validated by local government measurements and fed into analytical models to turn raw data into the foundations for sound decision-making.

“As a result of USAID activities such as these, water and wastewater services to the region’s citizens are improved, water shortages can be better managed, and countries’ abilities to adapt to climate change and maintain food security are increased,” said Mr. Peters. In Egypt, a USAID project pulling together national utility performance indicators enabled government water managers to better meet citizens’ needs. Dr. Mohamed Hassan, executive director of the Egyptian Water Regulatory Association, said this “allows the water sector regulator to track the performance of water and wastewater utilities and customer based level of service indicators.”

## GROUND-UP GOVERNANCE

While improving governments’ decision-making capacity within individual ministries and agencies is important, it is not enough. Water flows across administrative borders, making collaboration between government ministries and agencies necessary. Ministries charged with overall water resource allocation and regulation are often different than those which develop bulk water arrangements and separate still from those that provide water to end users. “Our work is focused not only on developing better information to help governments and other stakeholders improve water management, but also on fostering communication between ministries, agencies, and sectors. It is only when all parties share the same evidence-based understanding of a situation that tradeoffs can be discussed and resources effectively managed,” said Mr. Peters.

Furthermore, building on-the-ground capacity to manage water resources is essential to sustainability. In order to ensure that all voices are heard during resource discussions, USAID programs are striving to replicate their work with governments among smaller grassroots groups. In addi-

tion to its work with government agencies, MEC provides Moroccan water users associations comprised of 20 to 40 small-scale farmers with cutting-edge data that enables better water resource management. The project gives small-scale farmers access to a mobile phone-based texting service that provides real-time agricultural updates and advice about irrigation. The project also introduces water-saving agricultural techniques to the farmers, promotes higher value water-efficient crops, and provides training on drip irrigation, reducing water loss, and increasing revenue. “Now, farmers will be able to access water 24-7,” said Driss Moulay Rachid, former director of the Regional Investment Centre in Morocco’s Oriental Region.

Moroccan farmers have noticed the difference. Ben Miloud Smaili, president of a cooperative water users association in Morocco’s Oriental region, said, “With USAID assistance, we are planting fruit trees and vegetable crops chosen to meet market demand. As a result, we are guaranteed better income, while saving on water and expenses. By 2015, we plan to increase our market production by half.”

For thousands of years the Middle East has been an arid region, and the only way to secure the future of civilization there is by guaranteeing adequate water supply. It will take the continued efforts of USAID and other donor agencies, the private sector, governments, and determined individuals across the region to ensure these gains continue and that the Middle East is equipped to face the many serious water challenges that threaten it. But with improved technology, a willingness to work across country lines, and the commitment of governments, local leaders, and citizens, a water-secure future may be possible for the Middle East.

*C. Zeilberger*

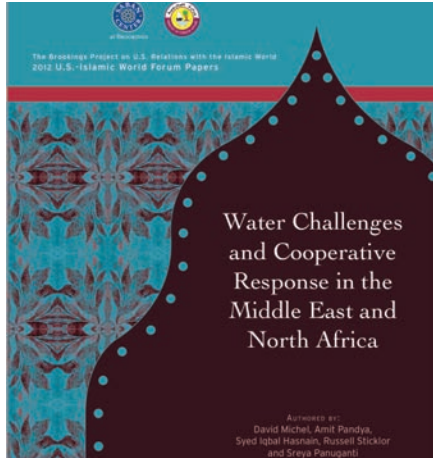
### More Information

**USAID Office of Middle East Programs (OMEPE)**

**OMEPE on YouTube**

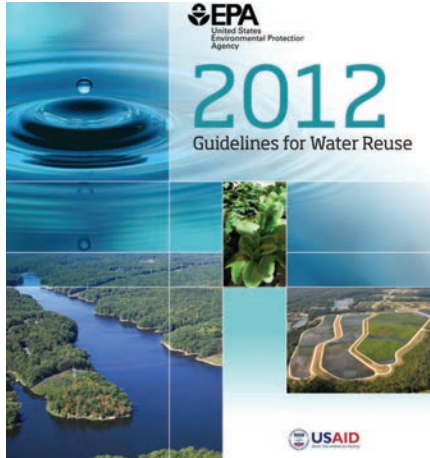
**Morocco Economic Competitiveness (MEC) on YouTube**

IN PRINT



**WATER CHALLENGES AND COOPERATIVE RESPONSE IN THE MIDDLE EAST AND NORTH AFRICA**

The Middle East and North Africa (MENA) is the most water-scarce region in the world. This report, published by The Brookings Institution, identifies and describes the available water resources in this region. The report aims to ignite discussions on the environmental and socio-economic factors that impact water supply and to delineate strategies for MENA countries to improve their water management. It sheds light on various policy options in water governance and features the following case studies: the Tigris-Euphrates basin, the Nile basin, and a side-by-side consideration of water stewardship in Yemen and Oman.



**U.S. ENVIRONMENTAL PROTECTION AGENCY 2012 GUIDELINES FOR WATER REUSE**

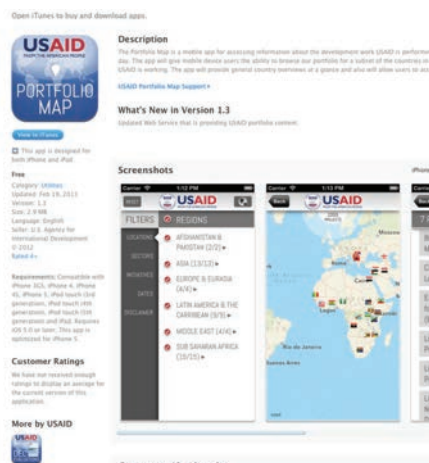
The U.S. Environmental Protection Agency and USAID have collaborated to produce a reference guide on water reuse. This guide presents a framework for developing geographically specific regulations and guidelines, both domestically and internationally. Topics covered in the guide include regional variations of water reuse in the United States, advances in wastewater treatment technologies relevant to reuse, best practices for involving communities in planning projects, international water reuse practices, and factors that will encourage the expansion of safe and sustainable water reuse. The report looks at over 100 case studies from around the world that highlight the various applications of water reuse. Over 300 reuse experts and stakeholders contributed to the report.

ONLINE



**NEW STOCKHOLM INTERNATIONAL WATER INSTITUTE WEBSITE**

The Stockholm International Water Institute (SIWI), a policy institute devoted to promoting and disseminating knowledge about improved water decision-making and sustainable development, has launched a new website. The new site contains up-to-date information about World Water Week 2013, which is organized annually by the institute. The site also features a new five-year strategy, a photo collection, and a number of technical publications about the water sector. SIWI works to strengthen institutional capacity by targeting five thematic topics: water governance, transboundary water management, water and climate change, the water-energy-food nexus, and water economics.



## USAID PORTFOLIO MAP IPAD AND IPHONE APP

Information about USAID projects and funding commitments around the world is now literally available at your fingertips. USAID developed the Portfolio Map application to increase transparency about the work that the Agency does in different sectors around the world. Available for free download on iPhones and iPads, the application presents users with a map of the world and allows them to click on a country to get additional details about USAID's activities and investments. In addition, users of the application can search for projects by sector, initiative, and date.



## MARGINS TO MAINSTREAM: WOMEN AND WASH IN INDIA

In India, women are saddled with the daily burden of collecting water. This UN-Habitat-supported video describes the approach used by the Indian State of Madhya Pradesh to implement the Gender Mainstreaming Strategy in the WASH Sector under the Water for Asian Cities Program. A rapid gender assessment revealed that the concerns and feedback of women were often ignored in the planning and provision of WASH services. The Indian state subsequently increased the participation of women in the planning, operation, maintenance, and monitoring of WASH services. By implementing the strategy, Madhya Pradesh boosted the role of women in their communities and improved WASH services. "Margins to Mainstream" illustrates the importance of empowering women in increasing the quality and responsiveness of WASH services.



## YAAJEENDE CONSERVATION AGRICULTURE

Senegalese farmers are threatened by unpredictable rainfall. USAID's Yaaajeende Conservation Agriculture project worked to improve soil health and strengthen farm resiliency in Senegal through conservation agriculture. Conservation agriculture employs farming techniques that enrich soil, conserve limited water supply, and increase productivity. Benefits of conservation farming include reduced production costs, increased efficiency, stronger plants, yield increases that can total 400 percent, and decreased crop damage from wind, drought, and pests. The project works with communities to distribute abandoned land to vulnerable people, including a number of women. The reclaimed land is used to produce lucrative, low maintenance crops that are in high demand such as micronutrient-rich okra and hibiscus. The video features testimonials from local farmers who have benefited from conservation farming.

**SUBSCRIBE**



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