

Water and Sanitation



Constructing a new drainage system in Sudan.



A reconstructed irrigation system in Iraq.



Identifying water system sites in Kosovo.



Using a new water storage system in Swaziland.

Water and sanitation systems are essential for the health and productivity of a community, preventing disease and providing irrigation for agriculture. When water and sanitation systems are inadequate, International Relief & Development works with the community first to identify needs, then to work in partnership with local governments to develop a plan to address those needs. IRD works closely with communities to provide opportunities for local input and ensure the future sustainable operations and maintenance of the newly-constructed facilities. IRD began our over 10 years of relief and development experience with a program to support internally displaced

populations in Georgia. Since then, IRD has worked worldwide with a multi-sectoral approach, becoming a specialist in working in conflict and post-conflict environments. We have taken on the challenge of working in some of the most complex and difficult places, improving the quality of life for vulnerable groups, including displaced persons, refugees, and others. We operate programs to expand healthcare, increase economic opportunities, rebuild infrastructure damaged by conflict or neglect, and accelerate agricultural development, as well as responding to emergency needs.



Multiple Countries

Small Rehabilitation Project (Armenia, Azerbaijan, Georgia, and Ukraine)

- **Improved water supply in remote areas.**
- **Repaired crumbling infrastructure.**
- **Transformed living conditions for elderly and children with disabilities.**

Donor U.S. State Department
 Date 2005 - present
 Amount \$99,990

The U.S. State Department gave IRD a grant to rehabilitate several social institutions in Armenia, Azerbaijan, Georgia, and Ukraine. So far, this funding has been used to improve nursing homes, orphanages, boarding schools for disabled children, hospitals, and municipal water systems. Over 5,000 people have benefited from these renovations.

Afghanistan

Human Resources and Logistics Support (HRLS)

- **Supports USAID by facilitating and monitoring the reconstruction of Afghanistan's infrastructure.**
- **Inspects construction and provides quality assurance.**
- **Provides vocational training to Government of Afghanistan ministries and operating entities and the private sector.**

Donor USAID
 Date May 2004 – February 2011
 Amount \$71.2 million

Under HRLS, IRD provides support to USAID's Office of Infrastructure, Energy, and Engineering in Afghanistan. This program will oversee the construction and rehabilitation of seven major roads, 480 schools, 341 clinics, 24 power projects, and 25 irrigation and water projects, and the development of an environmental assessment initiative.

Georgia

Provision of Transitional Shelter Solutions for IDPs

- **Provides financial and material support for host families.**
- **Improves temporary public shelter facilities.**

Donors USAID, UNHCR
 Dates September 2008 – April 2009
 Amounts \$2.5 million

This program provided decent shelter for Georgians forced from their homes during the conflict with Russia in August 2008.

Durable Shelter and Livelihood Solutions for Old Caseload IDPs

- **Provides financial and material support for IDP families**
- **Improves durable public housing facilities for IDP families**

Donors UNHCR
 Dates April 2009 – December 2009
 Amount \$2 million

This program provides rehabilitated accommodations to old caseload of IDPs occupying collective centers in Rustavi that are targeted for self privatization by the Ministry of Refugees and Accommodation. Families supported to obtain these durable accommodation solutions receive livelihoods support to maintain their sustainability. Under this project IRD upgrades and renovates buildings (147 families or 368 individuals) to provide durable, privately owned accommodation for the IDP old caseload families who are occupying the premises. IRD is also providing livelihoods support that is tailored to the needs and capacities of these individual families.



Improving the Collective Living Space of Internally Displaced Persons (IDPs) in Tbilisi

- **Renovated five large collective centers.**
- **Rehabilitated water and sanitation systems.**
- **Provided clean up tools and hygiene kits for IDPs.**

Donor BPRM/U.S. State Department
 Date July 2004 - June 2005
 Amount \$499,901

The program met basic shelter needs for IDPs from Abkhazia and Ossetia through rehabilitating water and sanitation systems, electrical systems, roofs and walls in collective centers housing approximately 2,430 IDPs.

Indonesia

Community-Based Sustainable Water and Sanitation Project

- **Improved the health of residents in 20 villages.**
- **Trained local organizations in the operation of cost-recovery programs.**

Donor LDSC
 Dates May 2006 – April 2007
 Amount \$1 million

In the wake of the 2004 tsunami, IRD constructed and rehabilitated water supply networks and sanitation facilities in 20 villages around Lhoseumawe in the Aceh province of Indonesia. The program also involved basic health and hygiene education and capacity building for local communities to implement cost-recovery programs, ensuring the long-term sustainability of the constructed systems.

Three Projects: Emergency Livelihood Recovery and Income Generation Interventions in Aceh; Two Emergency Water and Sanitation Programs for IDP Settlements

- **Created short-term labor opportunities through cash-for-work activities in affected communities and IDP camps.**
- **Facilitated the reopening of small businesses through capital input for qualified entrepreneurs.**

- **Provided emergency water and sanitation facilities.**

Donors USAID/OFDA; Save the Children; USAID/OFDA
 Dates March – August 2005; February – July 2005; January – October 2005
 Amounts \$1.5 million; \$1 million; \$1.5 million

IRD Relief implemented three emergency projects in response to the tsunami disaster in Indonesia. First, IRD provided emergency livelihood recovery and income generation opportunities for internally displaced and crisis affected populations in Aceh. The second and third relief programs supplied emergency provision of water and sanitation in order to meet the immediate needs of those persons most affected by the tsunami.

Urban and Rural Water Restoration Program

- **Provided clean water to approximately 345,000 people.**
- **Demonstrated ability to work in post-conflict and disaster zone.**

Donor UNICEF
 Date September 2005 – June 2008
 Amount \$7.8 million

IRD worked with UNICEF to provide long-term solutions to the need for potable water throughout the hard-hit Aceh province by restoring urban and rural water systems. Through this project, IRD evaluated 20 water treatment and delivery systems in six regions of the province and rehabilitated 15 of these systems and rehabilitated the Lambaro Water Treatment Plant in Banda Aceh, which now provides 45 million liters of water per day to the city. UNICEF awarded IRD a \$7.8 million extension of the grant in July 2006 for water improvement benefiting an additional 220,000 people.



Iraq

Humanitarian Assistance for Iraq (HAI)

- Improves access to potable water and sanitation services.
- Increases access to primary health care services.
- Provides emergency relief commodities.

Donor USAID
 Date December 2004 – September 2010
 Amount \$42.9 million

HAI provides humanitarian assistance and relief services to internally displaced persons and returnees affected by the war in 10 governorates around the country. To date, HAI has implemented 370 projects and activities benefiting more than 2 million people, including the construction of wells, rehabilitation of health care centers, assistance in making necessary arrangements for voluntary returnees, and training of regional administration and other partner NGOs on issues relating to international protection standards, reintegration, and human rights.

Kosovo

Small Infrastructure for Water and Sanitation (SIWS) Program

- Identifies specific projects through consultation with local governments.
- Works in partnership with local water providers and NGOs.
- Encourages good water supply management practices.

Donor USAID
 Dates September 2008 – September 2011
 Amount \$5 million

SIWS has established partnerships with the municipal authorities of Peje, Kline, Glogoc and Malisheve, and their corresponding Regional Water Companies (RWCs) - Hidrodrini, Hidroregjioni Jugor, and Pristina. Over the life of the program, SIWS will mobilize and commit \$6,240,000, including cost-sharing from municipalities, RWCs, and communities, in project works benefiting over 85,000 citizens of Kosovo with improved access to a safe water supply.

Laos

McGovern-Dole International Food for Education and Child Nutrition, Phase II

- Improves children's health and nutrition.
- Provides incentives to keep children, particularly girls, in school.
- Rehabilitates school sanitation facilities.

Donor USDA/Humpty Dumpty Institute
 Date September 2008 – March 2010
 Amount \$1.4 million

This program serves nutritious mid-morning snacks; for primary school children, provides take-home rations for girls and their families, and trains students and teachers in appropriate health and hygiene. Each of the primary schools will receive a \$4,000 mini-grant to be used to make structural improvements in the schools or conduct activities that improve the health of the students. IRD also teaches school personnel how to keep accurate financial records, internal audit practices, and accounting to keep track of these grants as well as student attendance and program effectiveness.

Solar Disinfection (SODIS) of Water

- Increases the availability of safe, inexpensive drinking water.
- Promotes the use of SODIS in 750 households, schools, and other organizations.
- Raises awareness to the benefits and uses of SODIS.

Donor The Swiss Federal Institute for Aquatic Science and Technology (Eawag)
 Date February 2008 – March 2010
 Amount \$20,000

This program increased awareness and utilization of SODIS in Laos through the training and support of 36 health promoters targeting 750 households (3,750 persons) and 30 schools (1,500 students). In addition, IRD developed promotional materials that increased the general awareness of the importance of clean water and SODIS at the local health facilities in three rural districts and among other organizations.



Montenegro

Community Revitalization through Democratic Action (CRDA)

- Worked with local communities to determine infrastructure priorities.
- Provided technical assistance, training, monitoring, and oversight to ensure the sustainability of projects.
- Managed all construction projects.

Donor USAID
 Dates April 2002 – April 2007
 Amount \$23 million

Infrastructure projects were identified as priorities by the local communities and completed with support from both the communities and local governments. Projects included building and renovation of low-voltage electrical networks, irrigation systems, farm-to-market roads, livestock and green markets, water and wastewater facilities, and tourism facilities. Over the course of the project, IRD implemented more than 550 projects benefiting more than 650,000 people and generating \$10 million in income.

Mozambique

Strengthening Communities through Integrated Programming

- Providing entrepreneurial training.
- Repairing and constructing wells, latrines, and water harvesting systems.
- Building on years of experience in Zambezia Province of southern Mozambique

Donor World Vision/USAID
 Date July 2009 – June 2014
 Amount \$7.4 million

IRD is building support for health resources in communities. IRD gives priority to caregivers for orphans and vulnerable children and members of prevention of mother-to-child HIV transmission support groups to join the Women First network of female entrepreneurs, which will give them business skills and basic health training. The program will also facilitate the growth of district-based health as-

sociations that will continue to operate after the end of the program.

Reduction of Drought and Cyclone Vulnerability in Southern Mozambique

- Taking a holistic approach to the reduction of drought and cyclone vulnerability.
- Helping local government develop a cyclone early warning and response plan.
- Benefitting over 55,000 people.

Donor USAID/OFDA
 Date June 2009 – May 2011
 Amount \$3.9 million

IRD's local agricultural experts are encouraging the planting of drought-resistant crops like sorghum, cassava, and legumes. At the same time, IRD is helping farmers gain market access for cash crops like vegetables and processed cassava, and establish other income generating activities like beekeeping and marketing of oil seeds. Agricultural activities are complemented by increased water supply for home and irrigation uses through improved water catchments, repaired water points using appropriate pump technology, and the installation of rooftop rainwater harvesting systems at 20 schools.

The River Value: Converting Risk to Opportunities

- Expanding opportunities for income generation.
- Increasing access to sanitation and clean water.
- Establishing local disaster risk management committees.

Donor USAID
 Date July 2009 – July 2011
 Amount \$1.8 million

This program works with riverside communities to create opportunities for income generation and to encourage healthy and sustainable water and sanitation practices. IRD's extension workers identify successful techniques developed by local farmers and replicate them across the area. IRD is training and equipping masons who will install water wells and rainwater harvesting systems at schools and construct bio-sand filters.



Drought Mitigation through Community Management of Water Harvesting Systems and Conservation Farming in Massinga and Funhalouro Districts

- **Community-based approach to mitigate the affects of cyclical droughts.**
- **Increase crop yields through run-off farming water harvesting and conservation tillage techniques.**

Donor USAID/OFDA
 Date January – May 2006
 Amount \$399,991

The project increased water availability through the construction of 14 cisterns in rural schools and improve captured water levels from eight water catchments. It also provided capacity training and hygiene promotion at each newly constructed water source. The program relied on community participation in partnership with local governments and community-level associations.

Emergency Flood Response Program

- **Meets emergency water and sanitation needs for evacuated families.**
- **Uses networks of previously trained hygiene workers.**
- **Exemplifies rapid response to emergency.**

Donor USAID/UNICEF
 Date 2008
 Amount \$300,000

IRD mobilized emergency teams in both Chinde and Morrumbala Districts within days of the Government of Mozambique declaring a flood disaster in the Zambezi River Valley. IRD established four operational water treatment stations, and began disseminating hygiene messages and distributing hygiene supplies. IRD is rehabilitating existing boreholes and building latrines.

Provision of Water, Hygiene and Sanitation Conditions for Long-Term Resettlement at the Centers of Chinde and Morrumbala Districts

- **Create the conditions for access to clean water and sanitation in the resettlement centers of Chinde and Morrumbala districts.**
- **Hygiene promotion targeting behavioral changes of the displaced population.**

Donor USAID/OFDA
 Date April – October 2008
 Amount \$554,615

The project supports the resettlement process of IDPs by reducing the incidence of water-borne diseases in Chinde and Morrumbala districts, through access to clean water, improved sanitation, and increased hygiene awareness. IRD will drill 15 new boreholes and construct 3,000 latrines. A total of 10,943 IDPs will be targeted, but services will be provided to both IDPs and resident families.

Solar Water Disinfection (SODIS) Project

- **Brings simple method for disinfecting water supplies to the village level.**
- **Works in conjunction with local health clinic and schools to train SODIS trainers.**
- **Reduces incidence of water borne disease.**

Donor Swiss Federal Institute for Aquatic Science and Technology
 Date January 2008 – January 2009
 Amount \$22,000

Under this pilot project, IRD developed locally appropriate training materials and worked in two elementary schools to promote this low-tech method to remove contaminants from drinking water.



Nepal

Emergency WASH Preparedness and Capacity Building Project

- Provide water and sanitation education in rural areas.
- Builds capacity of communities to cope with disasters.
- Provides essential health and hygiene supplies.

Donor UNICEF
 Date June 2008 – December 2009
 Amount \$80,000

The goal of the project is to prevent the outbreak of water and sanitation related diseases by working with WSSDO (Water Supply and Sanitation Divisional Office) and other WASH agencies operating in several districts, and by developing the capacity of WASH preparedness and response units. The project will also develop master trainers to provide awareness-raising and communication campaigns at the VDC level. IRD and its local implementing partners will establish a system within the WASH cluster and built the capacity to take leadership in preparedness and response for effective WASH related support during emergencies. In addition, hygiene supplies will be contributed in line with UNICEF current practices.

Reintegration and Resettlement for Conflict-Affected Populations in Mid- and Far-West Nepal

- Facilitates permanent settlement and stabilization.
- Partners with Nepali NGOs.
- Compliments existing activities by other OFDA partners in the target districts.

Donor USAID/OFDA
 Date May 2008 – March 2009
 Amount \$470,000

This program facilitated permanent settlement and stabilization by providing critically needed basic services and livelihood opportunities for IDPs, returnees, and the conflict-affected communities in three districts. IRD expanded livelihood opportunities for 11,400 people through vocational skills trainings, business development education, and small start-up

grants. IRD also rehabilitated or constructed the water systems in 12 villages to provide increased access to potable water for 3,600 people.

Pakistan

Emergency WASH and Primary Health Care for IDPs in D.I. Khan and Tank Districts

- Emergency water and sanitation for 3,000 families.
- Emergency medicines to at least eight rural health centers and functional basic health units.
- Emergency medicines to six maternal-child health clinics.

Donor USAID/OFDA
 Date August 2009 – March 2010
 Amount \$668,578

This program is rehabilitating and expanding sanitation facilities, including latrines and waste disposal; and rehabilitating, expanding, or constructing shower facilities and hand washing points. IRD is forming local hygiene committees to support ongoing hygiene awareness training as well as establish user committees for water supply and sanitation facility maintenance. In addition, an estimated 20,000 people will benefit from a donation of \$2 million worth of pharmaceuticals from IRD partner, METAD/MedPharm.

Serbia

Community Revitalization through Democratic Action (CRDA)

- Worked with local communities to determine reconstruction priorities.
- Provided technical assistance, training, monitoring, and oversight to ensure the sustainability of projects.
- Managed all construction projects.

Donor USAID
 Date July 2001 – July 2007
 Amount \$40 million

The infrastructure projects completed under the CRDA program in Serbia were similar to those completed in Montenegro. IRD also repaired and



improved solid waste systems, hospitals, health centers, ambulatory units, water and wastewater facilities, schools and kindergartens, community centers, and playgrounds. More than 150 such projects were completed. A project extension through 2008 was granted to complete work on the Belgrade Youth Center.

Southern Sudan

Rapid Impact Emergency Projects

- **Generates income through community improvement projects.**
- **Relies on non-monetary contributions from local NGOs.**

Donor UNDP
 Date March 2008 – present
 Amount \$2 million

These twin projects focus on generation of income, capacity building for local NGOs, and improvements in basic urban infrastructure in two state capitals in Southern Sudan: Malakal, Upper Nile State; and Kuajok, Warrap State. Improvements include installing a new drainage system in downtown Malakal and rebuilding clinics and schools in Kuajok. Local NGOs managed the process, with IRD supervision, ensuring their ability to do these projects on their own in the future.

Sri Lanka

WATSAN Project for IDP Population in Jaffna District

- **Improving access to water and sanitation for 25,000 internally displaced persons.**
- **Providing hygiene education.**

Donor United Methodist Committee On Relief
 Date September 2009 – March 2010
 Amount \$198,567

IRD is constructing a globally-acceptable and economically viable sewage treatment plant at Ramavil camp in Jaffna District, which will reduce the risk of ground water contamination. This plant utilizes a designed process to remove soluble, biodegradable, organic materials from sewage thereby achieving

a high quality effluent. IRD is also rehabilitating existing toilets and installing garbage bins to reduce the spread of disease. Finally, hygiene educators are being trained to promote the proper use of toilets and water supplies.

Hambantota Water Project

- **Provided safe water for 11,000 people.**
- **Worked with communities to identify appropriate water sources.**

Donor World Vision Sri Lanka
 Date October 2005 – December 2006
 Amount \$713,473

IRD improved local water quality and access to potable water to the people of Kirinda and Bundala in the coastal district of Hambantota by rehabilitating water distribution networks and treatment plants, identifying water sources, and improving water supply. IRD also worked with local authorities to create a 20-year master plan for water infrastructure development.

Community-Based Solar Water Disinfection System (SODIS) in Batticaloa and Ampara Districts.

- **Reduced health risks from water borne diseases.**
- **Increased hygiene awareness.**
- **Provided safe drinking water.**

Donor World Vision
 Date July 2007 – June 2008
 Amount \$538,822

SODIS is an economical bacteriological disinfection method to provide safe drinking water for affected population in eastern Sri Lanka. IRD established community-based organizations to assure the sustainability of the program and educate the population in the benefits of good hygiene practices.



Emergency Water Treatment and Nutrition Promotion (EWATANUP)

- **Trained internally displaced people to properly treat safe water.**

Donor World Health Organization (WHO)
 Date March 2009 – May 2009
 Amount \$75,000

To assist with immediate improvement to drinking water quality and to avert any epidemics of bowel diseases, IRD provided 4,000 IDP's and host communities in northern Sri Lanka with training and materials on treatment of drinking water at the household level.

Drought Mitigation through Community Management of Water Harvesting Systems and Conservation Farming

- **Uses community-based approach to break impact of cyclical drought patterns.**
- **Increases water availability for human consumption.**
- **Increases farm yields through runoff farming water harvesting and conservation tillage techniques.**

Donor USAID
 Date September 2007 – March 2009
 Amount \$400,000

IRD's drought mitigation program in Shiselweni and Lubombo is constructing engineered rainwater harvesting systems at 14 schools, and training farming households in conservation farming/tillage techniques and runoff water farming techniques. Hygiene promotion, HIV/AIDS awareness-raising, and the promotion of water demand management techniques are essential additional components of the overall program, which will benefit an estimated 6,880 people.

Swaziland

Reduction of Drought Vulnerabilities in Southern Swaziland

- **Uses community-based approach to break impact of cyclical drought patterns.**
- **Targets female farmers.**
- **Improves nutrition and income levels.**

Donor USAID
 Date May 2009 – May 2012
 Amount \$4.1 million

A continuation of the program described below, this program expands farming training to include a voucher program to increase access to vegetable, sorghum, and legume seeds. It is also bringing new sustainable water pump technology to the target area, sharing messages about HIV prevention, and expanding the model of rooftop water harvesting systems at schools.

Ukraine

Water Supply and Rehabilitation Projects

- **Included a wide range of water supply projects.**
- **Worked with local builders and contractors.**
- **Helped nearly 40,000 people.**

Donor U.S. State Department
 Date February 2002 – January 2007
 Amount \$800,000

IRD completed a range of water supply improvement projects in Crimea and Eastern Ukraine. These included construction of water-lifting stations, flooding wells, reservoirs, water towers, and supply line networks, as well as all the supporting infrastructure such as transformer sub-stations. The water is now used for human consumption and irrigation in villages, schools, and health care facilities.



West Bank and Gaza

Infrastructure Needs Program IQC – Task Order 10 Bureen Water System Project

- **Brings safe, clean water to hundreds of area residents.**
- **Uses local NGOs and other partners to build infrastructure capacity.**

Donor USAID
Date October 2008 – August 2009
Amount \$6.1 million

This project constructed a 22 kilometer steel pipe water network with different diameters ranging from 75 mm to 150 mm, a 300 cubic meter concrete water reservoir and pump station, a 500 cubic meter ground level concrete reservoir with associated piping, security fencing and controls, a water transmission main line of various diameters of steel pipe into the existing Nablus Transmission Main.

Improvement of Water Supply and Hygiene Systems for Gaza Schools (WASH)

- **Rehabilitated water and sanitation systems in 12 schools.**
- **Improved hygiene facilities for students.**

Donor UNICEF
Date August 2009 – December 2009
Amount \$62,528

IRD conducted a comprehensive school survey to prepare the detailed needs assessment, bill of quantities (BoQ), and site plans to rehabilitate school facilities. The project also prepared a complete set of tender documents consisting of the RFP, BoQ, cost estimate, specifications, and drawings.

Zimbabwe

Peri-Urban Rooftop Rainwater Harvesting in Zimbabwe (PROOF)

- **Satisfies water supply needs during a period of erratic supply of low quality water.**
- **Partners with other local and international NGOs.**

Donor USAID
Date June 2009 – June 2010
Amount \$2.4 million

PROOF provides a medium term solution to the critical safe water supply problem faced by some high density areas in the Municipalities of Harare and Chitungwiza through the installation of rain water harvesting systems (RWHS). The program is designed to serve 1,350 households (450 installations) and 7,500 students at 15 schools. PROOF also supports the implementation of water, sanitation, and hygiene and food security programs implemented by other USAID-funded agencies in Zimbabwe.

For more information, visit www.ird.org
