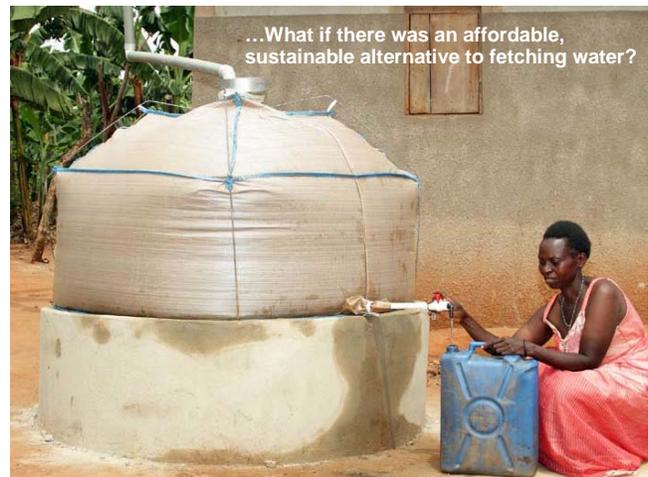
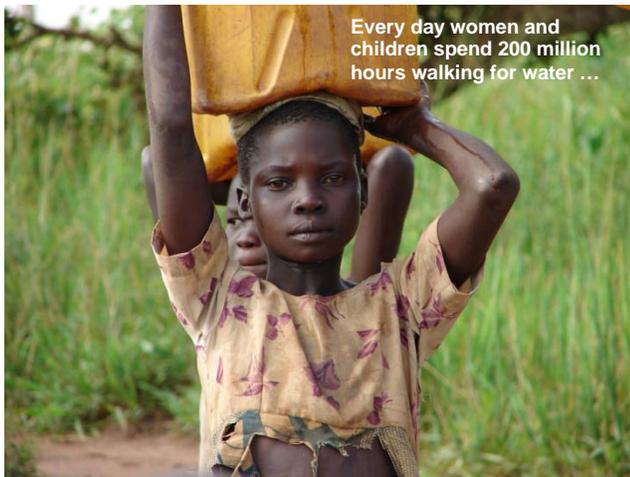




About the project



Domestic Rainwater Harvesting refers to the collection, storage, and use of rainwater at the household level. The term “domestic” alludes to the fact that the device used for catching and storing rainwater is literally at the user’s home, thus minimizing the distance of carrying water, and mitigating some of the problems of time and energy expenditure. Domestic rainwater harvesting dates back to the third millennium BC in India, and was used extensively in the Mediterranean and Middle East. Rainwater can serve as either the sole water source for a home or family, or it can be a supplementary supply for when the amount collected from other sources is insufficient. Domestic rainwater harvesting offers real opportunities to overcome the problems inherent in other alternatives.

Given the variable but ubiquitous rainfall in most of the developing world, the dispersed nature of rural settlements, and the challenges of serving urban areas, domestic rainwater harvesting is an ideal way of providing access to safe water directly at people’s homes. There are currently 250 million under-served households—more than **1.25 billion people**—that that could benefit from rainwater harvesting. Although a particular region or country may be very well endowed with rainfall, this resource remains a completely **untapped opportunity**. If capitalized on, domestic rainwater harvesting can have a huge positive impact on people’s lives. It alleviates the drudgery of collecting water from distant and often polluted sources that worldwide consumes **200 million hours per day**.



Given all of the **advantages** of domestic rainwater harvesting, why is it then not utilized more widely?

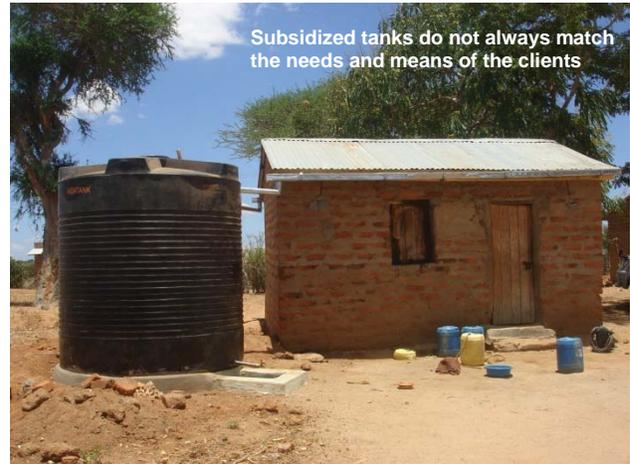
To answer this question, Relief International’s EnterpriseWorks Division (EW) is undertaking a pilot project to determine if rainwater harvesting can be commercially promoted on a wide-scale. In line with its mission, EW uses an **enterprise approach** that works with the private sector to develop the right product at the right price point, and develops a marketing and promotional strategy that can result in a sustainable supply chain.

Phase I learning and research

In Phase I, rainwater experts from 20 regions around the world were asked to describe existing domestic rainwater harvesting programs in different stages of their evolution to clearly define the factors that contributed to their success (or failure). The findings of these desk studies revealed several recurring themes that related to storage of collected rainwater. If the goal is to store rainwater for all uses and for extended dry periods, the cost of the storage exceeds the means of most clients. Large storage containers are expensive whether they are made from metal, cement, or plastic, and it is difficult to spread out the investment over time. A number of programs attempted to deal with these issues in ways that varied from multiple smaller storage units to substantial subsidies.

More at drwh.enterpriseworks.org

After completing the desk studies, 5 in-depth field studies were conducted to gain a deeper understanding of the regions and countries that were identified to have good potential for an enterprise-based domestic rainwater harvesting solution. Thailand was studied because it has had one of the most successful domestic rainwater harvesting programs of all time, with over 5 million rain jars installed in a 5-year period. Additional field studies were conducted in Vietnam, Kenya, Uganda, and Tanzania. The concentration in Africa was based on the observation that the need for clean water in rural areas will remain a high priority for the foreseeable future, due to dispersed populations and lower rates of infrastructure improvements. The field studies¹ confirmed that there is a widespread latent demand for low-cost water storage, especially in Africa, where people are paying US \$18- \$30 for a 200 liter barrel to store water at the household level.



During this phase, technology research was conducted to significantly reduce water storage costs – something that was seen to be critical for success of an enterprise-based solution. This was done via an internet contest that EW promoted through national design associations and national and international networks for rainwater harvesting and rural water supply. In the end, almost 1,100 problem-solvers registered for the contest, and over 130 inventors from 12 countries submitted innovative solutions².

Since the conclusion of the contest in February 2009, the winning design has been further improved based on feedback from field testing with potential clients.

Phase II commercial pilot

EW is currently in the second year of a commercial pilot in **Uganda** that is introducing the winning rain water storage solution. The product now has a name—bob™. Uganda was selected as the optimal location for the commercial pilot for the following reasons: it is a location where domestic rainwater harvesting is well known and accepted, so that testing a market-based approach will not also require an in-depth promotion of the concept of rainwater harvesting itself. Moreover, the concept of paying for water is becoming increasingly accepted in Uganda, so investment in domestic rainwater harvesting has an economic incentive—consumers don't have to pay per use, once they own bob, it's theirs; plus,

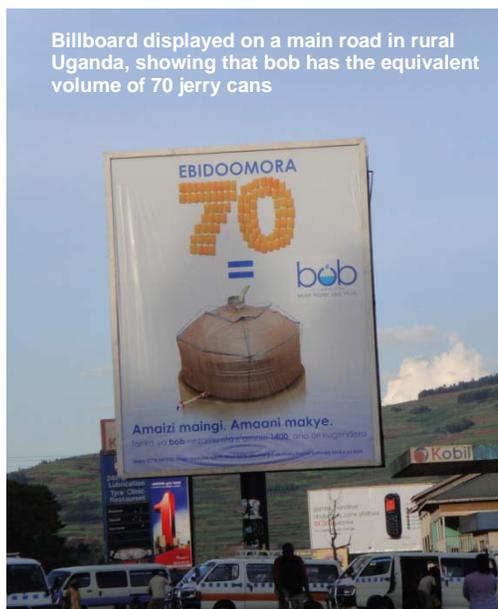


¹ <http://drwh.enterpriseworks.org/files/Library/EWV%20Domestic%20Rainwater%20Harvesting%20Desk%20Study%20Summary.pdf>

² <http://drwh.enterpriseworks.org/storage>

they can sell collected water to their neighbors and within their communities. While the level of access to safe water is reported to be high (rural 60%), the convenience of access is low, with water sources often hundreds of meters below the homesteads at springs in the valleys.

The commercial pilot has identified the **unique selling points** for domestic rainwater harvesting systems in Uganda where low-cost, convenience, ease of transport, and a large volume are key features for the consumers. *Bob* is a good value proposition; it retails for about twice the price of a 200-liter plastic barrel but with a 1400-liter volume, *bob* provides seven times the storage capacity.



Billboard displayed on a main road in rural Uganda, showing that bob has the equivalent volume of 70 jerry cans

The pilot is developing a sustainable **supply chain** from a manufacturer in China to rural markets in Uganda, using existing supply chains for hardware and house wares to ensure that the systems are available locally. In order to have a sustainable delivery mechanism, it is necessary to create the demand for domestic rainwater harvesting and specifically for *bob*. EW contracted an international promotion firm Saatchi & Saatchi to develop a promotional campaign highlighting the advantages of *bob* in posters, billboards, brochures, wall paintings and through radio shows. The campaign combines promotional and educational themes to inform potential clients and stimulate demand.

Market day promotions allow customers in rural areas to see and touch *bob*: critically important for a new product. These live demonstrations provide an opportunity for the sales staff to interact directly with potential clients. As part of the event, contests are conducted to test the participants' knowledge of *bob's* features; in exchange, promotional items such as tee-shirts, caps and umbrellas are given away as prizes.

In order to understand how price affects the uptake for the product and the impact at the household level, EW is partnering with **Innovations for Poverty Action** to conduct an in-depth study. A baseline survey has been undertaken in 3,240 households across 81 villages in one district in Uganda. A variety of promotional strategies and 4 different price points are being evaluated. Selected households have received vouchers that provide a discount at the retail sales point, thus ensuring that all everyone in the supply chain still gets their profit. While *bob* as a potential technological solution is now in place, it is important to gauge the demand-side responsiveness in order to: (a) determine the potential size of the market for the EW rainwater storage device, (b) identify price points the market can sustain, (c) identify the most effective marketing strategies to promote adoption, and (d) determine whether information dissemination through social networks and other related 'social marketing' concepts will be effective to create commercial demand for the new product.

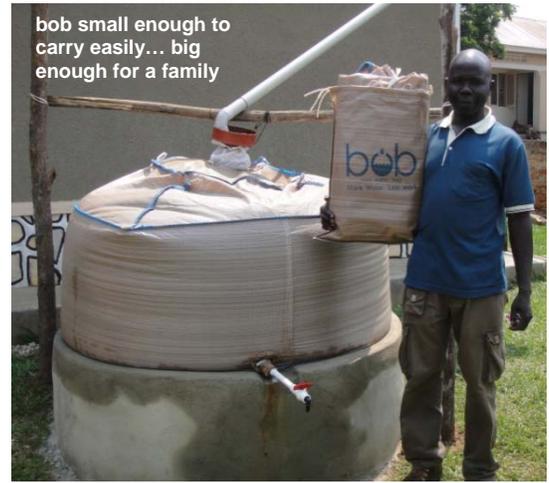


Market Day Promotion provides opportunity for potential clients to see and understand bob

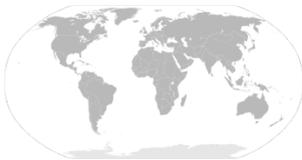
About bob, the low-cost, flexible tank

The driving force for product improvement is feedback from customers. Since the initial concept proposed in the 2009 contest, the rainwater bag, now known as *bob*, has changed dramatically. Clients wanted to have the convenience associated with piped water supply at the household level; this resulted in a tap that can be locked to prevent loss of precious water. They wanted the bag to be a color that would not show dirt, that could be repaired and transported to remote locations where vehicles cannot go, and that would keep the water clean.

Features versus price In speaking with potential clients, it is clear that what people would like to see in a product is different from what they can afford. Accordingly, the commercial pilot is gaining a better understanding of which features are essential, and which ones would be nice to have, but only if they don't add substantial cost. The next generation of *bob* will include a lightweight support frame, an inlet filter and a specialized outlet fitting. Some of the features have aspirational as well as functional aspects, one of these is the tap; it makes the product user friendly and resembles a feature that is associated with piped water supply, something most households aspire to have.

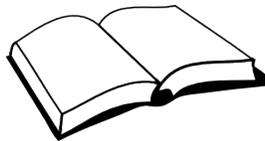


The impact



growth

The Commissioner for Rural Water Supply said, "This product has the potential to revolutionize rainwater harvesting in Uganda." If the technology is commercially successful and the model proves viable and replicable, this would mean the supply chain will be capable of bringing clean water to thousands of households initially, and millions over time.



knowledge

The project will contribute to the growing body of knowledge on domestic rainwater harvesting. The partnerships formed at the start of the project, and a strong communication strategy ensures that information reaches key organizations (private enterprises, non-governmental organizations, governments, donors, and other interested parties).



change

This project can directly contribute to poverty reduction by improving access to safe water in the home, relieving women and children from the drudgery of fetching water, while improving health and the quality of life of household members. Moreover, reduced medical expenses will directly increase the disposable income in the household.

About us

EnterpriseWorks a Division of Relief International is a US-based not-for-profit organization working to combat poverty through economic development programs based on sustainable, enterprise-oriented solutions. EW has worked with local businesses and organizations for more than 40 years in 100 countries. By supporting profit-making enterprises to create employment and to increase productivity and profits, EW addresses the challenges of rural, peri-urban, and urban development.

Questions?

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