

**Jorit Water Project
Ethiopia
Princeton University
Fatu S. Conteh, Sierra Leone, Princeton University
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The goal of our project was to install clean water systems in the village of Jorit, Ethiopia to satisfy basic water needs of this semi-desert village, and promote peace by mitigating the conflicts that water scarcity has in destroying family and community life. Our plan was to rebuild an unused and inefficient spring, and construct a new hand-dug well in the village; in the end, local needs and circumstances caused a change in our plan, so we built three wells and expect to have the last two finished by the end of September.

One of the lasting lessons we learnt with this project was the challenges involved with executing (what we thought were) well-laid out plans. As Leonardo Dicaprio said in the movie, *Blood Diamond, T.I.A.*, this is Africa, where projects usually do not go as planned. A series of unfortunate events forced us to change our initial plans. Fortunately, we opted for what we believe to be an equally good plan.

First, Hassen's backpack (containing his laptop, camera, and passports) was stolen from a hotel in Addis Abba, putting the entire plan one week behind. Hassen had to stay in Addis for a week to get a new passport and visas to the US and South Africa. Though initially apprehensive and unaccustomed to the country and the culture, Fatu went ahead without Hassen to Kemissie, Ethiopia (Hassen's hometown) to get started with Hassen's father, Mr. Yesuf, and his brother. Fatu summoned up her courage and boarded the bus on a seven hour ride up and through the beautiful mountains and highlands of Northeastern Ethiopia. By the time she arrived in Kemissie, her fellow passengers had stripped off her anxieties about language and cultural barriers with their attempts to get her to speak Amharic, and their friendly inquiring questions to her about herself, Princeton, and America. In general, cultural and language barriers were not significant difficulties for the success of the project owing to Hassen's presence after the first week.

On arrival in Kemissie, Fatu started work in earnest. She and Mr. Yesuf visited the Bureau of Water Management in Kemissie and the Water Resource Management in Oromia Zone, the zone to which Jorit belongs. Mr. Nur-Hussien, the officer in charge of the Water Resource Management, was thrilled by our project and informed Fatu (and Mr. Yesuf) that his office would pool resources and funds with our grant money to construct a machine-dug well so other villages could benefit from the project. His explanation of expanding the opportunity to other villages was very welcome. Given the dire lack of water in the zone, a hand-dug well, he said, would provide water, sufficient only for Jorit. It would be best, he pointed out, to dig one deep machine-dug well that would be a sustainable water source not just for Jorit but for all the nearby villages the zone. The thought of expanding the project to many more thousands through the cooperation was thrilling.

Of course, excited at the opportunity to expand the reach and benefits of our project, we (Fatu and Hassen) agreed to work with Bureau of Water Management and to wait for another week for the office to conduct a bid for contractors. Unfortunately, the promised one week bidding period turned into two weeks and after three weeks of bidding for contractors and countless meetings and anticlimaxes, the Bureau was unsuccessful in securing a reasonably-priced contract. The price that the contractors presented was so exorbitantly high that the Bureau was afraid of being accused of colluding with the contractors or being charged with corruption. Disappointed but not disheartened, we decided to move on with our initial plans. Armed with the combined Davis Peace Project and Princeton Environmental Institute (\$10,000) grants, we hired a local contractor with experience with the Bureau, to dig five hand-dug wells instead of the initial one well and the spring. Three wells were to be dug in Jorit, and two in the surrounding community. We abandoned the plan for spring development because our weeklong negotiation with the farmer who owns the land near the spring failed. One of the farmer's concerns was that the construction for the spring development would destroy his crops.

Two of the five wells were started by July 4, almost four weeks after our arrival. In fact, the diggers—which included most of the men in Jorit—struck water in one of the wells in the first week of digging. Unfortunately, the diggers had to abandon the second hole after digging several meters without finding water. The digging of the second well was moved to another site.

For the third well, the villagers suggested that they would clean out an existing open well that they had filled in with big stones years ago to prevent children from falling in, if we would renew the well and install a hand pump. This was a great idea for cost reasons as well, and we readily agreed. Cleaning of the well started soon after we left Ethiopia in mid-July.

When we set out for Ethiopia, we had not envisaged such difficulties. We are both seniors and had to return in mid-July to our individual senior thesis research, Hassen's in South Africa and Fatu back in Princeton. Due to the setbacks and time lost, we left the remaining work in the very capable hands of Mr. Yesuf who has been a tremendous resource for the project right from the beginning. We left a detailed plan for finishing the project and a structure to ensure the sustainably and proper use of the wells. The villagers agreed to choose five or so people from among them who will manage and oversee the wells, and, the local government agreed to provide maintenance for the wells when needed.

By August 26, 2009, three of the five wells had been completely finished with concrete rings and hand pumps. Digging the remaining two wells will start soon after rainy season. We expect these two wells to be completed by the end of September. Despite the change of plans brought on by on-the-ground circumstances, we believe will solve the problem of water scarcity in not only Jorit, but in the neighboring villages at least for the next five years.

Peace is the nonexistence of enmity, violence, and brutality, and the prevalence of love, justice, mutual respect and healthy interactions among people. The correlation between poverty and violence is self-evident. Building global peace requires alleviation of poverty in hamlets in poor countries, and in ghettos, in developed ones by empowering the poor to get rid of their suffering and shame, and the rich showing kindness and love toward others.

Needless to say, water scarcity is a global problem. Tackling this problem is the first step toward eradication of poverty and securing of world peace. Lack of water not only introduces conflicts in the home and community, it also undermines global prosperity and peace. We believe that our project puts our beneficiaries one step ahead in their struggle to fight poverty and brings about peace at a local level. Our project contributes to peace within the family by improving the lifestyle of women and children who are traditionally assigned the duty of fetching water. With water now available nearby, these vulnerable groups can easily carry out their duty and will no longer face punishment and violence for failing to do their duty. They also may use their new found time to pursue other productive activities. In addition, our project also reduces the scramble for water and the conflicts that arise due to water shortage among communities, and promotes peaceful sharing of this resource for household uses and watering of cattle.

Fatu Conteh's personal comments: Over the course of this entire project, I have come to understand the burden water scarcity puts on communities, families, and, sadly, women and young girls. Water scarcity is a gender problem in Ethiopia and Africa in general. This was confirmed by the group of women and girls I found gathered around the well, with no men or boys in sight. My stay in Kemissie made it possible for me to appreciate the clean water that I usually take for granted back in the U.S. Most of all, I developed a deep respect for women and girls in developing countries. I saw how these women work from 'sun up to sun down' with scarce or unreliable resources to prepare meals for their families.

Hassen Yesuf's personal comments: As an Ethiopian, absolute poverty and water scarcity in areas like Jorit were not foreign to me; however, this project has made me realize that I can play, with little cost, an indispensable role as a catalyst for change by facilitating global effort to eradicate poverty. Projects like ours have huge impacts in lives and well-being of the people that they benefit. It can be achieved at very reasonable cost. Finally, this project has taught me that helping people in developing countries needs, not only a good heart but also patience to overcome mitigating forces and the bureaucracy of bad governance. It also helped me see better, how I interact and work together with my family, friends and community.



These three adorable kids we met in one of our visits to Jorit posed for us in the middle of the small open market.



A girl from Jorit carrying water home from a distant well. She seems a bit puzzled by our arrival in her village.



Fatu (Princeton sweatshirt) and Hassen (dark glass) met with some of the villagers to discuss their water problems and how to sustainably manage the new wells.