

Global Water

A Low-Cost, High-Return Model for International Water Projects



Introduction

Global Water is an international non-profit humanitarian organization focused on providing safe water supplies, sanitation facilities and related health programs for rural villagers in developing countries. The organization was founded in 1982 by former US Ambassador John McDonald and Dr. Peter Bourne to focus on those people in developing countries whose lives are dramatically compromised (and often lost) due to unclean water. Global Water is a volunteer-based organization; therefore, all money donated goes directly into water projects implemented by non-profit organizations (often referred to as non-governmental organizations [NGOs]) in the developing countries themselves. Working directly with NGOs, Global Water provides funding for specific projects, program management assistance and technical support with water treatment technologies and equipment. This technical support includes the initial cost of equipment and follow-up help with repair parts and operational and maintenance training.

The Global Water philosophy is that lack of safe water and proper sanitation facilities are typically the most significant problems affecting rural populations of developing nations. Specifically, that the lack of safe drinking water and of access to sanitation facilities are the root causes of disease, hunger and poverty throughout the developing world today. In describing the organization's projects, Executive Director Ted Kuepper said,

"Most of our projects can be characterized as simple, low maintenance and readily sustainable with long-term benefits to rural villagers who have largely been overlooked in the developing world."

Global Water typically targets rural areas without electricity, where local water sources are either contaminated, insufficient or non-existent. In these areas, water that is available is often found only

in remote locations, so that villagers must spend significant time laboring back and forth on foot transporting water to their homes, often several times a day.

Global Water's projects have an immediate life-changing impact, particularly on women and children, who most often have the responsibility of collecting water for the family each day of their lives. Successful projects utilize water and sanitation as a tool to create sustainable socioeconomic development in these poor rural communities.

International philanthropy

There have recently been encouraging signs of global philanthropy indicating that help may be coming to the rural poor in developing countries. Although water projects have historically been grossly underserved by international aid organizations and traditional foundations, some of this new funding will hopefully find its way to water projects in developing countries, with some percentage spent on the neediest of all, the

rural poor.

Yet when one creates a set of priorities for helping people in need, safe water is always recognized as an essential resource for life and is always found at the top of such lists. Without safe water, all other forms of help, including food, medicines and vaccinations, pale in significance. Generally speaking, many health practitioners will agree that children are no better off having been vaccinated if they continue to drink



microbiologically contaminated water every day of their lives. Although admittedly, setting up a temporary clinic to administer vaccinations is significantly easier than supplying a safe water supply that will span the life of the child.

Global Water's approach

Over the past 25 years, Global Water developed a model called the *Rural Outreach Water Supply Program* (or *ROWS Program*). This has worked well for implementing water supply projects in rural villages in many challenging environments. Specifically, *ROWS* enables Global Water to identify local NGOs currently working with rural water sup-

ply projects. Often, there are NGOs with water infrastructure expertise already working with rural villages in need of a safe water supply. These organizations are referred to as water-advocacy NGOs. *ROWS* enables Global Water to quantify the experience and expertise of a suitable water-advocacy NGO that can provide the following characteristics:

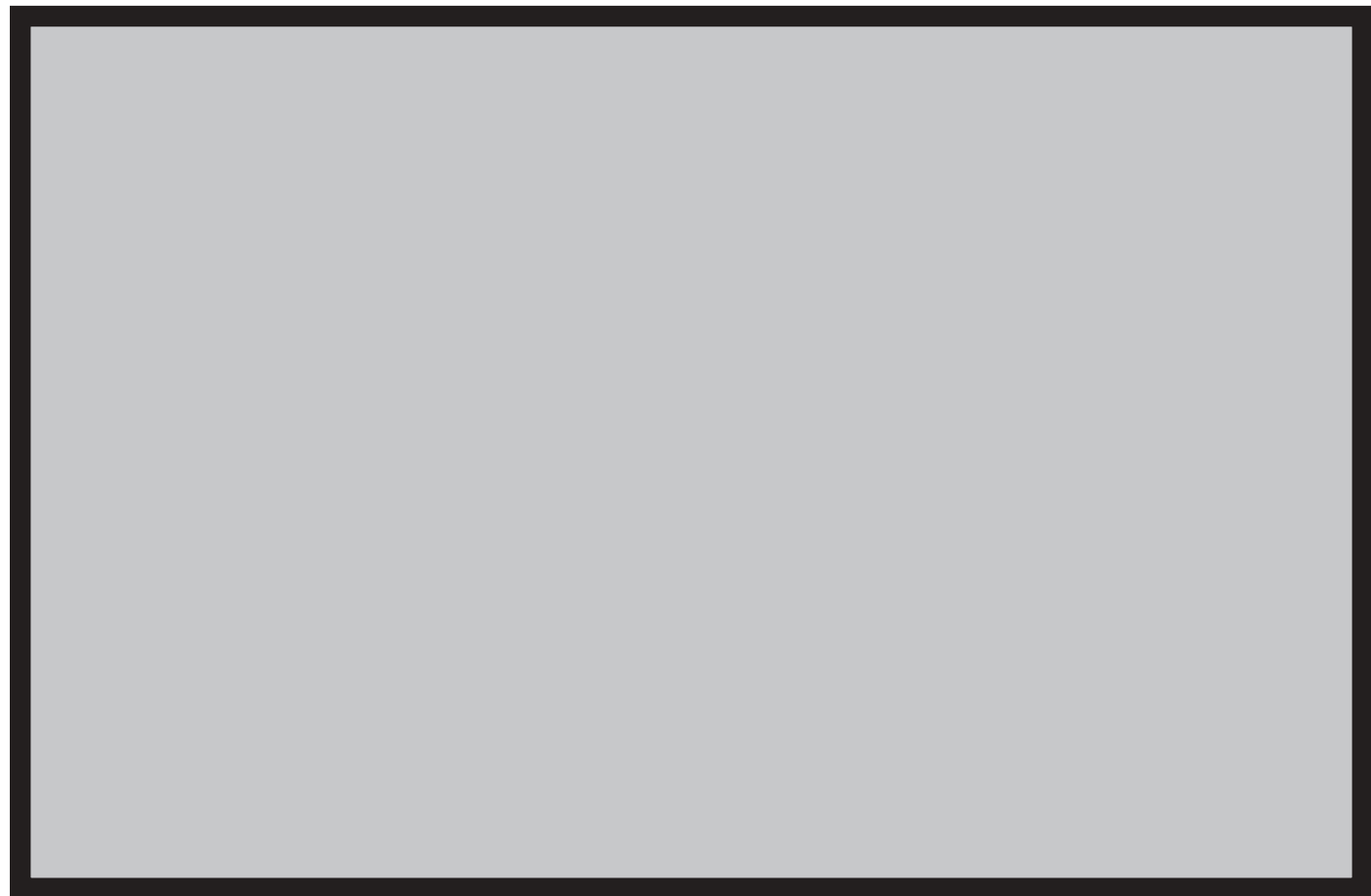
- Leadership necessary to liaison (and create a relationship with) water project recipients;
- Organizational expertise to plan a project (with Global Water's help);
- On-site skilled supervision throughout the project;
- After-project continuity to monitor equipment installed during project construction and to provide maintenance, as needed.

By creating partnerships and working with these local organizations, Global Water eliminates (for the most part) the need to interact unnecessarily with government bureaucracies. This has been successful in getting water and sanitation projects cost-effectively implemented even where a country's political system might have created a significant challenge or impediment to the project.

Examples of Global Water projects

Global Water recently provided primary funding for hand-pump water wells for villagers in Honduras, in the State of Intubuca. Each well provided water for villages consisting of 15 to 25 adobe hut homes with approximately 150 people in residence per village.

Simple systems are often the most sustainable; in Guatemala, for example, the organization routinely funds the creation of spring capture, gravity-flow water supply and distribution systems for rural villages. In the village of Panimachavac, there are 43 families comprising a total population over 200 people. This system, like most spring capture systems, included a spring-capture box to prevent future contamination of the water supply; break-pressure tanks; a 2,600 gallon (9,842 L) storage/distribution tank and a main gravity-flow transport line 2.5 miles (4.02 km) long. An additional piping system distributed water from the storage tank to household faucets installed at each individual home site. Latrines were built for many of the home sites in this village as well. Similar projects in Guatemala were completed in Caton Vi'qola, San Francisco Javier, Tisumal and



Cotzol, benefiting hundreds of families.

Global Water also supports the *Healthy Schools Program* in Guatemala. It is run by the Peace Corps' *Appropriate Technology Program* in which a Peace Corps volunteer works with a group of schools to help them build health-related facilities. This includes water systems, latrines, kitchen facilities and hand-washing stations.

Once the necessary health-related facilities are installed and in use, with hygiene instructions initiated at the school, the school becomes eligible for designation as a *Healthy School* by the Guatemalan government agency in charge of building and maintaining schools throughout the country. It's quite an accomplishment to be recognized by the government agency and having a *Healthy School* in a village is a significant point of status and pride for the villagers, teachers and students.

Global Water has also completed several projects in Nicaragua. The Masiguito Project provided a system for about 92 rural village families living without a safe and reliable water source. Like most gravity-flow systems, Masiguito's consisted of



a spring-capture box, break-pressure tanks, a storage/distribution tank, and a gravity-flow transport line totaling 1.4 miles (2.25 km). The distribution piping system connected the storage tank to several centralized faucets installed throughout the village area. Centralized faucet locations were chosen because the village home sites were too spread out to accommodate individual household faucets. A similar project was constructed in the rural village of La Pita, Nicaragua as well.

In Togo, West Africa, a project was completed consisting of repairing water well hand pumps, which had largely become inoperative. Repair and maintenance for sustainable operations was a critical element in this project, which restored clean water to more than 800 people living near these wells.

Technology-Push Program

A unique Global Water program recently initiated in Guatemala has helped to define an ambitious effort called the *Technology-Push Program*. This is a two-stage project to make selected water treatment technologies more readily available in developing countries. The goal of the project's first stage is to create a clearing-house database of disinfection technologies that are applicable to the developing world. This database will describe the technology and its associated equipment in detail along with its capabilities, limitations and cost. In order to create this database, Global Water is evaluating technologies under semi-field conditions to ascertain their operational characteristics and capability to inactivate, kill and/or remove microorganisms. The goal of the project's second stage is to

implement those disinfection technologies that prove to be most effective during the project's first stage. Technology implementation will be through community-based NGOs with support from Global Water.

One profound reality is that most water treatment technologies are not routinely available in developing countries, especially in rural areas. There is simply not enough money available in rural communities to purchase water treatment technologies and, typically, there is no local resident with the expertise to install and operate such equipment.

Global Water is sensitive to the fact that the international aid community has its share of horror stories of equipment being brought to a developing country by some well-meaning group only to have it break down shortly after it was installed and sit inoperable thereafter. The organization plans to overcome this challenge by combining technical expertise with relationships

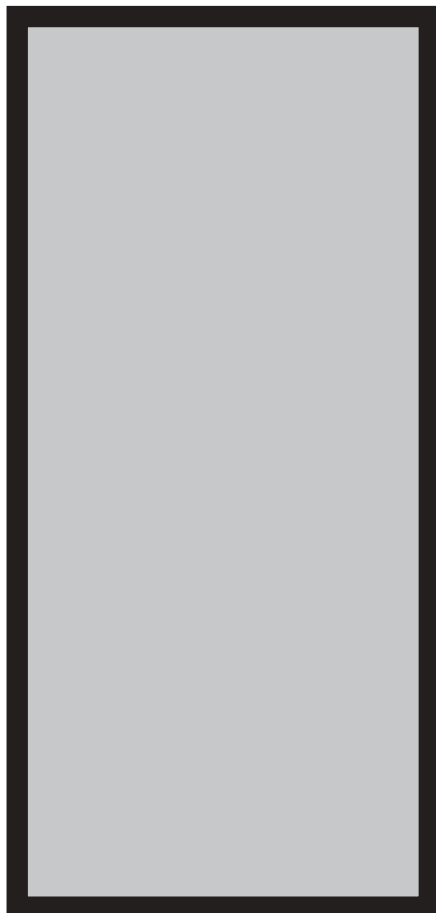
with local water-advocacy NGOs to provide the *appropriate* water supply equipment and ongoing support in order to 'push' technology that can help people live more healthy and productive lives.

As an example of the *Technology-Push Program*, Global Water purchased, evaluated and helped install

a liquid chlorine bleach injector to disinfect the water supply of a rural hospital just outside the town of Nebaj, Guatemala. This chlorine injector has all the characteristics appropriate for the program and application in developing countries: the device is simple, easy to install and understand, with very few moving parts and is fabricated from corrosion-proof materials. Also, it requires no electricity and automatically adjusts to changing flow rates. Liquid bleach can be found throughout the developing world, so the one key consumable item necessary to make the disinfectant system operate can be purchased locally. Through *Technology-Push*, Global Water is providing disinfectant equipment to NGOs either free-of-charge or at a nominal cost.

The need for sponsors

Many potential projects that will impact tens of thousands of lives are waiting for funding. Global Water seeks



corporate and individual project sponsors who wish to see quick results and high return-on-investment projects. One of Global Water's corporate sponsors is the Clearly Canadian Beverage Corporation. Recently, its corporate leaders traveled with Global Water's technical team to inaugurate a new water and sanitation system for a rural village in Nicaragua, which was supported by their funding. Everyone was caught up in the atmosphere of doing good works and it was obvious the executives of Clearly Canadian were impressed by how appreciative the villagers were to actually meet and connect with the people responsible for their new water system.

Global Water encourages sponsors to become engaged in its development projects. They are welcome to travel with Global Water's field personnel, whose regularly scheduled trips include inspection of funded works and investigation for future projects. It can be a life-changing experience to meet rural villagers who have just received a water system that is providing safe water to their families for the first time in their lives, thanks, in large part, to the generosity of a project sponsor.

Conclusion

The rural poor living in developing countries desperately need safe water and proper sanitation in order to live healthy and productive lives. Their collective needs must be voiced to be better addressed by the international aid community. Global Water, with the support of contributors and project sponsors, will continue to fund water and sanitation projects specifically to benefit the rural poor and to help give them that voice.

About Global Water

◆ Further information regarding Global Water can be found on its website at www.globalwater.org and from the Program Management office by calling (805) 985-3057.

About the authors

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