

“I Learn From You and You Learn From Me”: The Importance of Women, Authentic Relationships, and a Holistic Approach to WaSH in Developing Countries”

By

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B.A. Environmental Studies (Prescott College) 2010

Thesis

Submitted in partial satisfaction of the requirements for the degree of

MASTER OF SCIENCE

in

Community Development

in the

OFFICE OF GRADUATE STUDIES

of the

UNIVERSITY OF CALIFORNIA

DAVIS

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2012

“I Learn From You and You Learn From Me.”: The Importance of Women, Authentic Relationships and A Holistic Approach to WaSH in Developing Countries

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Abstract

Clean water, adequate sanitation and good hygiene (WaSH) could make a significant difference in the quality of life for millions of people in developing countries. One of the biggest challenges of work being done to address WaSH is that many of the technologies transferred require an ongoing process of follow-up to assure their long-term success. The Global Women’s Water Initiative (GWWI) has a model for disseminating technologies and knowledge that promotes women, a holistic approach to WaSH and the building of authentic personal relationships for ongoing support. This paper describes some of the literature reviewed in this area of work, the special role of women in WaSH, particularly in East Africa, the founding and evolution of GWWI and the 2011 GWWI program from the perspective of one intern (the author) who worked with the program for one year.

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Introduction

Every 20 seconds, a child dies from a water-related illness. (White Johansson, 2009) A dangerous lack of clean water, adequate sanitation and good hygiene (WaSH) is the cause of nearly one-tenth of the disease in the world today. (Pruss-Ustin, 2008) On March 6, 2012, the United Nations announced that one of the Millennium Development Goals (MDGs) (Project, 2002-2006) had been met: The portion of the world's population with no access to an improved water source** is now less than half of what it was in 1990. (UNICEF, 2012) While the United Nations has been celebrating the attainment of this goal, there are many who question the number of people who now have access to *safe* drinking water. (Batha, 2012) According to the Danish Institute for International Studies, there are at least 50,000 non-functional boreholes in Africa. (Skinner, 2009) Robert Bos of the World Health Organization estimates that as many as 4 billion people may still be without safe drinking water. (Batha, 2012) Even if people *have* access to clean water, without adequate sanitation or change in hygiene habits, the child morbidity and mortality rate due to diarrhea and other water-borne illnesses may not be reduced. (Pattanayak, Poulos, Yang, & Patil, 2010) (Datta, 2011) Indeed, despite the exciting gains heralded by the United Nations, there has not been a corresponding drop in diarrhea-related diseases associated with contaminated water, poor sanitation and lack of hygiene. (Batha, 2012) In working to reduce morbidity and mortality, education is a vital accompaniment to any WaSH project and it must stress the

inter-relatedness of water, sanitation and hygiene. Project planning to address this issue currently tends to be focused on only one part of the WaSH issue.

Women are the main collectors, keepers and users of water. They have a measurable impact on the effectiveness of water delivery infrastructure, sanitation measures and hygiene education. (Ako Ako, 2010; Pattanayak, et al., 2010) Women have traditionally been left out of the planning and implementation of WaSH projects. These projects may involve the government and/or they may involve projects where there is a lot of money being paid out. Since women still lag far behind in land ownership, equal education and equal treatment under the law, they are often not part of the governmental or traditional power structure with which non-governmental organizations (NGOs) or government programs work. (Nussbaum, 2000) Western development workers have, for decades, followed the model for WaSH development that has been in place in advanced countries. This has compounded the problem, resulting in a bureaucratic, centralized top-down system for evaluating, building and administering WaSH projects. (Pritchett, 2002) Since there are few women involved in upper levels of government or bureaucracy, they are simply not at the table to discuss needs, designs and priorities. Providing women with information and training can “get them to the table” with an ability to acquire the needed assets of WaSH and informed voices that can direct development work in this area.

International non-governmental organizations (INGOs) are dealing with a host of complex issues when they address WaSH in a developing country. They are coming into communities as outsiders. They will never have as clear a picture of what is happening on the ground as local NGOs or community based organizations (CBOs). Without the

insights from people who live there and understand the culture and politics, INGOs will miss important information that would make a difference in their work with a community. Without clear ongoing communication with the INGOs, people in the affected communities are often left with an infrastructure or technology that requires ongoing maintenance and repair, and no means with which to make that happen.

“Improved water sources” does not mean that the source is regularly tested to make sure the water is safe to drink. A study in Nicaragua found that around two-thirds of improved water sources were contaminated and another study in Ethiopia discovered unacceptably high levels of fluoride in the water. (Batha, 2012) This illustrates the serious nature of the lack of a long-term strategy. One strategy will not fit all communities. Interaction and continued dialogue may be important tools to support communities in overcoming problems that contribute to the lack of continuous access to safe water. Clear and authentic communication can also make it easier to both assess changes and react to them appropriately, thereby giving projects more flexibility and durability.

The following section will be a review of the work that has already been done around water, sanitation and hygiene, and will show where I believe additional research would be fruitful and where this study can make a contribution. Next, a discussion of the importance of this issue to the improvement of the quality of life for women and the importance to WaSH of women’s involvement will be presented. The section that follows will describe the methodology used for the extended case study featured in this paper. Following that will be a description of the founding and evolution of the Global Women’s Water Initiative (GWWI). The subsequent section will describe in more detail

the 2011 GWWI program, my role in it and the results I observed. I will conclude this paper by discussing my main point, which is that WaSH development work can be more effective and sustainable by using a holistic approach, working with women, and developing authentic relationships between people working to transfer knowledge and technologies and their peers in the global south. I will also note the possibility for a more universal application of this model and explain why this study has implications that could be helpful to community development specialists whether their work is done in a domestic or international arena.

*From a discussion with Rose Wamalwa, an East African Fellow, on May12, 2012.

** According to the World Health Organization (WHO)/United Nations Children’s Fund (UNICEF) Joint Monitoring Program (JMP) for Water Supply and Sanitation, **an improved water source can be one of the following:**

- Piped water into dwelling
- Piped water to yard/plot
- Public water or standpipe
- Tubewell or borehole
- Protected dug well
- Protected Spring
- Rainwater

Examples of “unimproved” sources of drinking water:

- Unprotected spring
- Unprotected dug well
- Cart with small tank/drum
- Tanker truck
- Surface water
- Bottled water

Taken from JMP website: <http://www.wssinfo.org/definitions-methods/watsan-categories/> on 5/24/12

Theoretical Background

Women in Development

The importance of women in development has been noted since before the “Year of the Woman” and the “Decade of the Woman” declared by the United Nations in 1975 and 1976-1986, respectively. As development programs have shifted from the top-down

approach of the '50s and '60s to working with people at the local level, the significance of women's role in the daily life of communities around the world has become obvious to those working in the field and has gained prominence in academic work. (Newland, 1988)

Much of the literature regarding women in reference to development can be divided into two categories. Some work highlights the importance of raising capacity for women because gender equity is important to the welfare of the society, as well as an issue of justice. (Nussbaum, 2000) Some literature describes the critical role women play in the success or failure of many projects (Ako Ako, 2010; Datta, 2011) .

This study gives observations which speak to both of these issues. The observations affirm much of the literature above and give concrete examples regarding the issues of gender equity, justice and sustainability.

Holistic Approach to WaSH

Seven journal articles which were reviewed focus only on water. Some had good information regarding particular technologies, evaluations of water access or of water projects. (Akple, Keraita, Konradsen, & Agbenowu, 2011; De Ver Dye et al., 2011; Eshcol, Mahapatra, & Keshapagu, 2009; Hayford, 2010; Pattanayak, et al., 2010; Roberts, 2012) There was an article on the effectiveness of community participation (Barreto et al., 2010)

There were eleven articles in this review that focused only on sanitation. Many of them reflect a realization by the aid and academic communities that sanitation is lagging behind in WaSH implementation. This represents a serious problem! One author suggests that part of the reason sanitation is lagging is because in many cultures

discussion of human waste is taboo. Even in advanced countries, projects that provide clean water appear to have more appeal than sanitation projects. (Jewitt, 2011) There are a number of articles in this review which are evaluations of various technologies, some at the household level and some serving larger populations. (Bhagwan, Still, Buckley, & Foxon, 2008; Duncan, 2010; Factura et al., 2010; Flores, Buckley, & Fenner, 2009; Govender, Barnes, & Pieper, 2011; Mehl et al., 2011) However, motivation and community participation are also present in literature focused on sanitation. Some articles look at social motivation for its own sake and some discuss social motivation as a way to get people to fund their own sanitation (Ashipala & Armitage, 2011; Beausejour & Nguyen, 2007; Jenkins & Cairncross, 2010) There is one article focused on sanitation which also stresses the importance of hygiene in making sanitation effective. (Pattanayak, Poulos, Yang, Patil, & Wendland, 2009) This paper seeks to stimulate conversation about how all of the facets of WaSH can be part of each step of progress in this area and why this inclusion is important.

Four articles discuss water and sanitation but give little or no attention to hygiene and education. Two articles discuss planning and evaluation. (Pattanayak, et al., 2009; Törnqvist, Norström, Kärman, & Malmqvist, 2008) The other two discuss motivation for water and sanitation, but education and hygiene are not part of the discussion. (Harvey, 2011; Mollah & Aramaki, 2010)

There are five articles which take a holistic approach to WaSH. Two of them in particular give a comprehensive overview of the sector and also discuss the importance of reaching vulnerable populations (Bartram, 2010; Rheingans, Dreibelbis, & Freeman, 2006) There is one that discusses some of the cultural challenges involved in a holistic

approach. (Herbst et al., 2009) One article is particularly concerned with the costs and benefits of water and sanitation. (Roma & Jeffrey, 2010) There is also an article which gives an overview of an intervention model and calls for more long-term involvement on the part of disseminators of the technologies. (Campos, 2008)

This thesis presents observations and insights gained in one year of work. It does not necessarily contradict any of the information noted above. It provides a perspective drawn from on-site experience. There are very few extended case studies and none that relate the experience of a project on a personal level beyond the implementation of the technology. The potential contribution of this case study is a more focused look at how to implement the ideas being discussed and what that looks like on an individual level.

Relationships

Prominent in the discussion of relationships was the issue of people from the northern and southern hemispheres working together. Many of these focused on issues of institutional modes of operation. Yet institutions are a reflection of the actions and beliefs of their members. Even the disagreements in policy and the limitations faced by organizations can be traced to individual inability to overcome longstanding prejudices and distrust between hemispheres. The biggest point of contention is the tremendous power imbalance between north and south (Ashman, 2001; Brodhead, 1987; Fowler, 1998; Kajese, 1987; Kimura, 2011; Lister, 1999) Some of the information presented here will support research already done, including one paper that stressed the importance of interpersonal relationships in making things work between organizations. (Lister, 1999) This paper contributes to the work from the scale of one experience. It discusses where interpersonal relationships might be valuable. It also describes some of the

challenges of overcoming the power/resource imbalance in creating an authentic reciprocal relationship.

There are articles regarding the relationships between the private sector and governments. Some emphasized the problems with bureaucracies and central administration of public goods for which there is not yet good infrastructure. (Pritchett, 2002) Some questioned the value of NGO work that may destabilize and problematize work being done by local and national governments. (Pfeiffer, 2003) Two authors contended that privatization is being done as a matter of ideology rather than pragmatism, as the case for the effectiveness (financially and socially) of privatization has not yet been sufficiently proven. (Castro, 2008; Edwards, 1998) There are also a couple of articles which make a strong case against privatization, using both history and case studies. (McDonald, 2005; Snitow, 2008) There were several pieces which discussed ways to bring political and private stakeholders together. (Cairncross, Bartram, Cumming, & Brocklehurst, 2010; Mitlin, Hickey, & Bebbington, 2007; Sánchez-Triana & Enriquez, 2007) This thesis does not take a stance on the advantages or disadvantages of government versus private work. Rather, it focuses on the possibility of having the flexibility to adjust to whichever modality works best in a given location.

Quite a bit of work can be found in the literature on Community Demand Driven development (CDD), which has become a very popular term. (Byars, Woodrow, & Antizar-Ladislao, 2009; Padawangi, 2010; Pritchett, 2002; Roma & Jeffrey, 2010) There was a variety of discussions on the importance of community participation. When in Kenya, I worked with an NGO that has an intensive program called Participatory Integrative Community Development (PICD). (This acronym, like CDD, is not specific

in that it has several different definitions, depending on the speaker.) While all of these papers make an excellent case for the value of community participation, the level of community *self-determination* varies. Rather than making a case for a particular CDD strategy, it is my intention to show the possibility of being supportive of various types of participatory programs, thereby having the ability to support a broader range of approaches.

This review indicated very exciting research being done, much of which is supported by the information in this thesis. By noting the experiences of the last year, this paper is an opening to a conversation about methodologies and practice, looking at the potential of stressing flexible support in a program to promote WaSH through good communication and authentic relationships.

For the purposes of this thesis, my concern is with the importance of having a holistic approach to WaSH, working with women, and developing authentic relationships as part of a long-term follow up strategy. It is important to note that the entire program is only four years old, and my involvement was only for a year. Therefore, any discussion of long-term results is speculative. That being said, since there is no single way to accomplish long term results, and since there is not currently much literature that speaks directly to this issue without speculation, this paper can be grounds for further discussion and ideas for accomplishing the goal of adequate follow up and work that truly empowers communities to achieve their own *self-determined* goals.

The Importance of WaSH to the Quality of Life for Women

History

The history of women and their role in society in East Africa, especially during the pre-colonial era, is an area of rich academic exploration by anthropologists and sociologists. Uganda, Kenya and Tanzania had been comprised of many different nations prior to colonization. Prior to colonization, although some land was owned by women in various societies, most land in East Africa was owned by men. (Berger, 1999) This was not necessarily an indicator of women's status, as many women wielded significant power because they were the farmers and had control of their crops, or they were keepers of important rituals. The introduction of Islam, and later Christianity, contributed to the withdrawal of women from the public sphere. (Berger, 1999) With the introduction of cattle, the plow, and an expanding commercial market, women's rights were eroding in some places before colonialism. Colonialism had a definite negative impact on women's status. In fact, prior to colonization women's status was rather fluid throughout the region, rising and falling in different societies at different times. Women's decline in status across the region became marked and consistent late in the 1800's with the advancement of colonialism and continued through much of the 20th century. (Berger, 1999) One of the legacies of this history is that it is still difficult for women to own and retain land. Due to the imposition of negative western gender influences, combined with the influences of Christianity and Islam, women today cannot use power through trading or through being the keepers of important rituals to maintain or achieve even a modicum of personal economic power and/or independence.

Today

“...the advancement of women and the achievement of equality between women and men are a matter of human rights and a condition for social justice and should not be seen in isolation as a women’s issue. They are the only way to build a sustainable, just and developed society.” (Charlier, 2007)

Women in Kenya, Uganda and Tanzania are making progress in the struggle for equal rights. There are now many more women in high government positions than there were even a decade ago. There are also affirmative action programs in educational institutions and in subjects that previously were considered “men’s work,” such as engineering. However, at the local level, particularly in rural areas, many women experience the negative legacy of colonialism and a lack of voice in public. While in Uganda and Kenya, I observed in conversations with the women who trained with us and visited sites with us that the women in Uganda do not currently experience land ownership as a right. The women from Kenya who were with us were very excited about the new constitution which had been enacted in 2010, as they would have many more rights in terms of land and were also promised funding directly from the government to address WaSH issues as part of rights granted by the new constitution.

I became aware during my research for this paper that women in East Africa had a very different perception of their rights to land than what was written in the constitutions of their respective governments. Women with whom I spoke who were from Uganda and Tanzania perceived rights to land as being extremely limited. Yet, according to a report done in 2002, they have had more rights than women in Kenya for quite some time. (Benschop, 2002) The problem with looking at women’s rights through the lenses

of constitutions is that traditional “tribal” laws still quite frequently trump laws set down in the constitution. According to “*Rights and Realities*,” a paper written by Margaret Benschop in 2002, customary law was permitted precedence over national law even when it violated women’s rights in Kenya. In Tanzania, it was allowed to override national law unless it denied women lawful access to ownership, occupancy or use of land. And in Uganda, it was not permitted precedence over national law in any case where women’s rights were reduced by the application of customary law. (Benschop, 2002) Yet it was in Uganda where both men and women assured me that women did not have the right to own land and the men I spoke with were concerned that allowing women to inherit land would create an imbalance of power in favor of women. None of the legal nuances in their constitutions made a big difference in access to land by women, in part because of the ambivalence of the constitutions themselves. While all of the constitutions had language which prohibited discrimination, spousal co-ownership was not presumed except in Tanzania, and inheritance for widows had little or no protection under any of the constitutions. (Benschop, 2002) Land grabs from widows have been quite common in East Africa and according to Kaori Izumi, 80 percent of the recent land grabs in Tanzania have been done by relatively wealthy relatives, thus invalidating the notion that land grabs are done by people desperate for land. (Izumi, 2007) Despite their inability to own land or control its use, women are heavily involved in farming, as well as being largely responsible for the provision of water. They have not had a strong political voice for well over a century. (Berger, 1999) This leaves them with very little control over the fruits of their own labor, a small voice in regards to community development issues, and little or no land security.

Spending hours a day getting water means those hours cannot be used for income generation. In a place where land ownership is difficult to attain, being able to generate income is an important part of the journey to freedom, equality and independence for women. And, as the above discussion of land ownership indicates, without economic self-reliance, there are no words on a document that can bring about a better life for women.

The HIV epidemic has exacerbated the vulnerability of women to violence and loss of land and even personal property. Women whose husbands die of HIV related diseases are often blamed, even though it is usually marital infidelity on the part of the man that brings HIV into the household. (Izumi, 2007) Often these widows are themselves ill from the HIV they have contracted from relations with their husbands. Yet they can quickly find themselves looking for a home in urban slums when their own homes and livelihoods are taken from them. The vulnerable position of women has also put many children into untenable living conditions while relatively wealthy families of the deceased husband benefit from additional land and even private personal property. (Izumi, 2007)

There are some good news indicators in Kenya. A survey done in 2008/2009 showed that while women are still earning less than men in about 85% of Kenyan households, they usually have either partial or total control of their income. (Statistics, 2010)

According to the aforementioned survey, the clearest indicator of whether or not women control their own money, their sexual lives and live in physical security (without threat of physical violence including rape) is the level of education in the household. A

woman in a household with a low level of education is more likely to experience violence and powerlessness even if the household has a higher level of income than average. A woman in the lowest education quintile, as compared to a woman in the lowest economic quintile, will have less chance of having her own health care (56.7%/63.3%), making major household purchases (49.2%/51.7%), making daily household purchases (65.1%/69.7%), deciding what food to cook each day (91.2%/92.4%), and participating in all five of those decision processes (30.1%/35.5%). (Statistics, 2010)

Girls often quit school early because they take on the time-consuming chore of collecting water as soon as they are physically capable of carrying the heavy water. Another reason why many girls leave school at the onset of puberty is the absence of any private facilities for dealing with menstruation.

Women literally carry the burden of water in East Africa today. A five-gallon jerrycan filled with water weighs more than 40 lbs. and women carry these filled jerrycans an average of 3-5 miles each day when they collect water. (Women, 2004)

Water procurement can lead to significant musculoskeletal injuries just from carrying the water. (Geere, Hunter, & Jagals, 2010) Musculoskeletal injuries are the least of the problems for women who must walk an average of 6-10 miles a day to fetch water. These long walks also make them more vulnerable to rape. (Women, 2004)

Working directly with women in the transference of knowledge and technologies is not only effective in the implementation of projects to improve water, sanitation and hygiene. It is also effective in helping to magnify the voice that women can have in the development of their communities. If women do not take a hand in these improvements, the improvements are less likely to be done for their benefit. Rather, if the imbalance of

power remains the same, it becomes more likely that benefits accrued to women in the saving of time and labor can be exploited further to benefit husbands and their families. By giving women a say in the building and use of this crucial resource, the community opens the door to giving them a say in other political and financial aspects of community life. This is not to imply that men should be excluded from WaSH work. There must be a careful balance between empowering women and working with men, so that women are given new opportunities to lead, plan and learn while men support this process as one that is in their best interest.

Women are also crucial to the success of many aspects of WaSH. Hygiene includes the cleanliness of the home, pest and rodent control, and hand washing. Much of the emphasis around hygiene is around hand washing, which has one of the single biggest impacts on controlling the spread of disease compared to any other aspect of WaSH. (Datta, 2011) Collection and storage of water is also an important facet, as it refers to keeping water clean and uncontaminated. Clean water that is collected outside the household may become contaminated before use if the proper precautions for collection and storage containers are not taken. Clean water and adequate sanitation may not reduce the disease burden if not combined with education and changes in hygiene habits. (Eshcol, et al., 2009; Pattanayak, et al., 2010)

Furthermore, Datta et al in their article *“Influence of mothers’ handwashing practices and availability of water and sanitary latrine on under-five morbidity”* showed that household level sanitation and water measures were the most effective in preventing the spread of disease. (Datta, 2011) Women currently have the most at stake for making

WaSH successful in their communities. They are also crucial to the success of any program because of their important role in the household. (Datta, 2011)

Methodology

This study was done through participant observation, interviews and documentation taken from communications done from August 31, 2011 through June 16, 2012. I attended an orientation in June of 2011 prior to leaving for Africa. After my arrival in Africa I attended the Advanced Training and the Grass Roots Training. At the orientation, I took notes. At the Advanced Training and the Grass Roots Training, I took video and digital voice recordings, which I later reviewed in preparing this paper. I also took video and digital voice recordings at meetings and implementations in Uganda and Kenya. At the end of our stay in Africa, the Fellows gathered and did a three-day long evaluation of what had happened in the trainings. I documented this in a form that was later used by GWWI on Google Docs. Once back in the United States, it was my job as an intern to enter records of all phone calls and emails so that GWWI would have a record of communications between Fellows and also between GWWI and the participants and women in the local communities. This thesis is based on information gathered in trainings, site visits, implementations, evaluations, weekly phone conversations with Ms. Wamalwa, additional phone conversations with participants, communications records, and numerous interviews with Ms. Bulos.

The Founding and Evolution of the Global Women's Water Initiative*

Gemma Bulos, the current director of the Global Women's Water Initiative (GWWI), approaches the issue of water from the perspective of its relationship to and impact upon women. When she founded the organization known as A Single Drop in

2006 to address water issues in the Philippines, she required that at least 50% of the participants in her programs be women.

In 2005, Ms. Bulos attended a women's water conference in Dehradun, India. The conference was sponsored by Crabgrass, a non-profit organization in the Bay Area (United States) whose focus is environmental and social justice and human rights issues. This was where she met Jan Hartsough. Crabgrass had sponsored several water conferences and was interested in doing work dealing with water and women in Africa. Ms. Bulos was inspired by the dedication and sacrifice which women made in order to attend these conferences. For the time these women spent, Ms. Bulos wanted them to go home with something that would make a real difference in their lives and work. She and Ms. Hartsough, who was representing Crabgrass, began planning a WaSH training program for women in Africa. They met Melinda Kramer, the founder of the Women's Earth Alliance. In 2007, these three women founded the Global Women's Water Initiative (GWWI) in order to provide training for women in Africa in the building of simple water and sanitation technologies.

In 2008, the first GWWI training program was held at the training center of the Green Belt Movement in Kenya. The training center was founded by environmental activist and Nobel Peace Prize winner Wangari Maathai. After the yearlong program ended in 2009, an in-depth evaluation was done to see what worked and what didn't in order to plan for the next training. In 2010, the training was held just outside of Accra, Ghana. The 2011 training was held in Kampala, Uganda.

Ms. Bulos understood that working with women in Sub-Saharan Africa would be different from the work she had done in the Philippines. Women in the Philippines have

traditionally held leadership positions from the grass roots all the way up to high levels of government. This is not true of women in Sub-Saharan Africa, most of whom have not been allowed to hold positions of authority at any level. It has not been unusual for NGOs and government administrators of WaSH programs to partner with men, because men were the decision-makers and policy makers in most countries in Africa. Women, however, literally carry nearly the entire burden of collecting, keeping and using water. It is the intention of GWWI to empower women in the area of policy and decision-making pertaining to WaSH. This can be done by providing them with training and education around the technologies, an understanding of how WaSH works and ongoing support to strengthen the work they are already doing.

In 2008, there was no overview of WaSH concepts in the training program. There were some informal sessions led by Ms. Bulos, which introduced the concept of WaSH and the interrelatedness of clean water, adequate sanitation and good hygiene. The formal training was on the technologies being offered, micro-business and proposal writing. They had a class called Action Planning, which consisted of learning community mapping and how to translate that into proposal writing. One facilitator led a discussion on climate change.

The need and demand for a formal overview of WaSH was evident from the experiences in 2008. In 2010, there were classes that covered all aspects of WaSH training. The classes looked at the overall importance of WaSH and how the various parts of it are interrelated. The organizers engaged past participants from 2008 to lead some of the sessions. There were lessons on micro-financing instead of “micro-

business.” From this experience, the organizers realized that they wanted a program that was stronger in the area of resource mobilization for 2011.

The technologies offered from year to year differed. In all of the GWWI trainings, there have been teams consisting of two women from each village. (See more information in the section on participants.) Each team chose one of the main technologies to learn. In 2008 they trained women in how to make BioSand Filters (BSFs) and Ferro Cement Rainwater Harvesting Tanks. There were other technologies that all of the women learned, such as Tippy Taps (a bottle hung up and attached to a string outside of a latrine so that people can wash their hands without contaminating the wash water), solar pasteurization using solar cookers and portable microbiology labs (PMLs) to test water.



Ferro Cement Rainwater Harvesting Tank



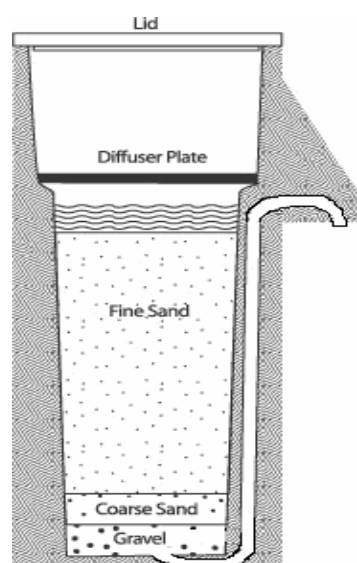
Rainwater Catchment Systems



Solar Cookers

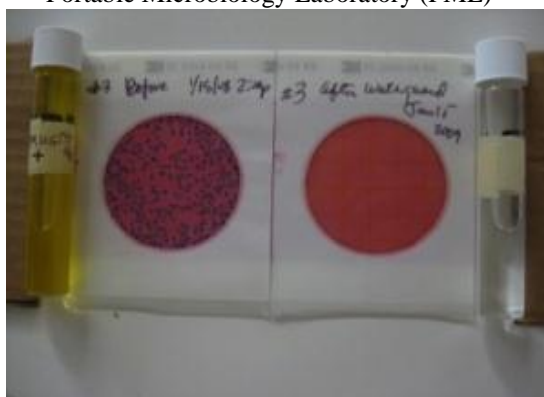


Tippy Tap



BioSand Filter (BSF)

Portable Microbiology Laboratory (PML)





EcoSan Toilet in Katosi, Uganda

In 2010, the training was held near Accra, Ghana. In Ghana, it was much cheaper to buy a plastic rainwater catchment tank than to build one (as long as it was less than 15,000 liters). GWWI also offered training in the construction of Ecosan toilets. The same BioSand Filter classes from 2008 were offered again in 2010, with graduates of the 2008 training leading some of the classes. All of the women learned about solar cooking and water pasteurization, PMLs and tippy taps.



Plastic Rainwater Catchment Tank (Cement around the outside protects it from the sun.)

Having a local partner do the groundwork and set up the logistics was more efficient than it would have been to have someone from the United States travel to Africa for that purpose. It also helped GWWI develop relationships with some of the local NGOs and has resulted in additional resources with which to connect participants.

The local partner in 2008 was Kenya Grass Roots Organizations Operating Together in Sisterhood (GROOTS). (see www.groots.org) They were chosen for their strength on women's empowerment issues. In 2010, the partner was ProNet Accra, a project of WaterAid Ghana, an organization that specializes in WaSH technologies. (see www.wateraid.org/ghana/)

In order to find participants, GWWI contacted organizations which they knew worked in Africa. This method was used for putting the call out for participants in all three years. They used a form similar to the one in Appendix A, which was used for the 2011 program. This form was basically unchanged for all three years. Some of the organizations contacted were: the Global Fund for Women, Jewish Vocational Services, Global Green Giants, iCON Youth Leadership Academy, Katosi Women's Development Trust and Educate!. (The last three organizations listed are either NGOs or CBOs based in Uganda.)

In 2008, GWWI chose women who were proven leaders in their local communities. There were some difficulties in keeping communications consistent because not all women had easy access to Internet or cell phones. Communications broke down relatively often and it was difficult to continue to support these women. GWWI realized that they needed an organizational partner to provide means of communication as well as other logistical support.

In 2010 GWWI asked for nominations again, but this time they also requested involvement from non-governmental organizations (NGOs) and community based organizations (CBOs). It was GWWI's hope that partnership with these organizations would provide more consistent communication and other structural support. However, the NGOs and CBOs saw the GWWI training as one of many such programs to which they sent local community leaders. A clear understanding about the follow-up commitment was not present, so follow-up from the 2010 training remained problematic and uneven.

There were two separate issues that were crucial to consistent follow-up with the participants. One was the technical follow up, which is having trainers and information available to participants after the training ended. The other was the personal follow up, through which the women were provided with support as they created their own WaSH agendas. This support included help with Action Planning, proposal writing and locating possible sources of funding.

In 2008, there were fifteen teams of women who attended the training. Two of those teams did not continue working with GWWI after the conference. Of the thirteen teams that remained, one woman from GWWI who had experience in constructing the technologies, traveled to twelve communities to support the building of the technologies for which the participants had received training. Her stay in each community was a minimum of two weeks. It took about nine months to complete all of the implementations.

When planning for the 2010 program, GWWI was determined to have implementation take place as soon as possible after the training. Their partner in the

training program sent trainers out to the villages immediately after its conclusion. The trainers were expensive, so they were sent out to one participant village in each “region.” All of the participants in other villages of each region traveled to the participant village the trainer was sent to, where they took part in an implementation. However, none of the women who did not have a trainer come to their village implemented a technology.

The main type of personal follow-up experienced by the participants in the 2008 training was a visit from the woman who traveled all over Africa representing GWWI to do implementations. There were a few groups which Ms. Bulos put in touch with Blue Planet Network. This is a website where people can join and submit a proposal for a water project if they promise to review the proposals of others. Through this website, 5 villages received money for a second implementation. The only drawback to Blue Planet Network was that it was not available to people with no Internet access. This seemed like a significant failure to reach the most vulnerable, and GWWI is looking for ways that the Blue Planet Network might be made available to all participants in the future, as it is a good proposal-writing training tool. A sixth village did a second implementation on their own with no help from GWWI or Blue Planet Network.

In 2010 GWWI realized that more ongoing personal support to the participants would make the project stronger. They created the Global Peer program. The purpose of this program was that Global Peers (from the United States) would continue relationships with the participants over the coming months. Global Peers were invited to attend the training. Many of the Global Peers had little professional interest in development work or knowledge about WaSH. They went in order to support the program because they understood the urgency of the issue and wanted to help out. The Global Peers received

only 2 hours of training prior to working with the participants, and their role was unclear. There was no structure for follow up, and the Global Peer program ended, for the most part, when people returned home.

*Information for this section is from an interview with Gemma Bulos conducted on May 17, 2012.

The 2011 GWWI Program

In the spring of 2011 I applied for a fellowship with the Global Women's Water Initiative. (See application in Appendix B.) I was accepted into this program, which required a one-year commitment. The first couple of months would be spent in Africa and the rest of the year would be completed at home.

The Fellows program was new to GWWI in 2011. They recruited women from the United States and from East Africa who were interested in development work and in WaSH. The idea was that the Fellows would form teams and each team would support three villages. Those who wanted to be Fellows had to apply and go through a competitive process. This strengthened the sense of commitment for the Fellows in the program. The North American Fellows had a daylong orientation before they left for Africa and all Fellows had an entire week of training (the Advanced Training) before the Grass Roots training. They also had a structure during the year of follow up work with their partners. Ms. Bulos contacted the Fellows each month. Prior to contact, she would send them a list of questions about the communities with which they were working. Once every 3 months, there was an "all Fellows call" where Ms. Bulos would connect as many of the North American and East African Fellows as possible by phone on a conference call and they would report to the group on the progress of their communities.

The partner for the 2011 program was iCon Women and Young People's Leadership Academy, an organization which specializes in leadership training for women and youth. (see <http://www.fundsforngos.org/uganda-2/icon-women-young-peoples-leadership-academy-invites-applications-icon-northern-uganda-entrepreneurial-transformation-leadership-fellowship-programme-2011/>)

My trip to Uganda began with my arrival in Kampala. The first program I attended was the Advanced Training. This was done for North American Fellows, East African Fellows, Trainers-in-Training and experienced trainers. (roster listed in Appendix C) Fellows were college graduates from North America and East Africa who had committed to work with the program for one year. Trainers-in-Training were graduates of prior GWWI programs who wished to hone their skills in training of WaSH technologies. There were also two women who were experienced in training on Rainwater Harvesting Tanks and VIP latrines. There were six North American Fellows, four East African Fellows, three Trainers-in-Training and three experienced trainers. We sixteen women studied together for five days. An overview of the three main technologies that would be taught at the conference was provided. There were also classes about technologies that would be taught to all of the women: solar cooking and solar water pasteurization, portable microbiology labs for testing water quality and tippy-taps. In addition to these technologies, we had leadership training and were educated about the importance of WaSH and its interconnected components. We learned about the effects of climate change on vulnerable populations and, in particular, women. The Advanced Training was an overview of what would be done at the Grass Roots Training. (For program schedule and curriculum of the Advanced Training and the Grass Roots

Training see appendix D.) This included a basic primer on all of the major technologies. Since we would each be training on only one technology during the Grass Roots Training, this overview was very helpful to the work we would be doing for the year following the trainings.

During the Advanced Training the Fellows were divided into teams. Since there were five teams needed and only four East African Fellows, one of the teams consisted of two North American Fellows. They had input from a couple of the Trainers-in-Training who had graduated from previous GWWI trainings. These teams met every night after dinner. Near the end of the week, each team was assigned to the communities with which they would be working for the coming year. Assignments were generally made keeping in mind that it would be advantageous if at least one of the implementations attended by the North American Fellows could be in a community with which they would be working for the coming year. The newly formed Fellows Teams began eating meals together and becoming acquainted with each other during the Advanced Training. This helped them to be a more consistent support to the women who arrived the following week for the grass roots training.

The Advanced Training was a time of relationship building between the Fellows, and a time for all of us to get to know one another. We were, for that week, peers in the classroom. Unlike the women coming for the Grass Roots Training, the women at the Advanced Training did not come in teams. There were a few people who knew each other from previous trainings. For the rest of us, every face was new. We came from many different backgrounds. All of the Fellows had at least a bachelor's degree. The rest of the group was quite varied. While a couple of women had Master's Degrees,

some had not finished the equivalent of high school. The difference in power and socio-economics between those in East Africa and those from North America was vast in some cases. Being together as peers, as fellow students, was a good opening. Talk over meals went from sharing our knowledge about community work and WaSH technologies to sharing pictures of children and grandchildren. The Advanced Training not only prepared us to support the participants in the Grass Roots Training the following week. It also laid a rich foundation upon which to build trust. This was especially important for the Fellows, who would be depending on good communication with one another in order to be effective in their work for the upcoming year. This was the week that Ms. Wamalwa and I began meeting daily to discuss what we were doing, what we hoped to do and what we had learned from the preceding day. (For an overview of the structure of the program, please refer to Appendix E.)

In their recruitment for the 2011 training, GWWI placed emphasis on selecting the organizations that were sponsoring participants. Organizations sought for the 2011 training were those that would see WaSH programs as beneficial to their particular interest. The NGO/CBOs were asked to send one woman who worked for them and one woman who was a leader in the local community. It was and is GWWI's intention to build relationships with these organizations in order to foster consistent follow up support for participants.

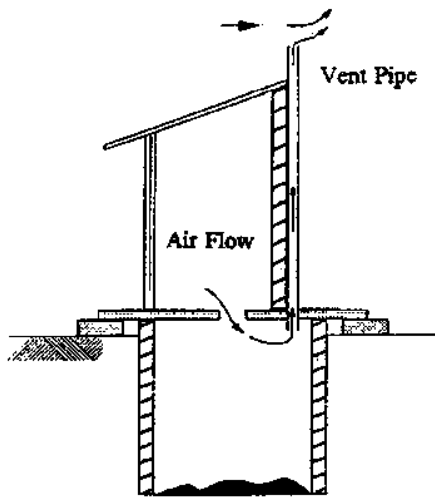
Prior to or shortly after arrival at the Grass Roots Training, each team of women from the communities chose one of the three "major" technologies to learn. They could learn about Rainwater Harvesting Tanks, BioSand Filters (BSFs) or Ventilated Improved Pit (VIP) latrines. Both women on each team learned the same technology. This was so

that the women could support one another in the skills they learned once they returned home. The mornings consisted of classroom-style work. The afternoons consisted of building the chosen technology. The technologies built as part of the training were donated to a local boarding school.

For a class on resource mobilization, a member of the Katosi Women's Development Trust (KWDT) gave a presentation on the work they had done. KWDT was originally founded in 1994 as a Community Based Organization (CBO) by eight widows. It was originally called the Katosi Women Fishing & Development Association. It is now an NGO which represents a network of women's groups in several sub counties in the Mukono District of Uganda. This organization had experienced great success in using the technologies they acquired to leverage resources for dissemination. They also were able to leverage success with one technology to bring in yet more technologies. (More information on KWDT can be found at: www.katosi.org) A woman from a local environmental group gave a presentation on climate change and its effects, particularly upon women.

It was the intention of the organizers to train the women on how to build a tank from bricks using Interlocking Stabilized Soil Bricks (ISSB), but the brick-making machine was not available. The women had an opportunity to take a field trip to see a tank built using ISSBs and receive an overall training on the technology. During the training, the women participated in building a Ferro Cement Tank. In 2011, unlike 2008 and 2010, the teams of women training on rainwater harvest tanks were not split. Both women on each team worked on building the tank and both women had training in building and using rainwater catchments. The BSF training was offered in 2011, as was

the Ventilated Improved Pit (VIP) latrine. This latrine is less expensive to build than the Ecosan latrine, has less smell than a normal latrine and eliminates many of the flies in the area. The women were also trained in solar cooking and pasteurization, PMLs and tippy taps.



VIP Latrine

Throughout the training, singing and dancing were an almost daily part of the schedule. Sometimes we began the day with singing and dancing. Sometimes it was used to wake people up who had become bleary-eyed while taking in a great deal of new information. There was a ceremony at the beginning of the Grass Roots Training that consisted of each team of women (as well as the graduates of the Advanced Training) bringing a small amount of water they had collected at home and pouring it into a bowl which was kept in the front of the room during the entire training.

When not in class or constructing a chosen technology during the Grass Roots Training, participants had many opportunities to build relationships and affinity. The newly formed Fellows Teams met with the women they would be supporting for the upcoming

year every night at dinner. Some people went dancing. Some sat in the outdoor bar of the hotel where the training took place and talked late into the night. Although there would not be constant communication between the North American Fellows and the Grass Roots Participants, it was good to have the opportunity to get to know one another and it helped to solidify the position of the “team” with the grass roots participants whom it would be supporting.

During the training sessions in Kampala, women were taught that there are many aspects of WaSH which are important and interrelated. The training stressed WaSH as one sector, which participants could begin working on in their villages according to the needs that they perceived took precedence. The participants went home with solar cook-its, which could be used to cook food or sterilize water, Portable Microbiology Labs (PMLs) and hygiene education materials. This gave them a variety of options with which to initiate improvements in water, sanitation and hygiene in their communities. The results to this approach were that communities were able to determine which option was most practical and/or most important to them and to begin their WaSH development with the “low-hanging fruit.”

Often the literature regarding the need for clean water, adequate sanitation and good hygiene quotes the morbidity and mortality numbers for lack of all of three of these aspects. It is difficult to separate out the morbidity and mortality numbers for clean water only, or adequate sanitation only, etc. However, most literature is focused on only one aspect, whether it is clean water, adequate sanitation or better hygiene. Perhaps, it is because of the project-oriented tendencies of development work that there is less literature regarding the advantages of broad education around WaSH, particularly in the

area of hygiene. However, the importance of viewing WaSH from a holistic perspective seems to be gaining popularity, and there is a growing body of work that supports this idea. (Bartram, 2010; Campos, 2008; Herbst, et al., 2009; Rheingans, et al., 2006; Roma & Jeffrey, 2010) If the main purpose in a WaSH-related project is to reduce morbidity and mortality due to diarrhea, approaching it from one or two aspects may fail to achieve that goal. (Datta, 2011; Pattanayak, et al., 2010)

Another reason that this broad approach can be more powerful for communities is that it invites the community to determine its own pathway to the attainment of WaSH. In some communities, where there are incidences of outbreaks of hepatitis and other problems caused by open defecation, sanitation may be the first priority. In some communities experiencing high levels of violence against women and girls, getting a nearby water source may be the biggest item on the community's agenda. Hand washing alone can reduce the incidence of water-borne disease by as much as 48%, so perhaps a community will decide to do education, which is a relatively low cost solution, before turning to technical solutions. A variety of other "technologies" have been helpful to the women as well. One community in particular has used all of the water testing kits (PMLs) that they received at the training and has ordered more. They are testing boreholes and wells, as well as water that they already know to be contaminated. The purpose of many of these tests is that they allow people to actually "see" harmful bacteria. Giving people a strong visual image of unsafe drinking water has proven to be a good motivator in developing political will within communities to address the problem of contaminated water. Another community is now making and selling solar cookers (used for both cooking and pasteurizing water) and is also training women in nearby villages on

its use. They are hoping to use the profits to, among other things, purchase an ISSB brick-making machine so that they can build more Rainwater Catchment Tanks and also rent it out to other villages for the same purpose. Having a variety of technologies at their fingertips has enabled women to return to their communities and facilitate a process of prioritizing. Lant Pritchett and Michael Woolcock, in their article, *“Solutions when the Solution is the Problem: Arraying the Disarray in Development”* noted complaints by critics of Community Driven Development (CDD) that this system can be easily manipulated to give the results desired by an NGO or a funder. This means there can be a distinct difference between community *participation* and community *self-determination*. (Pritchett, 2002) Giving the communities as many options and choices as possible with the one goal in mind of having a complete WaSH program allows the community to discover its own powers and explore its own strengths and weaknesses in the decision-making process.

During the Grass Roots Training, it was helpful in relationship-building that everyone, whether Fellow or Grass Roots Participant or Trainer, enjoyed the status of “student” for at least part of every day. The women who had been in the Advanced Training had the role of supporting and advising their teams and they were also learning with them. The women who were teaching the technologies were learning about technologies outside of the field of their expertise in the morning. This meant that we could share the experience of learning, and it did not matter whether someone was illiterate or had an advanced degree. In the long term, socio-economic and educational differences do matter, and this structure is not a panacea to bridge that gap. What it did

do was to provide a strong foundation which could be built upon over the course of the upcoming year to help mitigate the communications gaps that would naturally occur. Also during this time, and through much of the summer, Ms. Wamalwa and I had a chance to create protocols for ourselves so that we would operate smoothly as a team. As Ms. Wamalwa used to say, “Remember that in the work we do we are one.” We agreed, for instance, that no reports would be sent in to GWWI before both partners reviewed and approved them. We put together plans for the coming year, even though we assumed (correctly) that the actual future would be so different that those plans would never be implemented. Creating the plans and sharing our goals was a valuable exercise; one that has since helped us to understand each other as we have progressed through the year in our work supporting our participants and their communities.

When the trainings in Kampala ended, the grass roots women returned to their villages to prepare for the first implementation of the technology which they had learned. They wrote and refined proposals they had begun at the conference and faxed or emailed them to Ms. Bulos. When the proposals were approved, they were given the seed money grant of \$1500.00 with which to build their chosen technology. GWWI also paid for the trainers who came and assisted the participants in their first implementation.

During my third week in Africa, those of us who had attended the Advanced Training visited the sites of water-related projects done by other NGOs and CBOs. Some projects were done by international NGOs. Others were done by locally based NGOs and CBOs. Some were done as a result of a community petitioning a government or non-governmental agency for help. We had an opportunity to evaluate the projects and to speak with people who had worked on the projects. Even those projects which were no

longer functional became a wonderful learning opportunity, as we were also able to speak with people involved with them. This helped us take a more long-term perspective on what we were doing. It also underscored the importance of allowing the local community to “own” the project, because lack of community involvement and/or preparation appeared to be the biggest single factor in projects that only lasted a few months to a couple of years. This was also another opportunity for Ms. Wamalwa and I to compare our methods of evaluation and come to have a better understanding of what aspects of project work we each consider important.

During that week, I had the opportunity to visit and interview members of an international NGO which provides BioSand Filter molds, machines that make ISSBs and Ecosan Toilets. Their goal is to get as many units out to people as possible. They are, according to a member of this group, sometimes judged by funders on how many units are distributed each year. This is an understandable goal, with so many millions of people in Sub-Saharan Africa that have no access to WaSH technologies. However, there is little or no follow up done. This is problematic, particularly with BioSand Filters and, to a lesser extent, with Rainwater Harvesting Tanks and Ecosan Toilets. We toured schools and households who proudly displayed their BioSand Filters. When we asked the owners of these filters various questions about their use, it became clear that few of them were being used correctly. In some cases, this simply meant that from time to time the water coming from the filter would be contaminated. In others, it was hard not to think that all of the water being produced was unfit to drink. When people know that their water is contaminated, there are precautions that they can take to make the water safe. It might be argued that having filters, which wrongly lead them to believe the water they

are drinking is safe, represents more of a problem than would be present if there was no technology at all.

One of the most impressive projects we visited was the Katosi Women's Development Trust (KWDT), which sent two participants to the 2011 GWWI training. This group was founded by seven widows in 1994 and by 2011 had thirteen women's groups in various districts and 293 women members. We had the opportunity to visit a number of homes. At many of the homes we witnessed not only one, but several improvements that had come through KWDT. Many homes had drying racks for their dishes. Drying dishes in the sun is safer than drying them with a towel. The animals at most of these homes were kept in pens. This meant that the animal feces and their germs and parasites were not being spread all around the property. Many of these women had their own rainwater harvesting tanks and BioSand filters. One woman had an Ecosan Toilet and was very happy with it. She said that since she had been using it (she had only emptied it once so far) it had enhanced the growth of crops on her farm. The group had many options for income generation, and lent money to members on a revolving basis.

At the end the third week, we went out into the villages whose participants had attended the training. Together with them, we built BioSand Filters, Rainwater Harvesting Tanks and VIP latrines. The role of the Fellows, both East African and North American, was to support the women in accomplishing what they had determined they would do. We were not in charge of the projects, and our role was explained mostly as one of "cheerleaders."

I went to Katosi, Uganda for one week and helped in the building of BioSand Filters (BSFs). The women being trained at the implementation came from villages quite

a distance away from Katosi. This was because the women in Katosi already knew how to build BSFs and in fact had a couple of molds for this purpose at their shop in town. They wanted to take advantage of the GWWI program to get the knowledge of and training about the technology out to women who lived further from town.



Wednesday, June 20, 12

Katosi, Uganda and Kisumu, Kenya

Map from CIA World Factbook <https://www.cia.gov/library/publications/the-world-factbook/geos/ug.html>

In Kisumu, Kenya, together with my partner, Rose Wamalwa, we met with women who were building a Rainwater Harvesting Tank for a school in the nearby town of Bondo. I was able to help with site preparation and meet some of the school staff, but

construction on this tank began after I had returned to Kampala. Ms. Wamalwa attended the construction and we discussed it when I returned to the United States.

Ms. Wamalwa and I worked together for over a week with villagers in Odeso, which is near Kisumu. Most of the women spoke little or no English. Ms. Wamalwa and the trainers did not speak the local language. Fortunately, everyone but I knew Swahili. Although the women of the village and I could not communicate verbally, we worked together carrying nearly a thousand bricks across the village to the site where the tank was built, and found ways to communicate about the work, the meals and other things. The Advanced Trainers made one significant difference in comparison to previous years. Since they were actually out in the communities as the projects were being implemented, they could call in to a central place in Uganda and report any problems or areas where support was needed from GWWI. In 2008, twelve out of fifteen participating communities completed their projects over a course of nine months. In 2010, six communities completed their implementations. In 2011, fifteen out of sixteen communities completed their implementations within just four months of the training. Several of these were completed before the Fellows left to return to the States. When we were out in the field visiting and working with the women, it was an opportunity to observe and experience some of the powerful effects of gender roles. In Katosi, where the women's group has been particularly strong and successful, we usually sat on the floors. It was a stark visual reminder of how those roles play out when one day I observed 20 women sitting on the floor of a living room, aged from 20 to 80, and a fifteen-year-old boy occupying a chair. He had come in to ask his mother some questions

about the cattle. She was clearly in charge.... but he was the one sitting in a chair, looking down at her as he spoke.

Even though the constitutions of Uganda, Kenya and Tanzania all contain language that gives the right of land ownership to women, knowledge of that was murky within the group of participants with whom we worked. I never met anyone in the villages of Uganda who told me that she knew that women had the right to own land. Furthermore, I had the opportunity to observe, on several occasions, debates on whether women should have the right to own land in Uganda. The trainers we worked with to build the tanks and BioSand Filters in the villages were male. In good-natured debates, they patiently explained that if women were permitted to own property, they would have an unfair advantage over men, since they would be able to inherit from both fathers and husbands. The debates did not center so much on a perceived horror about women owning land, but rather the unfairness that would occur if women were permitted to inherit land under the same terms as their brothers and husbands can inherit it today. It was important to be an observer of customs and gender dictates without comment, especially since we did not have time to gain “context.” Martha Nussbaum, in her book “Women and Human Development: The Capabilities Approach” cautions that trying to “impart” feminist values without local context does not always produce results that raise the quality of life for women. (Nussbaum, 2000) The best example of this was in a village called Odeso, near Kisumu, where the women built a 15,000 liter water harvesting tank using Interlocking Stabilized Soil Bricks (ISSB). On the first day we arrived, we were introduced to the chief and several of the male elders of the community. They were present throughout the entire project. Each morning, they would arrive at the site

carrying a chair. They spent each day sitting together in a row and watching as the women carried nearly 1000 bricks across the village from the brick-making site to the site where the tank was built. They observed the women shoveling and mixing cement, stacking bricks and learning how to make and apply mortar. Someone from outside of the village might think this was not a very good picture. However, it turns out that it was very important, and the women were very happy that the men were there. The presence of the males, particularly the elders, was a sign of their blessing on the project. It gave the women confidence that when a water committee was formed, the elders would allow it to have the power to price the water and determine how to use the money for maintenance and repairs. The women's water committee was formed on the last day of the project. In a meeting of the entire community, including the men, a committee of women was selected and empowered to be in charge of use, pricing, maintenance and repairs of the tank. That committee is still operating today.

It is easy for us to look at a situation such as the one just described and pass judgment on the men, and perhaps even on the women. This image may imply that these women see themselves as inferior to the men. In my observations, this is not the case. As a matter of fact, it was my personal experience that women from Kenya were far more likely to discuss the new constitution, which gave them additional rights and guarantees in the areas of land and education, than women from Tanzania or Uganda, even though political changes with potential positive impact for women have been made recently in both of those countries as well. If we think that we need to educate either the women or the men in gender equity, the implication is that we think we know how it should be defined in a culture and situation that is completely foreign to us. The week in Odeso

was a wonderful learning opportunity for me, because I could see that learning the technology and applying it gave the women new political and financial power in their community. Our support of them, which instills new confidence and a sense of accomplishment for something that THEY have planned, is a powerful way of supporting women's rights. If we attempt to define what that should look like, the progression and appearance of rights for women, then we begin to revert to our historic role with these people, which is one of patronization. Furthermore, if the work is done in such a way that men are alienated, then neither the NGO (in this case, GWWI) nor the women can benefit from the work in the long term. Since the men were made welcome in their role (sitting and watching!) in the project, a foundation was laid that has allowed the women to retain control of the money and maintenance associated with the Rainwater Harvesting Tank which they built.

At the end of these projects, most of the Fellows, including myself, returned to Kampala and had three days of evaluating the program as we had experienced it thus far. We also created a structure for communicating over the coming year. I recorded this evaluation and made it available to the rest of the group who had participated in the process.

As a result of this summer's programs, several women have now become familiar enough with the technology they learned to train others. This represents good news on a couple of fronts. First of all, although many schools in Kenya, Tanzania and Uganda are now using affirmative action to bring more women into engineering, it will take time for them to catch up on this valuable education, which for many years was inaccessible to them. Second, having a woman train others during the construction of a technology is

significant because it says, without words, a lot about the potential and abilities that all women have in this work. It is also hoped that GWWI is developing a cadre of women trainers that it can use in future trainings.

Most Fellows teams communicated once a month after the North American Fellows returned home. Gemma Bulos, the director of GWWI, contacted each of the five teams once every month. Prior to contact, she sent us a list of questions about our communities. If we could not answer them, we contacted the participants from those communities to find the answers. Then, we would discuss the status of our participants and their communities with Ms. Bulos. She helped us to analyze when to step up and help out and when to step back and allow things to happen on their own. In this follow up communication, we had the opportunity to witness, through our regular phone conversations, exciting progress in many of the villages.

Eight groups did a second implementation, several of them building more than one tank, BioSand filter or latrine. (Second implementations were done with no financial support from GWWI.) A ninth group has gotten a loan and purchased a brick-making machine. They have a contract with the government to build Rainwater Harvesting Tanks in their region.

By December 21, 2011, another community had done four trainings and made twenty BSFs impacting about 560 people, most of whom are children. They are currently seeking to acquire knowledge and training regarding the Rainwater Harvesting Tank and the VIP latrine. The BSFs are a good income-generating project, which has also increased the community's sense of investment and concern in the entire WaSH program.

One community is in a slum near Kampala. They have recently made a proposal to build more latrines and are working with an organization called Global Soap, which collects leftover soap from hotels and distributes it to people in developing countries. The Uganda-based NGO working with this community has used this opportunity to train people on building latrines as a possible method of income generation while also giving classes on hygiene to the entire community.

An organization in Naivasha, Kenya, which has a program to help prostitutes get out of the sex trade, sent two participants to this year's GWWI training. The top priority for this group is vocational training to help sex workers escape the trade, and they are building a vocational school for this purpose. They have completed two implementations, one near the vocational school and one in a prison. They hope to be selling BSFs through the prison. They see BSFs as a potential source of income.

Another community has built two Rainwater Harvesting Tanks. They are interested in learning how to make VIP latrines. Since GWWI already have a woman who is an experienced trainer for this technology, they have put this community in touch with her.

There was one community mentioned above which has not done its second implementation yet. This is because after the first implementation, a local government official who was impressed by the first implementation took interest in the project. GWWI participants wrote proposals with the goal of getting a loan to buy a machine for making Interlocking Stabilized Soil Bricks (ISSBs) with which to build Rainwater Harvesting Tanks. The proposal, with support from the local government, was successful

in obtaining the loan and they now have a contract with the government to build many tanks in the region.

Ms. Wamalwa and I were responsible for supporting three teams of women. Grace Mushongi and Rachel Ndyamukama live in Bukoba, Tanzania and work with the Bukoba Women's Empowerment Association (BUWEA). Bukoba is a town of about 100,000 people. Most of the work BUWEA does is in small rural villages near Bukoba with populations between 150-300 people. Rosemary Atieno and Joyce Akinyi Nambare work for the Kisumu Medical and Education Trust (KMET) in Kisumu, Kenya. Kisumu is another large city (around one half million people) surrounded by small villages. The villages have average populations of 150 - 300 people. Akinyi Jacqueline Maganda works with youth for Lake Victoria South Water Services Board. She and her friend, Omboto Dorothy Awiti did a project in Bondo (population of about 30,000).

Ms. Wamalwa and I wanted to take this opportunity to learn from each other and from the work, so we communicated once a week. These communications always began with a personal update on the things we were doing or happenings in our families. Then, we would review what was happening in each of the three communities we were supporting. We would discuss various strategies. Often, our biggest role with our communities was to connect them to someone who could help them do whatever they were up to at the time.

BUWEA has over 300 members in numerous small towns near Bukoba. They see the WaSH program as a possible income-generating opportunity. GWWI helped them write a proposal to a funder with whom they have had a relationship in the past. At this time, the funder has supported the building of two tanks and is visiting the community in

July to consider funding additional tanks. BUWEA looks forward to building more tanks and is going to begin employing women who have learned about tank-building from previous projects to oversee construction and train others. Bukoba has built a total of three Rainwater Harvesting Tanks so far, serving a total of about 1500 people, most of them children. They have built tanks near schools, and are also building tanks for families, with four families sharing a tank. We connected members of BUWEA with sources for trainers and PMLs. Ms. Wamalwa has done most of the personal communication with this team and she has also been present for the building of each of the three tanks. When she attends the building of tanks, she also visits the tanks previously built to monitor their condition and any problems they might have. So far, there have not been any problems with the tanks. My own personal communication with this team has been minimal. I have called once and written several emails. The reason for this is that one of them does not speak English very well, and phone communication in that area is also difficult and full of static. However, through email responses from them and information from Ms. Wamalwa, I have been able to watch their progress. I was also able to forward them some application information for possible additional sources of funding.

Ms. Atieno and Ms. Nambare, who work for KMET, sometimes had difficulty finding the time or resources to continue the work after GWWI members had returned home. Frequently they would not answer phone calls or return messages. At first, Ms. Wamalwa and I were puzzled. We decided to attempt communications less frequently, and this seemed to help. So, the first thing we learned was to be careful not to push. Of course that had not been our intention, but it was apparently the way our communications

were interpreted. Another area of learning involved the “second implementation.” All of our communities received seed money for the first implementation of the technology they had learned at the training. They committed to doing a second implementation without financial support from GWWI. Our hope was that communities that experienced the success of the first implementation would then develop enthusiasm, political will and resources by leveraging that success. In the case of KMET, they planned to do the first implementation in one village and the second implementation in another village. This created some misunderstandings. The second village felt it was unfair that they were given no seed money. Furthermore, since Ms. Wamalwa had been visiting the second village with Ms. Atieno and Ms. Nambare, and the villagers knew that she represented GWWI, they assumed that KMET was receiving funding from GWWI and then became suspicious that KMET was keeping money intended for them. It took a couple of different meetings, attended by Ms. Wamalwa, to explain the system. Eventually, the second village accepted the explanation of GWWI’s role. They have done local fundraising events and have obtained enough money to build a tank. However, they have had great difficulty in obtaining an ISSB making machine. The Ministry of Housing has one that Ms. Nambare was assured would be lent out free of charge to community groups. They promised use of the machine in December of 2011. Then December came and went with a variety of reasons given as to why the machine was not available. Eventually, the person Ms. Nambare was dealing with said they would need money for rental and transportation of the machine. She began checking with other local organizations in the area. One of the people in a sister organization knew someone else at the Housing Ministry who would provide the ISSB making machine free of charge to

the community. As of June 2012, we are still waiting to see if the community will actually receive use of the machine from the Ministry of Housing.

KMET does participatory community development work with about 30 villages near Kisumu. Their program is called Participatory Integrative Community Development (PICD) and it is committed to teaching the communities that **THEY** are the experts about that which needs to happen to improve their quality of life. The work KMET does builds a sense of self-identity and self-determination in the communities with which it works. The strategy for consensus building is a model used throughout the world by many organizations. Although this is a locally based NGO, much of their funding comes from abroad. They supported a successful initial implementation. However it was difficult for them to continue to work with GWWI after the implementation because GWWI does not provide any additional funding past the seed grant. The record keeping, meetings and other work the NGO must do for funders is very time-consuming. They also experienced a drop in funding and for a few months our participants there, who both worked for the NGO, were unable to visit their communities. Having a total of 48 communications with my teammate, Ms. Wamalwa, and additional conversations with our participants who work for the NGO, I was able to learn a lot about the nuances involved in trying to implement this work. The PICD program is impressive in that it builds trust with the communities by an extremely intensive meeting process. They teach the community how to do self-assessment and priority setting by consensus. Their commitment to community *self-determination* is clear and their methodology is exciting. I had the opportunity to interview both the employees of KMET who implement PICD and the villagers with whom they work. Before this experience, it would have been easy for me to claim that

KMET was working on an agenda set by their outside funders. It is true that they have reporting responsibilities, and, like many of relationships between the global south and the global north, the accountability KMET has to the funders is not equal to the accountability the funders have to KMET. This does not negate the work, nor does it diminish the power of not only helping communities determine their own priorities, but also instilling them with the confidence that their priorities are the ones that should be attended to by NGOs and government agencies. Without the interviews I had with people at KMET who go out and work in the communities, I might have been more skeptical and less understanding of their reporting and financial constraints. My teammate (Ms. Wamalwa) has supported the participants by holding WaSH trainings and by facilitating strategy sessions. It has been a rich experience and both my understanding and my respect for the NGO have been deepened because of all I was able to learn in working with Ms. Wamalwa and the participants.

Ms. Wamalwa's education in this situation came from a more direct temptation. She has been a community organizer for many years in her work with a local NGO. When Ms. Atieno and Ms. Nambare did not have time to visit the communities involved with GWWI work, Ms. Wamalwa wanted to do so herself. Furthermore, members of these communities contacted her directly and requested that she continue the work on WaSH issues and/or projects with them. With guidance from Ms. Bulos, we determined that such an action would undermine the leadership and work of Ms. Atieno and Ms. Nambare. Looking back, this clearly was a good decision, since Ms. Wamalwa is still doing positive work with Ms. Atieno and Ms. Nambare and with the communities

This education around the situation with KMET would not have been possible without the close supervision of Ms. Bulos. When Ms. Wamalwa and I became frustrated with lack of progress, Ms. Bulos reminded us that our job was to be a support, and not to lead. “Stepping back” from the situation and allowing the women from KMET to work out the issues that were holding them back from more WaSH work gave them an opportunity to decide for themselves if this was something on which they wanted to continue to work.

Ms. Maganda and Ms. Awiti were associated with Lake Victoria South Water Services Board (LVS WB). Ms. Maganda worked with youth for LVS WB. Ms. Awiti was a friend of hers. Ms. Awiti is also a lawyer and very interested in doing work to benefit women in Kenya. An exception was made for them to attend the GWWI training, as LVS WB did not agree to sponsor either woman. When they returned and successfully built a Rainwater Harvesting Tank for a school in Bondo, Kenya (near Kisumu), it was hoped that LVS WB would be sufficiently impressed to support them in continuing the work. This did not happen. As a result, Ms. Maganda and Ms. Awiti spent much of the ten months following the training approaching various churches and communities, looking for interest in the WaSH program. Eventually, Ms. Awiti stopped meeting with Ms. Maganda and Ms. Wamalwa. In May of 2012, Ms. Wamalwa called for a meeting with Ms. Maganda, Ms. Atieno and Ms. Nambare. The four of them decided that once a week, they would teach a class on WaSH. They planned to do it in communities with which they were familiar through their work. They planned to do it in the communities in which they live. They received entry into a local prison and now have permission to

do WaSH classes at two local prisons. They have been very excited about this new project which they created.

Ms. Wamalwa had, at the trainings in the summer of 2011, been a very quiet person. She hesitated to take on leadership roles. Over the course of the next ten months, she discovered she could take on leadership roles. She also learned how to support work without imposing her own ideas onto a project. This has been a powerful opportunity for her in learning how to do effective work in community development.

An ongoing relationship allows GWWI to navigate areas that are currently ambiguous or can be a distraction to the goal of providing clean water, adequate sanitation and good hygiene. One of these is the ongoing debate between private versus government-based solutions. There is certainly cause for concern regarding the privatization of water because it often exacerbates lack of access for the most vulnerable populations and because it is still questionable whether privatizing water is the most effective way to provide for this public good. Access to potable water is considered by most to be a human right. (Gupta, 2010) There are many versions of public, private and public/private partnerships that are providing WaSH to communities around the world. (Cairncross, et al., 2010; Mitlin, et al., 2007; Sánchez-Triana & Enriquez, 2007) Rather than take a stand on this issue, which has academics, activists and aid workers making arguments on all sides, GWWI seeks to listen to the participants and support them in doing what works best for them given the country in which they live, local culture, politics and availability of resources. A pragmatic approach that keeps vulnerable populations at the center of its goals can listen to those it seeks to serve, rather than concerning itself with a particular ideology. It is also important to be clear about what is

meant by “privatization.” A water supply is not privatized simply because people are charged for its use. The community we work with in Odeso is charging all users for water from its Rainwater Harvesting Tank. The money collected is put into a fund, which is administered by the water committee. It is used for repair and maintenance of the tank. This is not a case of privatization, but rather an informal way of administering a public utility.

Part of making something work in the long term is developing people. This project was a rich experience in learning for both Ms. Wamalwa and myself.

Ms. Wamalwa and I had conference calls with Ms. Bulos at least once a month. Ms. Bulos had much good information and wisdom to impart from her years of experience working with developing communities on WaSH. Something which she emphasized throughout the year was knowing when to step up and offer more support and when to step back and listen. This knowledge is not innate. It requires constant evaluation of the role each of us is playing, based on the current events and what interpretation others place on those events. For Ms. Wamalwa and I, who both have more experience as community organizers than as supporters of organizers, our experience with Ms. Bulos not only helped us to be more effective with the women we were supporting, but it also helped us to learn to practice ongoing evaluation of when to step up and when to step back.

After sharing a phone conversation almost every week with my partner, I have learned a lot from conversations we had about various issues that arose with our communities. I found that she sometimes had to disabuse me of assumptions I had made about governance, both official and traditional. I listened to various crises that she faced

personally, as her brother became ill and as she struggled to go out and visit communities while leaving her children in the care of a young woman whom she hired to help out

I now know better questions to ask in evaluating the work of a local NGO or CBO. I have a more nuanced understanding of NGOs and CBOs. A year ago I would not have even known the difference between the two types of organizations. Now I understand them better, and do not automatically assume one is better or worse than the other. Although in the projects I observed and worked with this year, CBOs appear to be more effective, I do not feel that I have enough data to make that a strong conclusion. I also understand that evaluating that work is a long process, one that could take months or even years before a final determination could be reached, particularly in regard to my approach with them. I have learned to listen carefully to what the person with whom I am speaking is focused on, so that I can better understand *their* priorities, rather than assuming our priorities are the same. I will, in the future, take much more time to understand what it is that a partner or community in a developing country sees as important and what things they see as insignificant. In the past, I had assumed that if a person or community requested to be part of a program, that their goals and mine were aligned in ways that I now know neither of us has enough understanding of the other to ascertain. There is only one change I experienced that does not overly surprise me, which is that being attuned to the local aspects of culture, politics and resources is crucial to making projects that last and that are owned by the community as an accomplishment which *they* have achieved.

My partner, Ms. Wamalwa, has a Bachelor Degree in Biological Science, a diploma from Kisumu Polytechnic in Analytical Chemistry, and numerous trainings and

certifications for WaSH programs, entrepreneurship and participatory community work. Her education is vast and is complemented by her experience, as she has worked as an intern and later as a volunteer for organizations doing community work for a number of years. As time went on, we were able to get to the heart of a challenge with a better analysis of the situation and a frank discussion of what actions (or lack of actions) would be appropriate for a given situation. It took almost a month for us to realize, last fall, that one of the groups we were working with was having difficulty with a trainer. They had told Ms. Wamalwa, but not Ms. Bulos of this problem. Once we realized the issue, we were able to address it, with the guidance and input from Ms. Wamalwa. She knew which personalities were in conflict and who was there locally to address the situation. In the late winter, another issue came up in regards to expectations we had versus the actual timeline in which things would be accomplished. Some of this was due to the fact that most of December is not a time when people do a lot of work in East Africa due to the holidays. Ms. Wamalwa alerted us to the difference in expectations as soon as she realized it was present. This allowed us to have better and clearer communications with those people with whom Ms. Bulos was working with directly. Also, last fall, when discussing what was happening with KMET, I would sometimes begin asking about particular aspects of the work: Did they have a budget? Had they set goals? Was there an action plan? I asked these questions with little or no context regarding the community meetings and the comments Ms. Wamalwa had made regarding their progress. Eventually I realized that these questions had no value and in fact were slowing down the discussions we were having regarding what actions we might take to support the community. This spring, when there was a slowdown in the progress of the Rainwater

Harvesting Tank in the second KMET community, I listened more and asked questions less. It helped my report of what was happening to improve in accuracy over what I had reported in the fall. It also made reporting clearer because I was no longer placing my own evaluation over the top of the information we were gathering regarding the activities of the community. I would credit this to several evolving processes. With Ms. Wamalwa's help, I was able to shed many of the assumptions and pre-conceptions with which I had arrived in Africa in July of 2011. Ms. Wamalwa developed a level of self-confidence that allowed her to relay her own opinion whether it was in agreement with mine or not. She is still very diplomatic about this and I hope I have picked up at least some of this diplomacy from her. The trust she developed in GWWI brought her to the realization that even in situations where there was something that did not go as planned, she would not be "blamed." On the contrary, in some of these situations GWWI depended on Ms. Wamalwa's good judgment of what was going on in determining what actions would be best to take. Ms. Wamalwa participated in other community projects besides the ones we worked on together, and as each project unfolded, she gained confidence in her own abilities.

I recently asked her what she felt were the best things she gained from her work with GWWI. This is what she said: "Before I interacted with GWWI, I was working with people from Europe and UK. The perception I had about people from the west has greatly transformed since working with GWWI. As interaction has continued, I have come to realize that some, but not all people are very understanding and willing to learn from their counterparts in Africa. My previous experience was that people from the northern hemisphere thought they already knew everything. I realize that you learn from

me as I learn from you. It is like we have been in class, with each other for teachers, and are about to graduate as this year draws to a close. The women I have interacted with have changed the way I see myself and the way I approach my life. This is my own experience. Now I feel confident to go anywhere and do a training with real confidence. This is because I have had a year of experiencing your confidence in me.”

Ms. Wamalwa had worked as an intern during college at a local NGO. She continued working there as a volunteer for many years after college. She had gone to many trainings, but was not often asked to lead trainings because her ethnic group was different than what mostly comprised the NGO she worked with. Working with GWWI gave Ms. Wamalwa an opportunity to put her previous training and education to work, and to develop confidence that she was good at doing the work for which she had studied and trained. She also learned from Ms. Bulos some basic evaluative indicators on when to “step up” and when to “step back.” The good results from this new form of evaluation and planning will serve her well in any future endeavor. Lastly, she added, “I can go anywhere and do something and it will be something good.”

Conclusion

A holistic approach to WaSH is important for reducing water-borne diseases. There are studies which show that an approach that focuses on only one or two components of WaSH may not be effective in reducing exposure to bacteria and parasites which cause diarrhea. (Datta, 2011; Pattanayak, et al., 2010) Diarrhea is one of the biggest killers of young children in developing countries. (Pruss-Ustin, 2008) When women are provided with a wide array of technologies, it gives them more flexibility in determining the best path for their communities to take in achieving clean water,

adequate sanitation and good hygiene. This creates a sense of self-determination in the community, which engenders a sense of ownership, out of which comes the promise of sustained functioning and maintenance of WaSH technologies.

The acquisition of clean water, adequate sanitation and good hygiene can make a significant difference in the quality of women's lives and the opportunities available to them. Women who are no longer tied to carrying water long distances experience less violence, have fewer musculoskeletal injuries and have more opportunities for income generation. Knowledge and self-reliance in the area of WaSH also give women more status and new opportunities to contribute to the political voice of the community. Adequate sanitation in schools means girls can continue to attend classes after the onset of puberty. The opportunity of an education for girls which matches the education of boys will contribute to the development of gender equity. The reduction of disease that results from a comprehensive and successful WaSH program will also mean that women and girls, who normally are caretakers for the sick, will have more time for education and income generation.

Authentic relationships have the potential to do more than make a particular project successful. They can provide a powerful education to all involved. A team that has developed a sense of trust, reciprocity and affinity can communicate more clearly, better support the projects with which they work and teach one another how to listen to people of different cultural backgrounds. The GWWI program is more than just training women to build tanks, filters and latrines, which promote survival today. This program is a way of building relationships and partnerships which can benefit us all in the future.

I came to graduate school wanting to gain a deep understanding of communities that would benefit me whether I worked domestically or abroad. I discovered the one common thread I face as a community development specialist -- me! I am an outsider in almost any community in which I work. As a community activist for many years, I have been sensitive to the difficulties of an outsider status in working with domestic communities. How do I support change that raises the quality of life for others without imposing my own agenda? The GWWI model does not attempt to overlook or gloss over the outsider status, but rather uses it as a connection between communities and the resources and knowledge they need in order to achieve their own self-determined goals. This makes it worthy of additional research and application in both domestic and international arenas.

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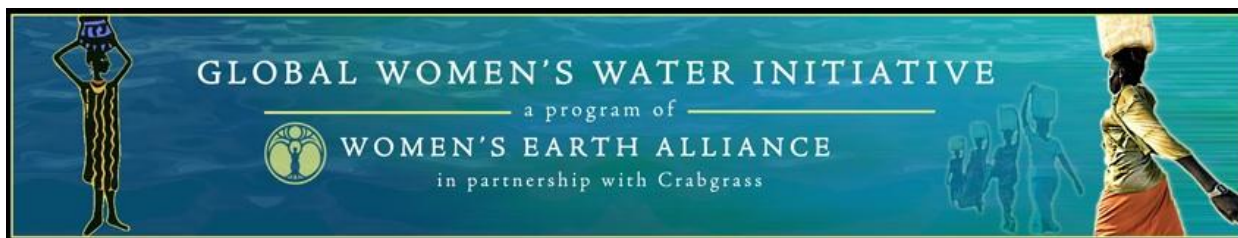
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Appendix A



Nomination and Application Form

The GWWI 2011 East Africa Women and Water Grassroots Training Program

A Program of Women's Earth Alliance in Partnership with Crabgrass and ICON

We are seeking African women who are working for water security and environmental sustainability in their communities. We welcome environmental advocates, organizers and entrepreneurs to apply to participate in the GWWI 2011 East Africa Program.

PURPOSE OF THE GWWI EAST AFRICA PROGRAM

The Global Women's Water Initiative (GWWI) is a program of Women's Earth Alliance in partnership with Crabgrass. The 2011 East Africa Grassroots Training Program is also partnering with ICON, a Ugandan Women and Youth leadership development program. This year's training will begin with a weeklong training to be held in Uganda from July 11th – July 17th.

GWWI equips two-person teams of local African women leaders with technology training, introductory business skills, networking support, and seed funding to launch water service projects in their communities that have the potential to become income-generating.

Attendees will enter the program with a vision for their communities and during the training, will create and commit to specific action plans for the year following the training to achieve that vision. The GWWI team will provide nominal seed funding and follow-up support for each team to implement a water project.

HOW THE GWWI EAST AFRICA PROGRAM WORKS

Selected GWWI Grassroots Training participants will participate in 3 phases of work: Preparation, Training, and Follow-up/Implementation.

During the Preparation Phase, selected participants will:

- Gather information and map their communities' needs related to water and sanitation.
- Begin developing a vision for improved water and sanitation projects in their communities

During the Training Phase, the selected teams will:

- Attend a week-long capacity-building training to learn proven and appropriate water technologies and introductory action planning, business and leadership skills to address the water challenges in their communities
- Receive training from highly-skilled African women Advanced Trainers who specialize in the training topics
- Gain the ability to
 1. Design and implement a water/sanitation service project from start to finish;
 2. Offer WASH Education seminars in their communities
 3. Write compelling proposals and effective action plans for further funding
 4. Develop long-lasting peer networks with other women water advocates
 5. Access resources to expand their programs and learn applicable skills
- Draft a project action plan and receive a \$1,500 seed grant to launch a water project addressing water access and quality

During the Follow-up/Implementation Phase, the GWWI participants will implement their projects and receive GWWI support including:

- On-the-ground site visits and refresher trainings from Advanced Trainers
- Peer support via virtual and web-based technologies
- Technical assistance in identifying and securing additional funding for successful projects
- Pairing with Global Fellows specializing in issues of water, policy and development

WHO SHOULD APPLY

Through an application process, **an established local NGO will nominate two East African women who work together in the same target area** to represent their target community. Preferably, one woman from the team works for the NGO and the other woman is a community leader who lives and works in the community served by the NGO. During the course of the weeklong training program, each team of two will work in partnership to develop an action plan for launching an appropriate water technology project for their community. Several technologies will be available for these teams to select one and focus on it during the training. Ongoing support among these groups will be provided after the weeklong training in Uganda is complete.

Each woman chosen must meet the following specific criteria:

- Affiliated with an organization that has an established working infrastructure and has already implemented a successful project in the community
 - Active in grassroots advocacy, entrepreneurship, and/or community organizing around issues of environmental advocacy and/or sustainability (*Grassroots refers to community-based activism, where positive change is created through citizen participation addressing issues that affect them*)
 - Recognized by her peers as a leader in her community around local water or health
 - Lives in and is a citizen of an East African country
 - Ability to start or expand a water program
 - Excellent communication skills
 - Proven leadership in designing and operating successful community-based projects
 - Fluent in English language and strong English literacy skills for writing proposals, reports, keeping records, accounting
 - Has a partner to work with (**women will only be accepted in teams of two**)
 - Willing and able to travel to Uganda from July 11th-July 17th and has a passport or required documentation that is valid through December 2011.
-

COST OF PARTICIPATION

Each team participating in the training is asked to invest \$500 USD - \$1,000 USD to support the GWWI participation fees (room, board, training, etc). Please contact us if you foresee problems with raising this participation fee. We suggest participants look into possible funding sources like their affiliated NGOs, government agencies, churches etc.

We are focused on ensuring that various regions with similar water-related issues are represented in the training. To ensure that the training enjoys a broad and balanced representation, we will select women who will contribute different perspectives in approaching these water issues. Decisions will be made by the international organizing team.

DETAILS OF THE WEEK-LONG TRAINING PROGRAM

During our week-long training, participants will choose workshops from the following theme areas:

Theme: Technology Transfer

The technologies and techniques that we choose will specifically address water quality, access and sanitation. Some can also become livelihood opportunities. **They *may* include:**

- Household water treatment options
- Rainwater harvesting
- Water storage
- Sanitation techniques and strategies
- Water Testing
- Solar pasteurization and solar cooking

The participants will:

- Learn the theory behind the technology
- Participate in hands-on training
- Practice marketing scenarios for introducing the technologies into their community

Theme: Project Development

- How to carry out needs assessments in your community
- How to plan and manage a project from concept to implementation and keep it sustainable
- How to identify and use local assets in management strategy
- How to delegate and coordinate leadership and committees
- How to build strategic partnerships (public and private) for community initiatives
- How to prepare action plans for grant proposals
- Participatory action planning

Theme: Leadership and Self-reliance

- Honing well-rounded leadership skills and confidence-building
- Women's collectives
- Introduction to business skills
 - Budgeting, cost recovery, and income-generation
 - Fundraising Strategies
 - Basic financial literacy
- How to design effective promotion and marketing
- Introduction to Micro-Financing and economic livelihood development

JOINT APPLICATION

If you or your organization would like to nominate a **team of two women**, please fill out the form below ***jointly with your nominees*** and send to info@globalwomenswater.org or 2150 Allston Way, Suite 460 Berkeley, CA 94704, USA. Please make the subject of your email: "Application: GWWI 2011 East Africa Program".

****Please note that we will not accept incomplete applications. This means that you must nominate **two women** and **they must fill out their own section. *Nominators cannot fill out information for their nominees.*****

******All nominations must be received by midnight of May 10, 2011.******

TO BE COMPLETED by NGO NOMINATOR			
Organization/ Affiliation			
Name			
Position in Organization			
Email Address			
Skype Name			
Best Phone Number to reach you at (with Country code)			
Alternate Phone Number			
Best time of Day to call you			
Postal Address			
City		State/Province	
Zip Code/ Country Code			
Fax			

Comment on Nominee:

1. Please briefly describe the nominees' work in water issues/environmental sustainability qualifying her to participate in the Women and Water Training Program.
2. In what ways do your nominees fulfill the criteria listed above under "Who Should Apply?"
3. What is your relationship to the nominees? Why do you believe they should represent their region at the Women and Water Training? What impact have they had in their community?
4. Would you or your organization be able to assist the nominees in computer access such as: ___internet, ___training or ___Skype conference calls? Please check the appropriate selections.
5. GWWI asking each team to invest \$500 - \$1,000 USD for their participation in the 2011 Uganda Women and Water Training. In the past, the nominating non-profit has covered or helped the nominated team raise funds to participate in this training. Will your organization be able to sponsor this team to participate in the GWWI Grassroots Training?
6. Are you prepared to support the GWWI Grassroots Participants and their professional development as they implement their improved water projects after the training?

TO BE COMPLETED by NOMINEE

Name			
Position at NGO			
Email Address			
Best Phone Number to reach you at (with Country code)			
Alternate Phone Number			
Best time of Day to call you			
Postal Address			
City		State/Province	
Zip Code/ Country Code			
Country			
Organization/Affiliation (if any)			
Fax			
How did you hear about training			

References		
1.)	Name	
	Email	

	Phone	
	Relationship to you	
2.)	Name	
	Email	
	Phone	
	Relationship to you	
3.)	Name	
	Email	
	Phone	
	Relationship to you	

Questions for Nominees

Self Actualization Questions *(Please limit your response to 500 words)*

1. What is your vision to help others? Please provide 3 examples of how you have selflessly helped others or examples of your investment in social issues beyond yourself
2. What is your ideal model of community development?
3. Please describe experience working at the NGO level (if applicable).
4. Please describe your experience working with grassroots women in your community

Community Questions

When answering questions about "your community" please answer for the community that you serve either through an NGO or as an individual *(Please limit your response to 500 words)*

1. Briefly describe your work in environmental issues and/or water issues specifically.
2. In what ways have you taken leadership in your community? In what ways do you support other women working alongside you?
3. What tools, programs, and technologies do you think are needed to strengthen the efforts of grassroots women working to protect water resources?
4. How do you and your teammate currently work together? Please give examples of the types of projects you have worked on together.

5. Please let us know if you can or how you will try to fund all or part of your costs to attend the training in Uganda (approximately US \$1,000) plus your round-trip travel to Kampala
6. Do you consider yourself a **capacitator** (with the proper training, you would go into a community and train other women to learn water technologies) or an **implementer** (you would implement a water technology yourself in your own community if you had the proper training)?
7. Do you have experience writing in English?

*****The information you provide in this next section will guide us in designing the content of the training to best serve the participants. Please answer as thoroughly as you can. *****

Questions about your Target Community

1. Where does your target community get their water?

<input type="checkbox"/> Household well (shallow or deep)	<input type="checkbox"/> Village well (shallow or deep)
<input type="checkbox"/> Borehole	<input type="checkbox"/> River
<input type="checkbox"/> Rainwater	<input type="checkbox"/> Municipality
<input type="checkbox"/> Other	
2. Does your target community have to carry water? If yes, how far of a distance and who fetches (women, girls, boys, men)? How much time is the average walk?
3. Does your target community's local government provide water through pipes to household? Does it cost money? How much?
4. Does a private company pipe water to the households in your target community? If yes, what is the average cost per month
5. Does your target community purchase water from water vendors who sell water on the street? If yes, how much does it cost?
6. Does your target community harvest (catch) rainwater?
7. About how much water per person do people in your target community have access to daily-- Under 20 liters? Over 20 liters?
8. Is the water in your target community safe to drink? Why or why not?
9. Do the people in your target community have to treat your water? If yes, how do they treat it? (Boiling, Sodis, filter, solar pasteurization etc.)

10. Have you or anyone in your community tested your water? If so, what method was used to test the water?

11. What are the most challenging water issues in your target community? Rate them in importance from: (1 being the most harmful and 5 being the least harmful)

- | | |
|------------------------------------------------|-----------------------------------------------------|
| <input type="checkbox"/> Access to fresh water | <input type="checkbox"/> Access to clean water |
| <input type="checkbox"/> Water quality | <input type="checkbox"/> Water quantity |
| <input type="checkbox"/> Inadequate Sanitation | <input type="checkbox"/> Other (please state _____) |

12. If the target community's issue is **contaminated water**, please indicate the issues your community is facing (Check all that apply)

- | | |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <input type="checkbox"/> pollution/garbage | <input type="checkbox"/> biological contaminants (feces, cholera, etc) |
| <input type="checkbox"/> chemical contaminants (fertilizers, industrial waste, etc) | |
| <input type="checkbox"/> other | |

13. Does your community need access to alternative methods for cleaning water for drinking? Explain

14. If the target community's issue is **lack of access to water**, please indicate the issues your community is facing (Check all that apply)

- | | |
|---------------------------------------------|-----------------------------------------------------|
| <input type="checkbox"/> drought conditions | <input type="checkbox"/> water source over 1km away |
| <input type="checkbox"/> expensive | <input type="checkbox"/> other |

15. If the target community's issue is **lack of sanitation**, please indicate the issues your community is facing (Check all that apply)

- | | |
|-----------------------------------------------------|-------------------------------------------------------------------|
| <input type="checkbox"/> no sanitation facilities | <input type="checkbox"/> open defecation |
| <input type="checkbox"/> improper hygiene practices | <input type="checkbox"/> lack of sanitation and hygiene education |

16. What are the current sanitation practices or facilities in your target community? (Please check all that apply)

- | | |
|---------------------------------------------|------------------------------------------|
| <input type="checkbox"/> pour flush toilets | <input type="checkbox"/> pit latrines |
| <input type="checkbox"/> compost toilets | <input type="checkbox"/> open defecation |
| <input type="checkbox"/> other | |

17. Do people in your community have access to private toilet facilities? Are they safe to use?

18. Does sewage exist close to the water source?
19. Is your community's sewage treated? If so, how?
20. Does your community need information on sanitation practices?

COMMUNITY ORGANIZING

1. Who are the decision-makers in your community around water?
2. Do you have a water committee in your community now? If so, what do they do?
3. Do women have projects in your community now? If so, what kind?
4. Are you comfortable in taking a lead or constructing a water project in your community? Please explain why you are confident you can launch a project
5. Have you ever done fund-raising for a project? If so, please describe your method and the results

INFORMATION TECHNOLOGY

1. Do you have an email address?
2. Do you have access to a computer with an internet connection? Where is it located? (Please indicate distance from your home or office)
3. Do you pay to use the internet? If yes, how much per hour?
4. How many times a week do you access the Internet?
5. Do you have access to an organization that offers training in using computers? If so, what is the name of the organization?
6. Do you use a mobile phone? Do you text message?

MICRO-FINANCE AND ECONOMIC LIVELIHOOD

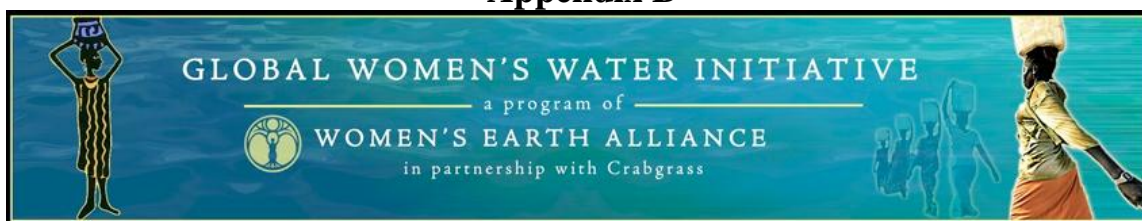
1. Is there a local bank near your community that offers micro-loans?
2. Have you or anyone you know received a micro-loan from a bank or micro-finance institution?
3. Are you aware of any organizations in your community that offer training in micro-financing?
4. Are you a part of a cooperative, a self-help group, or a "merry-go-round"? If so, describe how the group works as well as your specific involvement.
5. Have you received basic financial literacy training? Describe.

CULTURE

1. We will be sharing stories and songs about water from our different cultures - do you have music or stories to share?

Thank you for applying! For questions during the application, please contact womenandwater@gmail.com.

Appendix B



Global Women's Water Initiative Fellowship: Call for Applications Deadline March 18, 2011

The Global Women's Water Initiative is a program of Women's Earth Alliance, providing training and seed funding for African women leaders to implement appropriate water technologies, build economic livelihoods, and enhance leadership skills so they can improve their communities' health, self-reliance, and resilience to climate change.

GWWI seeks women graduate students and development professionals from around the globe who are seeking holistic and hands-on training in international development and WASH-related education and appropriate technology. Through a competitive application process, GWWI Fellows will be selected to work directly with African women trainers on community-based water projects. Ideal candidates are enrolled or have completed graduate programs in related fields, such as international development, public health, water and sanitation, environmental engineering and have experience working in the Global South. GWWI Fellows commit to one or two summers where they will participate in trainings and assist grassroots women leaders in their implementation of water projects.

The Program

The Woman's Earth Alliance 2011 GWWI Fellows will engage in a hands-on summer program where they will attend two trainings in Uganda:

1) The Grassroots Training. 15 teams of emerging African women leaders will learn WASH technologies and concepts and receive seed grants to launch self-reliant water projects in their communities. Fellows will assist the trainers and act as global peers for grassroots women participants.

2) The Advanced Training. Fellows will learn a holistic set of technology, business, leadership, and facilitation skills related to WASH directly from African women trainers. This 2-year training will prepare Fellows to support Grassroots Training Graduates to implement WASH solutions in communities and organizations across Africa. Immediately following the trainings, GWWI Fellows will travel and train alongside the African Advanced Trainers, conducting customized refresher trainings for grassroots women graduates. Additionally, they will travel to some of the previous Grassroots Graduate projects to conduct monitoring and evaluation site visits. This exposure will give participants hands-on experience that will enable them to develop a realistic perspective when designing and implementing future community development programs throughout their careers.

We invite women to apply who fit the following criteria:

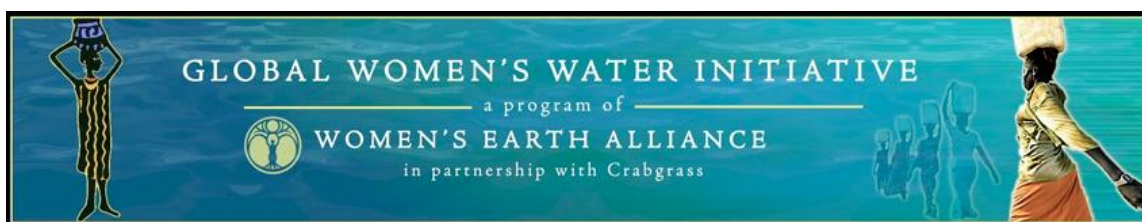
- ☐ Currently or previously enrolled in a undergraduate or graduate program related to: international development, public health, environmental engineering, women's studies, water and sanitation
- ☐ Experience living or working abroad

- ☐ Able to commit to a two-year Fellowship program
- ☐ Interest in experiencing grassroots, community-led development
- ☐ Seeking to hone skills in project implementation
- ☐ Interest in gaining advanced training in water, sanitation and hygiene (WASH) practices/education
- ☐ Seeking hands-on experience in preparation for, or enhancement of, a career in international development
- ☐ Seeking to be a part of an global team of a dynamic, diverse, and driven women working together to create thriving communities and environments for generations to come

Program Costs:

- ☐ **\$3500:** This cost includes the cost of in-country housing, travel, meals, and visas (not including airfare to Uganda)
- ☐ WEA is available to support fundraising and offer tips for students or professionals

If you are interested in becoming a Global Women's Water Initiative Fellow, please **send your application to beth@womensearthalliance.org by Friday March 18, 2010. Please write "2011 GWWI Fellowship Application" in the subject line of your email.** We invite you to learn more about the Global Women's Water Initiative and this unprecedented Fellowship.



GWWI Fellowship Application

Contact Information	
Name	
Street Address	
City ST Zip Code	
Cell Phone	
E-Mail Address	

Availability	
Can you commit to GWWI for all of Summer 2011 (June-August)?	___ yes ___ no
Can you attend all pre-departure meetings in Berkeley, CA?	___ April 5 th ___ April 26 th ___ May 17 th

Education			
Are you currently a graduate student?		<input type="checkbox"/> yes <input type="checkbox"/> no	
Do you have a graduate degree?		<input type="checkbox"/> yes <input type="checkbox"/> no	
	Name of Institution	Concentration	Date of Graduation
Undergraduate			
Graduate			
In the space below please share any special training that you have received that can contribute to your work in Africa (i.e. appropriate technology training, Grant writing training, community health education, water and sanitation-related training etc.):			

Skills
Please check any of the skills below in which you could train others. In the blank space below, please elaborate:
<input type="checkbox"/> Grant writing <input type="checkbox"/> Rainwater Harvesting Systems <input type="checkbox"/> Ecosan Toilet Construction <input type="checkbox"/> Action Planning <input type="checkbox"/> Biosand Filter Construction <input type="checkbox"/> Leadership Coaching <input type="checkbox"/> WASH (Water, Sanitation and Hygiene) or Community Health Education
Elaborate:

Essays	
Please respond to the following essays in an attached doc. (Each essay, 500 word max.)	
1.)	Please explain the reasons why you wish to become a GWWI Fellow?
2.)	What is your ideal model of development? How do you see the current model of development and how would you improve it?
3.)	Why is it important to incorporate grassroots women leaders into the development and WASH discourse?

Resume/CV and Cover letter/Recommendation Letters

For consideration, please attach your cover letter, curriculum vitae and 2 recommendation letters to this application.

Agreement and Signature

By submitting this application, I affirm that the facts set forth are true and complete. I understand that if I am accepted as a GWWI Fellow, any false statements, omissions, or other misrepresentations made by me on this application may result in my immediate dismissal.

Name (printed)	
----------------	--

Signature	
-----------	--

Date	
------	--

If you are interested in becoming a Global Women's Water Initiative Fellow, please **send your application to [beth\(AT\)womensearthalliance.org](mailto:beth(AT)womensearthalliance.org) by Friday March 18, 2010. Please write "2011 GWWI Fellowship Application" in the subject line of your email.** We invite you to learn more about the Global Women's Water Initiative and this unprecedented Fellowship

Appendix C

Advanced Training Roster

Name	Role	Country of Origin
Gemma Bulos	Training Coordinator	USA
Jan Hartsough	Coordinator	USA
Beth Robertson	Training Coordinator	USA
Maame Yelbert-Obeng	Training Coordinator	USA
Esther Bugaiga	Training Coordinator	USA
Zeinab Adams	Content Trainer (Action Planning)	Kenya
Elizabeth Akinyi-Oberio	Content Trainer (WaSH)	Kenya
Patricia Eiyo-Elotu	Content Trainer (Climate Change)	Uganda
Debbie Serwadda	Content Trainer (Leadership)	Uganda
Mildred Mkandla	Tech Trainer (Rainwater Harvesting Tank)	Zimbabwe
Faustine Odaba	Tech Trainer (Solar Pasteurization/Cooking)	Kenya
Godliver Busingye	Tech Trainer (VIP Latrine)	Uganda
Matilda Nabukonde	Trainer in Training	Uganda
Nansubuga Immaculate	Trainer in Training	Uganda
Anna M. Anatoli	Trainer in Training	Tanzania
Mukasa Haira	East African Fellow	Uganda
Ruth Mubezi	East African Fellow	Uganda
Eva Nalwanga	East African Fellow	Uganda
Rose Wamalwa	East African Fellow	Kenya
Epi Bodhi	Global Fellow	USA
Samantha Winter	Global Fellow	USA
Terri Harris	Global Fellow	USA
Crossley Pinkstaff	Global Fellow	USA
Melanie Medelle	Global Fellow	USA
Lilly Dimling	Global Fellow	USA

Grass Roots Training Roster

Name	Village, Country of Origin	Local NGO/CBO
Jane Wanjiko Joseph	Kitale, Kenya	Kilili Self Help Project
Linda N. Wameya	Kitale, Kenya	Kilili Self Help Project
Joyce Akinyi Nambare	Kisumu, Kenya	Kisumu Medical and Education Trust (KMET)
Rosemary Atieno	Kisumu, Kenya	Kisumu Medical and Education Trust (KMET)
Catherine Wanjohi	Naivasha, Kenya	Life Bloom Services
Susan Njeri Karaja	Naivasha, Kenya	Life Bloom Services
Akinyi Jacqueline Maganda	Kisumu, Kenya	Lake Victoria South Water Services Board
Omboto Dorothy Awiti	Kisumu, Kenya	Lake Victoria South Water Services Board
Lillian Mugure Waithera	Thika, Kenya	Fairladies Self Help Group Msichana Mulafrica Agenda
Rose Wanjuki Nthiga	Thika, Kenya	Fairladies Self Help Group Msichana Mulafrica Agenda
Acharit Florence Chandiru	Kampala, Uganda	Orphans and Widows Association for Development (OWAD)
Aliamo Eunice	Kampala, Uganda	Orphans and Widows Association for Development (OWAD)
Aidah Nerinda	Kampala, Uganda	Uganda Community Based Association for Child Welfare (UCOBAC)
Amella Peninah	Kampala, Uganda	Uganda Community Based Association for Child Welfare (UCOBAC)
Afuwa Ngobi	Bushenyi, Uganda	Women's Center for Job Creation
Charity Nduhura	Bushenyi, Uganda	Women's Center for Job Creation
Grace Loumo	Kaabong, Uganda	Action for Women and Awakening in Rural Environment (AWARE)
Josephine Auma	Kaabong, Uganda	Action for Women and Awakening in Rural Environment (AWARE)

Name	Village, Country of Origin	Local NGO/CBO
Martha Adong Edema	Mooyo, Uganda	Marindi Cooperative Society Ltd.
Angella Betty Tassas	Mooyo, Uganda	Marindi Cooperative Society Ltd.
Namaganda Mastula	Katosi, Uganda	Katosi Women Development Trust (KWDT)
Namukasa Rose	Katosi, Uganda	Katosi Women Development Trust (KWDT)
Kirabo Martha	Kagulu, Uganda	Educate!
Kiskye Irene Henrietta	Kagulu, Uganda	Educate!
Grace Kyomya	Fort Portal, Uganda	Kitojo Integrated Development Association (KIDA)
Marjorie Musobozi	Fort Portal, Uganda	Kitojo Integrated Development Association (KIDA)
Sophia Ally Mremi	Arusha, Tanzania	Attraction of Natural Environment we Protect and Organize (ANEPO)
Mary Didas Kerety	Arusha, Tanzania	Attraction of Natural Environment we Protect and Organize (ANEPO)
Mary Godson Mwangi	Arusha, Tanzania	Tanzania Girl Guides
Jacqueline Ali Mbwana	Arusha, Tanzania	Tanzania Girl Guides
Grace Mushongi	Bukoba, Tanzania	Bukoba Women's Empowerment Association (BUWEA)
Rachel Ndyamukama	Bukoba, Tanzania	Bukoba Women's Empowerment Association (BUWEA)

Appendix D

Training Schedules

Advanced Training Schedule					
TIME	Monday (July 4, 2011)	Tuesday (July 5, 2011)	Wednesday (July 6, 2011)	Thursday (July 7, 2011)	Friday (July 8, 2011)
7:00 - 7:45 AM	7-7:45a BREAKFAST				
8:00-9:00 AM	Orientation to GWWI Training Program	WaSH--Women in the WaSH Sector Challenges, Successes and Solutions	Leadership in WaSH	PML Water Testing Results	Action Planning, Creating Work Plans
9:00-10:00 AM	Igniting the Transformational Leader		Applying Your Leadership in WASH Strategies		
10:00-10:30 AM	BREAK				
10:30-12:30 PM	Leadership (con't)		Action Planning Tools	Strategies for PML in WASH Outreach	Resource Mobilization
12:30-1:30 PM	12:30-1:30a LUNCH				
1:30-3:30 PM	Women, Water and Climate Change	Intro to Appropriate Technologies	Intro to Microbiology and Epidemiology	Technology Training Set-Up	Orientation for Grassroots Training
3:30-4:00 PM	3:30-4p BREAK				
4:00-5:45 PM	Climate Change (con't)	Rating Appropriate Technologies	Portable Microbiology Lab	Set-Up (con't)	Grassroots Training - Committee and Individual Work and Task Assignments
6:00-6:30 PM	EVALUATION				
7:00-8:00 PM	DINNER				

Grassroots Training Schedule								
Time/Days	1 (7/11-Monday)	2 (7/12-Tuesday)	3 (7/13-Wednesday)	4 (7/14-Thursday)	5 (7/15-Friday)	6 (7/16-Saturday)	7 (7/17-Sunday)	8 (7/18-Monday)
7:00:800 AM	BREAKFAST							
8:00-8:30 AM	Welcome - Into to GWWI		Leadership			Gusst Speaker		
8:30-9:00 AM	H2o ceremony -					KWDT		
9:00-9:30 AM	Expectations and Agreements	Climate Change	WASH Games, Modeling Sensitization	Portable Microbiology Lab Interpreting Results	Action Planning and Leadership		Open Morning	Goodbyes
9:30-10:00 AM	Announcement of Teams	Breakout	Breakout		Breakout	Action Planning and Leadership		
10:00-10:30 AM	BREAK							
10:30-11:00 AM	Leadership							
11:00-11:30 AM		Intro to Wash						
11:30-12:00 AM	Breakout	WASH and Water-Related Diseases	Portable Microbiology Lab Water Testing	Press Conference	Action Planning-	Resource Mobilization	Complete Technologies	
12:00-12:30 PM	Leadership con't				Breakout			
12:30-1:00 PM	LUNCH				LUNCH			
1:00-1:30 PM	LUNCH				LUNCH			
1:30-2:00 PM	Tech Intro	Tech - Hands On Training-Tech Trainers	Tech - Hands On Training	Free Day	Tech - Hands On Training	Tech - Hands On Training		

2:00-2:30 PM							Handover Ceremon y to School	
2:30-3:00 PM	Solar Cook Kit Intro							
3:00-3:30 PM								
3:30-4:00 PM	Mini Break				Mini Break			
4:00-4:30 PM	Build Solar Cookers	Tech - Hands On Training	Tech - Hands On Training		Tech - Hands On Training	Tech - Hands On Training	Handover Ceremon y to School	
4:30-5:00 PM								
5:00-5:30 PM								
5:30-6:00 PM	Fellows/Teams Daily Evaluations				Fellows /Teams Daily Evaluations		Way Forward	
6:00-6:30 PM	Fellows Report Back w/GWWI				Fellows Report Back w/GWWI			
6:30-7:00 PM	FREE TIME							
7:00-8:00 PM	DINNER							
After dinner		Music/Dance	Video		Storytelling	Talent Show/Skits		

