



## Providing Safe Water and Sanitation to Families in Ethiopia

### Report for March 2011 – February 2012

- Grant Amount: US\$50,000
- Grant Focus: Tigray, Ethiopia

### Impacts of Support by the Voss Foundation at a Glance:

- One hundred percent of the targeted 5,695 beneficiaries now have access to clean water;
- Constructed four hand dug wells, nine shallow borehole wells, and four spring catchment systems;
- Mobilized community members – who will benefit from the respective well sites – to contribute materials and labor for the construction of the water and sanitation facilities, and safeguard the water points.

Presented to  
**The Voss Foundation**

Prepared by



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## Background

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### **Context:**

Water.org began its activities in Ethiopia in 2004. Since then, it has worked successfully with local communities, reaching more than 100,000 people with improved water, sanitation, and hygiene (WASH) efforts. Nearly 70 percent of residents in this area lack access to an adequate and reliable clean water supply, and a majority of households do not have access to hygienic sanitation facilities.

Women and children walk up to six hours to find water sources – most of which are contaminated. In Ethiopia, more than 250,000 children die each year from water- and sanitation-related diseases. More than 90 percent of the population practices open defecation, due primarily to the lack of proper and available toilets. As a result, diarrhea-related diseases such as dysentery, intestinal parasites, and typhoid – caused in part by inadequate water and sanitation coverage – are among the major causes of infant and child mortality. As part of the program with the Voss Foundation, the Water.org team leveraged its expertise and community-based approach to address the long-term water and sanitation needs of 5,600 local residents, half of which are women.

### **Program description:**

Water.org's approach entails identifying, evaluating, and certifying high-performing local WASH non-governmental organizations (NGOs) that have long-term relationships with the communities and local government agencies, and an in-depth understanding of local cultural dynamics. The Water.org team works closely with these partners, and integrates training components in its programs to ensure communities are engaged in and have the capacity to build and maintain cost-effective and sustainable water and sanitation infrastructure over time. Developing a partnership with local organizations, such as the Relief and Education Society of Tigray (REST) in rural Tigray, has helped Water.org to accurately identify Ethiopia's lack of resources and amenities, and implement successful programs in response.

Expanding on the success of its previous three-year integrated WASH program in Tigray, Water.org worked directly with REST on this program to construct additional wells and spring catchment systems. Program targets and activities included:

- Performing hydro-geographical studies to determine the most beneficial technologies to use.
- Engaging communities in rebuilding key infrastructure and replicating successful household toilet models built with local materials.
- Forming water and sanitation committees (comprised of local community members) at each site.
- Training the water and sanitation committees to manage financial and operational maintenance of each water point.
- Integrating community hygiene education programs.

Water.org continues to work with local water and health government offices to encourage a low-cost toilet design that is easy to construct and maintain in rural areas.

**Table 1: Program Budget: Voss Foundation**

<b>Item</b>	<b>Description</b>	<b>Total Program Cost</b>	<b>Voss Foundation Funding</b>
Program Activities	Construction of water systems, community mobilization, training and hygiene education	US\$94,000	US\$37,500
Monitoring & Evaluation	Assessment of progress, quality of infrastructure, and level of community participation and ownership	US\$18,500	US\$7,500
Water.org Admin & Governance		US\$12,500	US\$5,000
<b>Total Expenses:</b>		<b>US\$125,000</b>	<b>US\$50,000</b>

## Final Progress Report

The Voss Foundation is a tremendous source of support to Water.org and its work in Ethiopia. Through its generous grant of US\$50,000, the Voss Foundation enabled Water.org to successfully advance its mission of providing safe water, improved sanitation, and hygiene education to communities in Ethiopia. As a result of this program, more than 5,600 people in Ethiopia now have ready access to safe water and the dignity of a sanitary toilet. The Voss Foundation’s support is directly responsible for serving 2,278 people, of which more than 1,300 are women and children.

### Program with REST

With its local partner (REST), Water.org implemented an integrated WASH program in three woredas, or districts, of the eastern zone of Tigray. More specifically, Water.org and REST have:

1. Constructed four hand dug wells, nine shallow borehole wells, and four spring catchment systems. Communities contributed through the provision of labor, construction materials, well user fees, and management of the completed water points.
2. Established 17 water and sanitation committees, which serve as the primary managers of the community resource, and promote health and sanitation education.
3. Trained 170 model peer educators and 20 health extension workers in hygiene and sanitation education. The model peer educators were trained on how to construct an easily replicable, household-toilet model. They built 170 of these toilets, and taught an additional 510 households how to build this model. As a result, 220 pit latrines have been built by the households, and an additional 290 pit latrines are under construction.

Today, 100 percent of people in the targeted areas have clean water, thanks to the recently completed hand dug wells, shallow borehole wells, and spring catchment systems.

Community members are very happy because the new water sources are improving their livelihoods significantly. According to local households, construction of the water sites have enabled them to consume clean water, maintain personal hygiene, and send their children to school on time.

The following is additional detail on the program deliverables highlighted above:

**Hand dug Wells**

The four hand dug wells are providing improved, potable water for approximately 1,000 people. The construction process included excavating wells using hand tools, small generators, dewatering pumps, hammer drills, and explosives. The wells were dug to a diameter of 1.8 meters and lined mostly with stone masonry. Well technicians are based mostly in the field at well sites under construction. The Technical Implementing Teams worked closely with the local people's council, the water and sanitation (WATSAN) committee, and other villagers throughout the project period.



**Table 2: Hand dug wells constructed**

SN	Woreda	Tabia	Kushet	Site Name	Status
1	Gulomekeda	Sebeya	Adibetekristian	Mezegaguf	Completed
2	Gulomekeda	Sebeya	Ayere	Endabashman	Completed
3	Gulomekeda	Hagere-Selam	Tahtay-ruba	Ruba sewero	Completed
4	Gulomekeda	Hagere-Selam	Zala adi awlie	Kega	Completed



Previous water source



New water source

**Shallow borehole wells**

The nine shallow borehole wells were completed successfully and are serving the water needs of 3,730 people in the woredas projects. Borehole yields have been tested for accuracy using pump-

testing equipment and productive wells installed with hand operated VLOM (Village Level Operation and Maintenance) Afridev hand pumps, which can easily be serviced and maintained by the communities at the village level. The construction team consisted of experienced hydro geologists, technicians, field coordinators, drillers, drilling and pump installation technicians, plumbers, mechanics, and community participation promotion agents.

**Table 3: Shallow borehole wells constructed**

SN	Woreda	Tabia	Kushet	Site Name	Status
1	Ganta afeshum	Bahrisihita	Tsenkeket	Beatikerso	Completed
2	Ganta afeshum	Bahrisihita	Tsenkeket	Kalay menhaba	Completed
3	Ganta afeshum	Gahgot	Gahgot	Adigoro	Completed
4	Gulomekeda	Kileat	Laalay-kileat	Enkomenen	Completed
5	Gulomekeda	Maytsada	Mayweyni	Komalemlem	Completed
6	Gulomekeda	Adistefa	Ziban-hutsa	Ruba telam	Completed
7	KilteAwlaelo	Abrahaatsbeha	Mandae	Geneo	Completed
8	KilteAwlaelo	Genfel	Dengolo	Mayayni	Completed
9	KilteAwlaelo	Debretsiion	Abi-Adi	Mai-tseada	Completed

### Spring Catchment Systems

Approximately 965 people are benefitting from the completed spring catchment systems.

**Table 4: Spring catchment systems completed**

SN	Woreda	Tabia	Kushet	Site Name	Status
1	G/Afeshum	Golea genahti	Ziban Adi	Mai Kaebi	Completed
2	G/Afeshum	Sasun Betharyat	Bet Haweryat	Gunaguna	Completed
3	Gulomekeda	Hagere-Selam	Tahtay Ruba	Chegri ruba	Completed
4	Gulomekeda	Kokeb Tsibah	Mai Nigesti	Mai Werazut	Completed

### Establishment and training of WATSAN committee

At all of the new water sites (shallow boreholes wells, hand dug wells and spring development structures), a WATSAN Committee comprising of six members (three women and three men) has been established. These committees are responsible for managing and ensuring the sustainability of the structures. All committee members received two trainings: an on-site training and a comprehensive training. The former was conducted for one day on simple maintenance and dismantling of hand pumps while the project was progressing. The latter was conducted after all the water schemes were completed. The overall comprehensive training was conducted at their respective wereda's capitals (Adigrat, Wukro and Fatsi) for five consecutive days. Contents of the training included:

- Hand pump maintenance
- Hygiene and sanitation
- Recording of the beneficiaries list
- Determination of tariff based on the economic condition of the village
- Setting up by-laws
- Recording financial flow

- Planning for weekly or monthly meeting
- The benefit of opening a bank account
- How to take turns in managing the water schemes and others

The training's purpose is to empower the WATSAN committee to practice good management on their respective water sites and enable the water schemes to function long-term for targeted communities. Overall, the ratio of women to men on the committees is 50:50, which speaks to the key role played by women in water and sanitation.

### **Health, Education, and Training**

To improve environmental hygiene and sanitation of communities near the water points at the project sites, intensive training was provided to Health and Sanitation model households selected by the community with the potential to influence their neighbors and share their skill and know-how to the rest of the community members. During the project period, a total of 170 community model peer educators living in the developed water schemes were given a consecutive, five-day training on Sustainable Ecological Sanitation.

The contents of the training included:

- Basic facts of hygiene and environmental sanitation,
- Waterborne diseases and their prevention,
- How to use safe water supply and how to manage it,
- Basic facts of prevention of communicable diseases including waterborne, maternal and child health care and integrating HIV/AIDS and gender mainstreaming,
- Relationships between good hygiene practice and leading healthy life,
- Assessing situations in their respective areas in terms of hygiene and environmental sanitation,
- Health risks in over-crowded houses, poor hygiene and sanitation barriers,
- Technical skills on construction of latrine, refuse pit, compost pit and their importance and proper utilization,
- Construction of shelves, stoves, and chicken houses with local materials, and
- How to document and report on progress.

Moreover, based on the prevailing ten top diseases of each woreda, additional training topics were included. All 170 of the trained community peer educators recently completed the construction of pit latrines. Of the influential households, 220 pit latrines have been constructed and 290 pit latrines are under construction. In addition to this, all model households have successfully completed the digging of a refuse pit, a disposal site, a composting pit, a liquid waste disposal pit, and construction of locally made shelves, stoves and chicken houses.

## **Story from the field**

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Until recently, the 350 individuals living in Mezegaguf village suffered from a lack of access to clean water. Community members drank unsafe water from the river and stagnant water sources. One of these sources was a remote water stream full of worms and leeches. Before drinking it, they used their clothing as a filter to separate the worms from the water. While they tried to

remove the visible worms, it was still contaminated with pathogens. The new well, made possible with the financial support of donors like the Voss Foundation, completely changed their condition.

Community members are happy having clean water, free from waterborne diseases, nearby their homes. According to Akberet Naizgi, a 23-year-old beneficiary, “Before the new well, my child repeatedly suffered from diarrhea. Sometimes I observed small worms in his feces. To examine the case, I took him to the health center for a medical checkup, but I was not able to identify the cause. I thought it might be waterborne diseases. Everyone could observe small organisms in the water we drank. It is not difficult to understand the quality of the water in the river. You only have to glance at the color of it, it is green. It is full of algae like most stagnant water.”



Akberet collecting water from the river



Well under construction

For Akberet and the other community members of Mezegaguf, these issues are now a thing of the past because the hand dug well has been installed and is pumping safe water. Today, Akberet and other women in Mezegaguf walk only 10 minutes round-trip, and there is no line for water. After the new well was installed, Akberet said, “My family, and the whole community, now has protected water. We are free from contaminated water sources. In regard to water quantity, everyone has an ample supply to match their desired usage.”

Immediately after the well construction was complete, the community formed a six-member water committee (comprised of three women and three men). They regularly monitor the well and the community’s sanitation and hygiene status. According to water committee members, each family contributed 10 birr to open an account through a local microfinance institution. Each household decided to pay two birr per month, one for the guard and the other for maintenance of the well. According to the community’s rules and regulations, the well opens two times a day: 5 a.m. to 7 a.m. in the morning and 1 p.m. to 4 p.m. in the afternoon.

In summary, due to the support of donors like the Voss Foundation, the community now enjoys an ample supply of safe water, right in their community.



Akberet collecting clean water



Akberet at home

## Conclusion

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Water.org would like to convey its deepest gratitude for the resources and support that the Voss Foundation brought to this program, resulting in 2,278 rural Ethiopians empowered with access to safe water and improved sanitation. The Voss Foundation can learn more about its impact in Ethiopia by visiting the Foundation's personalized website (<http://water.org/reports/voss-foundation/> password: voss), which contains videos, photos, and stories from the field.

The Water.org team looks forward to continuing its work with the Voss Foundation, and remains available for any questions the Foundation may have on its activities in Ethiopia.

## Contact

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