in the midst of water

WATER, SANITATION AND HYGIENE IN ETHIOPIA

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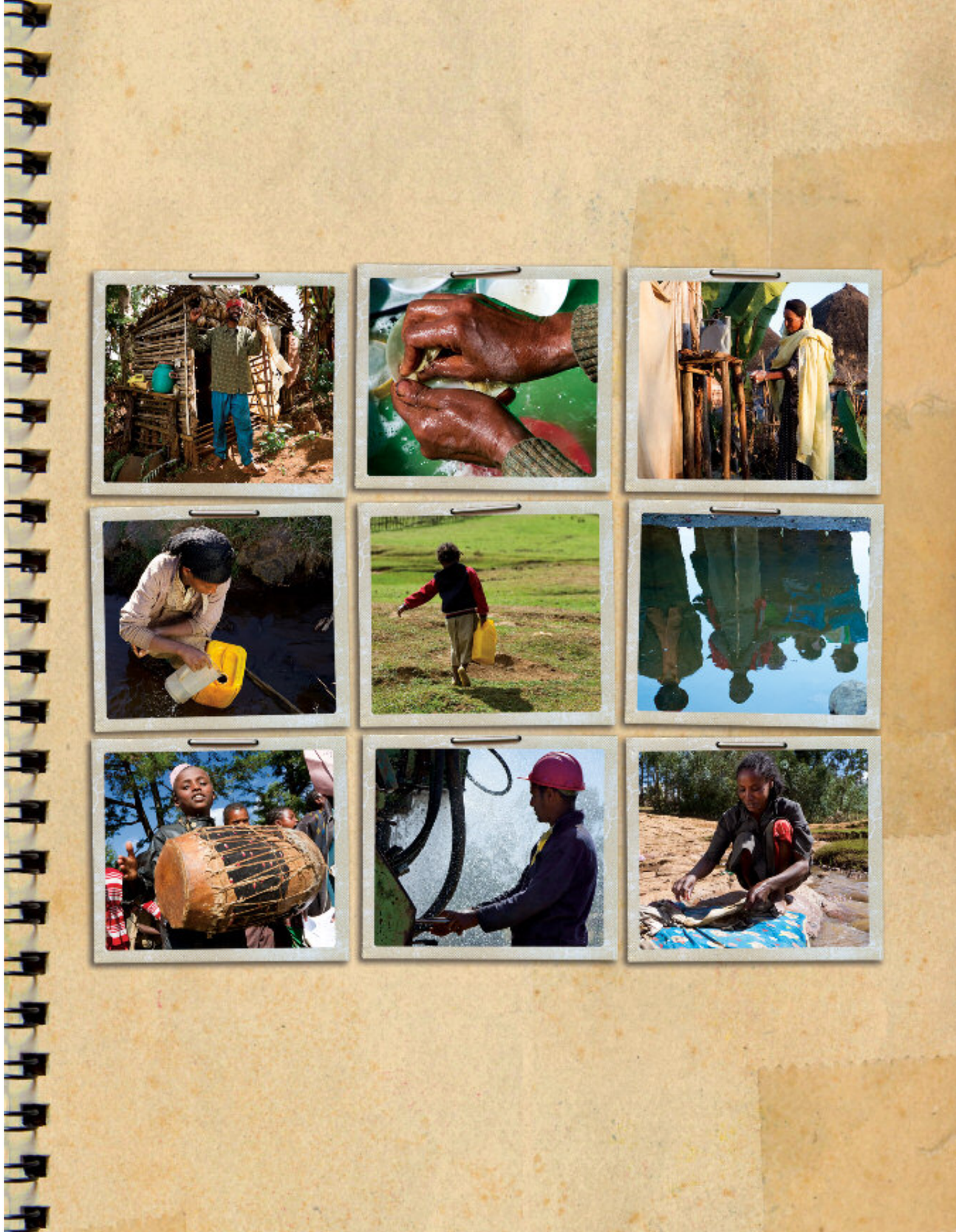
World Vision

some facts

Worldwide, 780 million people do not have access to an improved water source. > Eight out of ten of these people live in rural areas. > An estimated 2.5 billion people—half of the developing world—lack access to adequate sanitation. > The regions with the lowest coverage of improved sanitation are sub-Saharan Africa, Southern Asia and Eastern Asia. > Worldwide, millions of people are infected with water and/or sanitation and hygiene-related diseases that cause malnutrition, skin infections, organ damage and/or diarrhea. > Unsafe water and inadequate sanitation and hygiene are linked to 88 percent of diarrhea cases worldwide and result in 1.5 million deaths each year. > An estimated 700,000 children under the age of five die from diarrhea each year, mostly in developing countries. > Clean water reduces diarrheal deaths by as much as 24 percent; improved sanitation reduces diarrheal deaths by 33 percent; and good hygiene reduces diarrheal deaths by as much as 43 percent. > Ethiopia is Africa's second most populous nation and has one of Africa's largest rural populations: 80 percent of the country's 85 million people live in rural areas. > Ethiopia has one of the lowest rates of coverage for improved water and sanitation in the world: just over 54 percent of households have access to an improved source of drinking water, with a higher proportion among urban households (75 percent) than among rural households (49 percent); and 57 percent lack access to an improved sanitation facility. > Open defecation is the norm for 46 percent of Ethiopia's population. > Between 2012 and 2015 World Vision's Ethiopia WASH Program will help an estimated 800,000 people gain access to much needed safe water, improved sanitation facilities and hygiene education.

Sources: Centers for Disease Control and Prevention; Ethiopia Demographic and Health Survey 2011; UNICEF 2012 Progress Report: Rapid progress in child survival; UNICEF's State of the World's Children, 2009 and 2012; World Vision.



For I will pour water on the thirsty land, and streams on the dry ground ... (Isaiah 44:3)

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It is foolish to remain thirsty when in the midst of water. —Ethiopian proverb

Ethiopia has one of the lowest rates of coverage for improved water and sanitation in the world: nearly 39 million Ethiopians—most of them in rural areas—do not have access to safe water and nearly 48 million lack access to basic sanitation. Many millions more have a poor understanding of the importance of good hygiene. So intertwined are the issues of water, sanitation, and hygiene that they have been combined into one sector known as "WASH."

WASH-related issues have contributed significantly to the high rates of disease, diminished opportunities and grinding poverty that have been a drag on Ethiopia's development for decades.

But things are changing fast. Fueled by the ambitious Growth and Transformation Plan (2010-15)—the Government of Ethiopia's all encompassing vision of an Ethiopia that rises to join the ranks of the world's middle-income countries over the next 15-20 years—and a commitment to achieve the Millennium Development Goals, the Government of Ethiopia has made remarkable progress in expanding access to water and sanitation facilities and hygiene initiatives in recent years. It looks to 2015 as the year it will provide 98.5% of its people with access to safe drinking water and 100% with access to basic sanitation.

But as committed as the government is, it does not have the investment resources or the technical capacity to undertake this revolution alone.

World Vision Ethiopia is helping to fill the gap. As a world leader in WASH World Vision is supporting the government in expanding access to water and sanitation facilities and modifying hygiene habits. It does this by focusing its work where it is most needed: on vulnerable women and children in under-served rural areas.

Today, far from standing in the midst of water lamenting its thirst, Ethiopia has awakened to the wealth of assets at its disposal—chief among them its people.

Those you meet on the following pages are just a few of the more than 800,000 people World Vision and its partners will have reached with WASH interventions between 2012 and 2015.

World Vision works with children, families and communities in Ethiopia to help them identify and overcome the obstacles that prevent them from living life in all its fullness.

The World Vision guide to WASH in Ethiopia
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WASH and the MDGs

The Millennium Development Goals (MDGs) are international targets aimed at reducing world poverty by half by 2015. Expanding Ethiopia's access to safe water and sanitation and improving hygiene practices (WASH) is fundamental to Ethiopia achieving virtually all of the MDGs.

- **MDG 7: Ensuring environmental sustainability**—Specifically calls for halving the number of people without sustainable access to safe drinking water and basic sanitation by 2015.
- **MDG 1: Eradicating extreme hunger and poverty**—Farmers and wage earners suffering from WASH-related diseases may be unable to work; the repeated cost of medicines to treat these diseases pushes already poor families further into poverty.
- **MDG 2: Achieving universal primary education**—WASH interventions impact girls' education in particular: where water sources are far away, girls may not attend school because they are required to fetch water. Those who do go to school are at a greater risk of dropping out, escecially during adolescence, if their schools lack private and hygienic sanitation facilities.
- **MDG 3: Promoting gender equality**—It is women and older girls who bear the burden of fetching water from far away and looking after children sickened by WASH-related diseases.
- **MDG 4: Reducing child mortality**—Combining WASH interventions can reduce the number of preventable child deaths by up to 57 percent (World Health Organization).
- **MDG 5: Improving maternal health**—Access to sufficient clean water means women can give birth in more hygienic conditions.

This is our only water source. People use it for bathing, washing their clothes, watering their animals and for drinking. Twice a day every day I walk an hour each way to fetch this water for my family. It leaves me exhausted—and afraid. All of us get sick a lot. When we go to the health center they tell us what we already know: it is coming from the water. We spend a lot of money on medicine to get well, and then we have to drink this water and we get sick all over again. Every day I wonder: who will relieve me of the burden of this river?

—Shayitu Dabata

water

Lack of access to a safe and adequate supply of water has a colossal influence on every aspect of life. Unsafe water is not just dirty, it's deadly. Every year millions of people worldwide die from diarrheal diseases like cholera and tens of millions of others suffer a host of water-related ailments from malnutrition to liver damage to blindness—many of which are easily preventable.

Communities that are water-poor are generally economically poor as well: families are forced to spend their resources on frequent and high medical costs; sick children miss school; economic opportunities are lost due to illness; and productive time is compromised by the need to travel long distances to collect water. Because availability is limited to what can be carried, little is spared for proper hygiene—further adding to the already high burden of disease.

World Vision is working to improve living standards in Ethiopia by expanding access to reliable sources of potable water close to home. Working closely with the government and local communities, the organization is drilling deep and shallow borehole wells, refurbishing broken water systems, capping natural springs, constructing hand-dug wells and introducing new cost-effective technologies that bring water to remote rural areas. By involving beneficiary communities from the start and training them to manage, operate, protect, repair and maintain these systems, the sustainability of these valuable assets is assured.

Water shoots out of a newly drilled borehole. Ethiopia has 122 billion cubic meters of surface water potential and an estimated 40 billion cubic meters of ground water reserve. It is an immense potential; but untapped. World Vision is helping to expand Ethiopia's limited use of this vast resource by working with the government and communities to construct water systems that take into account the needs of both people and the environment.

changing lives with clean water

Before World Vision dug this well we were collecting water from the river. Our cattle also used that river. It seemed we were always getting sick—and some children in the community died. When someone got sick we would have to take them to the health centre, which is a two hour walk from here. Because it is so far away we often had to spend the night there. And, of course, we also had to pay for medicines. In a month any of us might get sick two or even three times, and sometimes it would last as long as a week. With so much time spent being sick or taking care of those who were, we were often not able to get our work done.

Since World Vision drilled this shallow borehole we have been collecting our water here. The water is pure and safe. World Vision taught us to keep it that way by collecting, transporting, storing and serving it in a hygienic manner.

Now we don't get sick. And because we are healthy, we work and we are productive; we grow our crops and we harvest them on time. And instead of spending our money at the health centre, we use what we earn to buy the things we need: clothes, soap and healthy food. Or we put it in the bank. Over the last year we saved enough to buy a second cow—an 'American' (Holstein-Friesian)—that cost 12,000 Birr (US $667). It gives more milk than our other cow, so now we have more milk for the children to drink and also plenty left over to sell.

—Kebebush Genale

(Left) Kebebush Genale helps her daughter Atsedu, 2, collect water in her own water bottle at their community's shallow well. Drilled by World Vision in 2011, the well provides access to clean water that is saving the lives of children and improving the quality of life and livelihoods for their families.

(Above) It's not only the cleanliness of the water at the source that is critical to good health. World Vision teaches mothers methods for handling water safely at every step in the chain: during collection, transport, storage and use.

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universal access to safe water

As an integral part of the Government's all-encompassing Growth and Transformation Plan, the Government of Ethiopia's Universal Access Plan for Water, Sanitation and Hygiene commits to providing 98.5 percent of Ethiopian citizens with access to safe water by 2015—a goal that is far more ambitious than Ethiopia's Millennium Development Goal target of 63 percent. Recognizing that water use and availability differs between rural and urban communities, the plan uses two sets of criteria for 'universal access'. **Rural areas:** the community has access to safe, clean water no more than 1.5 km from home and at least 15 liters per person per day. **Urban areas:** the community has access to safe, clean water no more than .5 km from home and at least 20 liters per person per day.

All World Vision Ethiopia programs, including WASH, are implemented in close collaboration with the government of Ethiopia. It is a partnership that is essential to every phase of every project, from assessment and design through implementation, monitoring and evaluation. All of World Vision's project targets are set in consultation with the sector offices of the government so that they contribute directly to achieving the overarching goals of both the Growth and Transformation Plan and the Universal Access Plan for Water Sanitation and Hygiene.

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water and gender

In Ethiopia women and girls are responsible for collecting water. In rural areas where water infrastructure is poor or non-existent, they spend large amounts of time (often several hours a day) and energy collecting and hauling water. The heavy jerrycans (typically weighing 15-20 kg) carried long distances can result in exhaustion and also injury. But as heavy as their jerrycans are, the burdens of traveling long distances for water may be felt most keenly in other areas, including: exposure to sexual harrasment or rape; little time to do other household work; insufficient water to maintain adequate standards of health and hygiene (where the source is more than two km from the home, per capita consumption may be as low as three to four liters per day); and girls who are late to school or pulled out of school because they are needed to fetch water.

The Government of Ethiopia and World Vision recognize that developing reliable water sources close to home will significantly improve the entire population's overall health, socio-economic condition and quality of life. It will also have particular benefits for women and girls. Accordingly, women's participation is essential in all activities and bodies—including WASH committees (see page 19)—that work to ensure the sustainability of water systems.

Merawi Ayalew, chief driller for the World Vision contractor that is developing the Dae Wandimtu deep borehole in Wonchi woreda (district) flushes the borehole after drilling it to the required depth.

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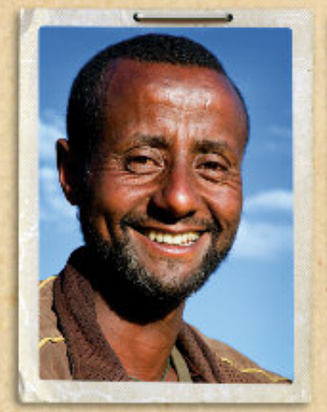
improved water source

An improved drinking water source is one that, by nature of its construction or through active intervention, is likely to be protected from outside contamination, especially with fecal matter. In rural Ethiopia this typically includes water piped into yards or plots, public taps, boreholes, protected dug wells and protected springs. Since October 2006 World Vision Ethiopia has drilled 49 deep boreholes (over 100 meters in depth) and laid their associated distribution lines; drilled 146 shallow boreholes (to 100 meters or less) and fitted them with hand pumps; and drilled 58 hand dug wells, also fitted with hand pumps. In addition they have capped 56 springs and fitted them with on-site public taps; capped 26 springs with gravity distribution systems and public taps; and supported the manual drilling of 56 shallow boreholes fitted with hand pumps. Other water facilities constructed include 160 km of distribution line, 35 reservoirs and 246 taps (attached to the deep boreholes and springs with gravity distribution systems). These systems have served to bring potable water within 30 minutes of home for many beneficiaries, and have increased average rural household consumption by an estimated 70 percent so that many more people now meet the minimum consumptive target of 15 liters per person per day. These and other World Vision implemented water systems that are currently in the planning stages or under construction will provide more than one million people in over 20,000 communities with access to safe, clean water by 2015.

Legessa Dakura
Chairman

Engeda Bizuneh
Secretary

Etalemaw Tafessa
Treasurer



Asfaw Getachew
pump supervisor

Mesash Abebe
Member

Negash Getachew
Member

handing it over

However beneficial a particular water project is for a community, it is only truly useful if its impact is long lasting and sustainable. For this reason, the foundation for the sustainability of all of World Vision's water systems is laid within the community from the very beginning.

At the outset of any World Vision water supply project all members of the community—men, women, children, the elderly and the disabled—will be involved in the design of the system. They will also be involved in the selection of a group of trusted fellow community members who will be trained to take responsibility, not only for helping to oversee the construction of the system, but also for managing and maintaining it into the future. These seven people—two to three of whom must be women—are known collectively as a WASH committee.

Members of the WASH committee that look after Chalbessa Shallow Well in Hulla woreda[1] work on behalf of more than 30 rural households that rely on them to keep this valuable resource in good working order.

"Previously there was not enough water here year round," says Etalemaw Tafessa, WASH committee Treasurer. " In the dry season women and girls had to walk farther and farther to find water—which was often stagnant and polluted—because the springs would all dry up. There were many evenings when it was dark and we were still not home. Our families would get worried and come looking for us."

Since the well was drilled in 2011 things have changed. "Today the maximum time any of us ever has to walk to get safe, clean water is just 30 minutes," says Etalemaw. "This has changed our lives. Now women can easily fetch water, do their household work, go to the market and still have some time to visit with friends."

WASH committees' responsibilities are substantial but not excessive. "One of us is always there during water collection times to protect the water system from breakage and to monitor water use," says Etalemaw. The group also meets once a month to discuss any problems they encounter and to review the collection schedule and user fees. "Right now the fee is just 2 Birr (US $.12) per household per month," says Etalemaw. "The money goes into a bank account. Then if any part of the well breaks, we can have it repaired." Further responsibilities include meeting with stakeholders and local government officials that backstop the system, training households in water source conservation and mobilizing them to take any other action needed to protect the source.

Etalemaw and the others are glad to be of service to their community—and the community is grateful for all they do. "Wherever we go people praise us," says Etalemaw. "They say, 'because you are involved all of us will continue to have safe, clean water.'"

(Left) Six of the members of Chalbessa Shallow Well's WASH committee.

[1] A woreda is an administrative district.

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supporting community management of water systems

As part of ensuring universal access to safe, clean water, the Government of Ethiopia has committed to reducing the non-functionality of water systems by half—from 20% in 2010 to just 10% by 2015. To achieve this the government is turning to people in the communities that benefit from the systems, asking them to take the lead in ensuring they are sustainable.

At all World Vision developed systems, the organization establishes WASH committees and provides them with training in environmental hygiene and sanitation, construction oversight, source water protection and recharge, and WASH systems operations, maintenance and management. In addition, they provide them with training in financial management and accounting and assist each WASH committee in opening a bank account in which to accumulate the monthly user fees against future repairs.

By 2015 World Vision will have established and trained 4,550 WASH committee members in 650 communities across Ethiopia, enabling them to better maintain the water systems so many depend upon.

0 km

The source

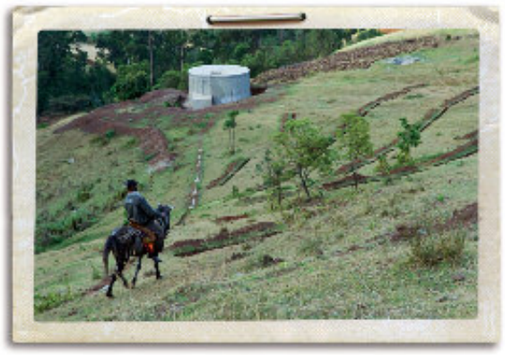
Not accessible to trucks, it was local community members mobilized by WASH committee members who carried the 30 cubic meters of stone, 8 cubic meters of sand, 8 cubic meters of gravel and 14,000 kg of cement required for the capping almost 2 km to the source of the spring.

When it was first capped by the government in 2001, the Yekashe spring water supply system was designed to serve 10,000 people in 40 communities via a network of 22 water points. Ten years later, with over 16,000 regular users and no regular maintenance, the system had fallen into disrepair. The cap at the source was broken, the pipelines leaked and all but a handful of water points were not working, leaving most of those communities once again without access to safe water.

In 2011, at the request of local communities and the government, World Vision embarked on a three-year project to renew and expand the Yekashe system. By the time it is completed in 2014 this large scale gravity-driven water supply project—one of five such projects the organization is currently developing in Ethiopia—will provide safe water to an estimated 25,000 people in 50 communities via a network of 43 new and rehabilitated water points connected by 37 km of newly laid pipeline.

Wherever possible, additional features take into account communities' other water needs, including cement basins for doing laundry, troughs for watering animals, and water for small scale agricultural use.

Following the system as it expands outward from the source, there are many people who are already benefitting from the ongoing development and expansion of this important water system, and others who are still waiting for a taste of the changes access to abundant, clean water will bring to their communities.

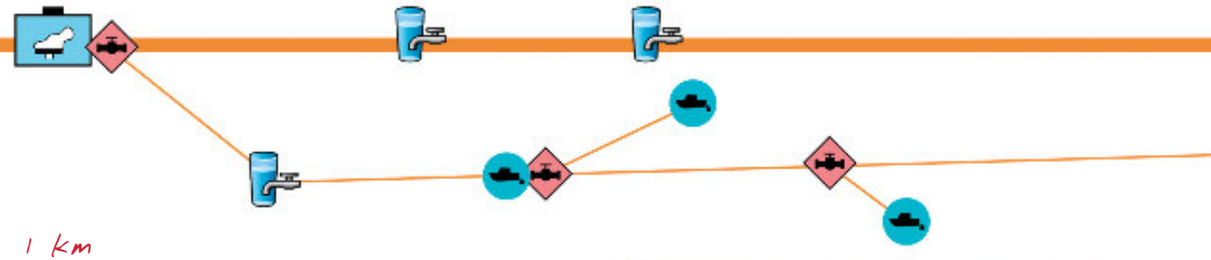


.5 km

The reservoir

With one new 200 cubic meter reservoir and three existing reservoirs (50 cubic meters each) the Yekashe system can ensure an adequate quantity of water is available to meet users' demand. The reservoirs are also key points for applying water quality treatment if it is necessary.

Above the reservoir the community has planted trees and dug infiltration ditches to ensure the sustainability and the quality of the water source.



1 km

A rehabilitated water point

Twelve-year-old Senaiyt Shibru fetches water for her family before and after school. Today, because the water point near her home has been rehabilitated, this job takes only ten minutes. "Previously, when this water point was broken, I had to go to the river to collect water. I would spend almost an hour and a half every day making two trips to the river and back—and that water was making all of us sick. I am so grateful to World Vision for fixing our water point."

2 km

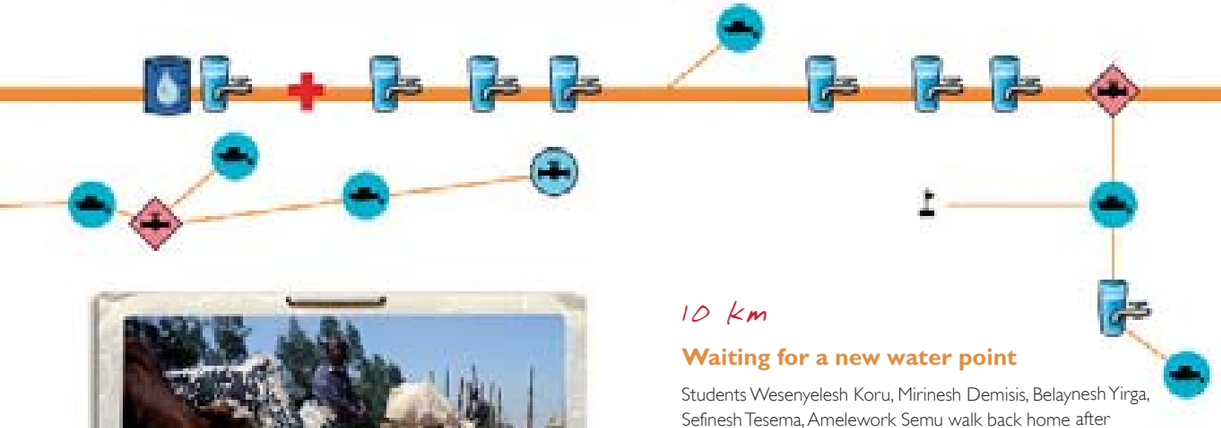
A new water point with washing basin

Maerege Mesfin and her daughter Shegu wash their family's clothes twice a week. Previously they would carry them to the Yekashe river which is 45 minutes from their home. "Because the cattle also use the river we could never get our clothes really clean," says Maerege. Their new water point is just five minutes from home and provides them with access to clean water and a washing basin in which to wash their clothes. Doing the family's laundry is not only faster and easier, it allows them to get their clothes really clean, putting an end to dirty stains and itchy, infected skin.

4 km

A new water point at the health post

"Our new water point at the health post will be working in just a few days," says Health Extension Worker Ababa Kebede. "Until then we have to continue using water from the river for everything we do, from cleaning the medical instruments to delivering babies. Obviously, this is far from ideal. We waste one hour every day fetching water—time that we could use to see patients and do home visits—and that water is contaminated. Thank God in just a few days our problems will be solved."



3 km

A new water point and a trough

With a new cattle trough just 20 minutes from home, Hilku Girma no longer has to take his cattle to the river twice a day, a chore which used to take him one and a half hours round trip. Hilku is grateful for more than just the savings in time: "When my animals used to drink from the river leeches would get in to their throats and suck their blood," he explains. "That made them not eat very well. Now, because they are drinking clean water, they're healthy and I am happy."

10 km

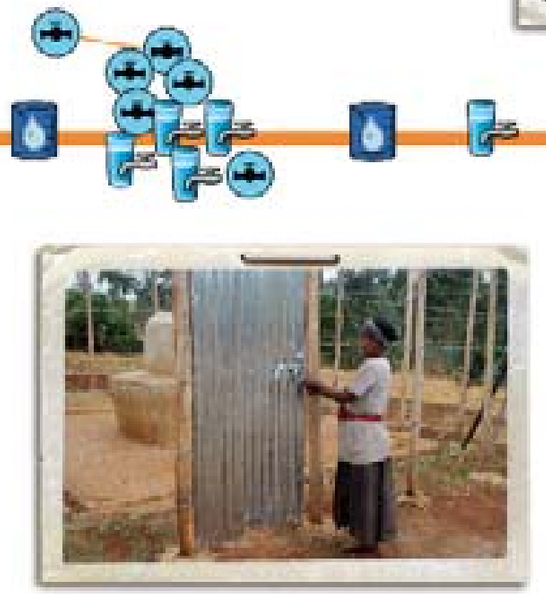
Waiting for a new water point

Students Wesenyelesh Koru, Mirinesh Demisis, Belaynesh Yirga, Sefinesh Tesema, Amelework Semu walk back home after collecting water from the river. Most days they walk the 2 km to the river together. Not only does this make the task less boring, there is also safety in numbers. Girls out collecting water on their own so far from home may be subject to sexual harassment. They are looking forward to the new water point World Vision will construct in their village later this year. "When we only have to spend minutes fetching water instead of hours our lives are really going to change," says Wesenyelesh.

11 km

Looking forward to a water point

Twice a day—before school and again after classes finish—grade 12 student Belaynesh Asema, 17, walks 2 km each way to fetch water from the river for her family. Sometimes this makes her late to school and it always impacts the time she has to do her homework. In a few months all of this will change when a new water point is constructed in her community. "My grades haven't been so good thanks to this tiresome chore," she says. "Soon, that will all be history."



16 km

A new water point

After the time for water collection has passed, WASH committee member Kibinesh Menjiye checks the taps to make sure the system is in good working order and locks the gate before she leaves for the day. This new water point is important to her and to her family and community. "We are so happy to have this water point," she says. "Before this was constructed we were wasting two hours a day walking to the river and back for water that made us sick. Now it takes just 15 minutes and this water is safe and clean. Because it is so near we can easily bring home enough to meet all of our needs."

18 km

Laying more pipeline

World Vision contractors continue working to replace the narrow pipes that fed the old Yekashe system, which had resulted in problems with restricted flow and leakage. They are also digging new trenches and laying new pipeline to extend the system's reach still farther. Once it is complete, World Vision estimates that the system will not need to be rehabilitated again for at least another 15 years.

Main reservoir | Supplementary reservoir | Existing water point | New water point | Future water point

protecting the source

Metiku Tagele (left) and Bekele Tarekegn plant bamboo shoots above the Hulutitcha spring, which was capped by World Vision in 2012. Members of the spring's WASH committee work with World Vision, government officials and the community to ensure the system's sustainability. In the case of the Hulutitcha spring, this included fencing the spring to protect it from animals and having community members plant more bamboo above the source. Bamboo forests perform important ecological services; by rebuilding the soil and reducing surface runoff they give water more time to infiltrate the soil, thereby recharging the groundwater. They also improve rural economies: "Bamboo grows fast, requires few inputs and is really strong," says community member Timoteos Heyo. "People here use it to make furniture and to construct their houses; it also fetches a good price at the market."

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integrated water resource management

Integrated Water Resources Management (IWRM) is a participatory planning and implementation tool for managing and developing water resources in a way that balances social and economic needs, and ensures the protection of ecosystems for future generations.

Before starting any water project World Vision conducts extensive feasibility studies to determine the demand and the amount of water needed to ensure balanced water use. The organization also undertakes source water protection work at areas where they do spring capping. This serves not only to protect the water source from hazards, but also to increase ground water recharge and hence increase the yield.

World Vision encourages the implementation of the government's afforestation and soil and water conservation programs in WASH project areas to ensure the well being of not only the water resources but also the larger ecosystem. By 2015 the organization will have completed source water protection and recharge projects (including terracing the catchment, planting and protecting trees and fencing) at over 20 springs and wells.

water is life

I AM A FARMER. My father was also a farmer. He had one hectare of land and when he died it was split between my brother and I, so I have just half a hectare—and eleven children. At that time (no water) it was impossible to support my family on such a small piece of land, so I left my family here and went to Addis Ababa in search of work.

Life in the city was difficult. I worked for many years as a street hawker, selling sweaters and eyeglasses. I didn't earn a lot, but (without water) it was more than I could make working my land.

When my two oldest children had completed grade 10, I decided to return home to work our land and have them replace me working in Addis. There was one big problem—the same problem that had driven me to Addis years before: we had no water. The nearest source was a river that was 30 minutes away.

I had some jerrycans, but no donkey. So I carried them back and forth to the river, making eight to ten trips a day every day with one 20 liter jerrycan after another. But with just 200 liters of water a day I could successfully cultivate just half of my land.

At that time we ate most of the carrots, cabbage and beets I grew, and sold what little was left over. We only managed because my children in Addis sent us money and I started a small fattening business—buying a couple of young sheep and goats, fattening them for a few months and then selling them on at a profit—with microcredit from World Vision.

Seven or eight years ago things took a turn for the better when World Vision capped a nearby spring and constructed a water point just seven or eight minutes from my house. I could easily make 20 trips a day to the water point. And because I had more water and more time I could grow—and sell—more crops.

During the construction of that water system I had asked the water authorities to leave an access point for me so I could hook up a line in the future. Two years ago my neighbors and I finally purchased 150 meters of pipe and the authorities installed it. Now all of us have a stand pipe in our yard.

This has changed everything. Now I can cultivate all of my land and I can grow more. With what I earn from selling the crops and from animal fattening, I no longer have to ask my grown children in Addis Ababa—or anyone else—for money. I have built a new house. I am putting money into the expansion of my land. Having more money means we can take better care of our six children who are still at home: we can buy them more clothes, feed them better food and keep them in school instead of sending them off to search for work. Having access to water at home also means we practice better sanitation and that my wife and daughters no longer have the burden of fetching it for us.

It is true what they say: water is life.

—Weira Debane

(Top right) Now that he has his own standpipe Weira cultivates his entire half hectare of land in cabbage, apples, coffee, carrots, beets and avocados.

(Bottom right) Weira, his wife Askalech and four of his eleven children sit in the living room of their new house. "We often sit like this," says Weira, "my wife doing handicrafts and my children studying. I don't do anything and I like it that way. I'm so busy all day, I really enjoy having this time to sit and relax."

Developing innovative, cost-effective solutions to the challenges of water delivery allows World Vision to provide more people with access to safe water, even in Ethiopia's most remote areas.

Two of the biggest obstacles to achieving universal access to safe water in Ethiopia are the high cost of drilling wells and the difficulty of accessing many remote rural communities.

World Vision is piloting a project—the second of its kind in Africa—that addresses these challenges while rapidly expanding access to safe water in line with the government's ambitious targets for 2015. Currently operating in just four of World Vision's Area Development Program (ADP) sites, the project provides teams of four to five local men and women with the training, skills and equipment to manually drill, maintain and repair shallow wells in and around their communities.

The benefits of this approach are significant:

Hand dug wells are inexpensive. At an average cost of 18,000 Birr (US $1000) per well—including the installation of the well head and the pump—hand dug wells cost less than a third of what it costs to drill a shallow well with an engine-driven rig. This allows World Vision to construct three times the number of wells, thereby providing three times the beneficiaries with access to a source of clean water close to home.

The technology is portable. Unlike engine driven rigs, the manual drilling equipment can be carried to remote locations by hand or using animal drawn carts.

It is effective. Eighty-five percent of the wells are successful (though the technology does have its limits: it cannot drill through hard rock formations).

Tsegaye Keye, Daniel Dasa, Mulugeta Mukako and Gemeda Ataro work together to drill a shallow well by hand. When it is finished the well will provide almost 500 people with as much as 50 liters per person per day of clean, safe water. By 2015 the four teams of artisans in the pilot project will have drilled 200 such wells in Ethiopia, providing potable water to more than 6,000 people in rural communities.

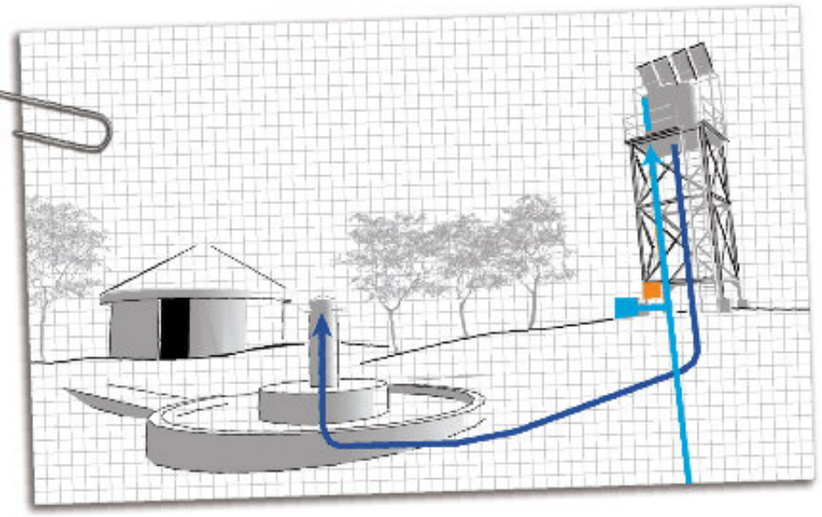
The hardware is simple and durable. The teams are also trained to construct the well head and install a simple manual pump. Provided by World Vision, these pumps are inexpensive, extremely durable, and easy to repair. Spare parts are locally available and the pump requires no welding (which is often not available in rural Ethiopia).

It is sustainable. A WASH committee (see page 19) for each hand dug well will ensure continued care and maintenance of the water point. But World Vision is also looking towards a future in which these trained 'artisans' can use this technology and their skills to create a sustainable business that benefits both the artisans and the communities in which they live.

Currently, the artisans are working as contractors for World Vision, which pays them for every well they drill. But in the future, World Vision plans to hand over the drilling equipment to each team so that they can work directly with the government, local communities, households and other implementing agents as independent contractors.

To this end, World Vision works with each team of artisans to develop a business plan and open a bank account. The organization also provides them with training in financial management so that when the time comes their enterprises will be economically viable.

The group in Hulla woreda—Tsegaye Keye, Daniel Dasa, Mulugeta Mukako and Gemeda Ataro—have been drilling shallow wells for the past year. All agree it's hard work—far harder than farming—but also more lucrative. "We are still farmers," says Daniel Dasa, "we've just added another skill." It is a skill that has brought them added financial security: over the past year each of the men has bought land and animals. As a result their income from farming has also increased. "This is good," he says. "We are improving our lives while improving the lives of people in our community. Everybody benefits."



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solar powered water pumps

Since most of rural Ethiopia has no access to electricity that could power mechanized pumps, water schemes typically rely on either hand pumps or diesel driven generators to extract groundwater. Both have their drawbacks.

Diesel generators are costly, difficult to maintain, and rely on fuel that is expensive, damaging to the environment and not always available. Hand pumps are not inexpensive, and like anything that is handled excessively, they are prone to breakage. Finding spare parts for both generators and hand pumps can be difficult in rural areas, particularly for imported hardware.

Because problems like these can quickly render a water scheme entirely useless, World Vision has begun piloting a low maintenance, cost effective alternative energy source for pumping water in its small-scale systems: solar.

The first of World Vision's shallow wells to be fitted with a stable, low maintenance Grundfos SQFlex solar submersible well pump is in Teticha kebele[1] in World Vision's Hulla Area Development Program. Drilled in 2011, the system benefits over 550 people, and at a per capita investment of just $40 per person is well within the normal range of investment ($40-$45 per person) for World Vision's water projects.

What is drastically different is the operating cost. A diesel generator running eight hours a day can easily run up fuel charges of 25,000 Birr (US $1,390) or more in a year—and the cost of spare parts and maintenance can be high. On the other hand, a solar powered system uses fuel that is abundant and free, and because human contact with critical parts is extremely limited, requires very little maintenance.

Solar power is not recommended for every location. It is most effective for systems with a lower power requirement—e.g. shallow wells (approximately 60 m in depth). Water storage tanks (either elevated or on the ground) must also be constructed to store the pumped water, which is then gravity fed to the distribution system. The solar panels are put on top of the elevated water storage tanks not only to protect them from harm, but also to prevent theft. A round-the-clock guard paid by the system's WASH committee, along with the fences the community built, further serve to protect this valuable equipment.

[1] A kebele is Ethiopia's smallest administrative unit.

testing the waters

In countries like Ethiopia where poor water quality is the norm, being able to monitor water sources for bacteriological contamination is essential to safeguarding public health. This process used to be difficult, costly, time consuming and unreliable. Today, thanks to World Vision, water officials in 17 woredas each have at their disposal a water testing kit that makes it possible to have widespread, quick, easy, affordable and accurate on-site water testing for all of their water systems.

As the woreda's water sanitarian, it is my job to test springs before we develop them to see if the water is good and to test shallow boreholes after they are constructed. I am also responsible for testing water sources when there is an outbreak of water-related disease.

Previously our water samples were sent hundreds of kilometers away to Addis Ababa or Hawassa for biological testing. This was a waste of time, energy and money. Previously during emergencies (related to water and disease) we had to wait weeks to get a result. We would have to go to the lab, prepare everything, then travel to the site to collect the sample and have it back in the lab and in the petri dish within six hours or the result was not reliable. Some places in this woreda are so remote that it could take longer than that to get back. Even if we did make it back in time, then there was the risk that in sending them, the bacteria in the sample might die on the way—but we knew nothing until we got the results two or three weeks later.

Time is particularly critical when there is an outbreak of waterborne disease. Previously acute watery diarrhea was prevalent in this woreda. All we could do was give people water treatment tablets and wait for the results [so that we could know exactly where it was coming from].

Now if there is an outbreak of diarrhea we can go to where it occurred and check the water sources without delay. We can take samples from anywhere at any time and, because we have the kit with us, time is not an issue. We get the results in a matter of hours, which allows us to take immediate action to disinfect the source and protect the public's health.

Of course, groundwater may still contain chemicals or trace elements like arsenic that are hazardous to public health in the longer term. We can't do those tests. Fortunately the Ministry of Water and Energy can.

—Mekdes Kassa, Water Sanitarian,
Hulla Woreda Water and Energy Office

In 2012 World Vision also purchased and donated an Atomic Absorption Spectrophotometer to the Federal Ministry of Water and Energy. This has augmented the capacity of the country to test water samples for heavy metals, including arsenic and fluoride. Samples that were previously sent to the USA for testing can now be tested in country, making the process faster, easier and less costly.

A teacher checks the fingernails of students at Luda Primary School. As part of the school's hygiene training students learn about the importance of having clean hands, hair, clothes and teeth.

sanitation and hygiene

sanitation and hygiene

Every day thousands of children worldwide die from diseases transmitted by unsafe water, but many more die from diseases caused by poor sanitation and hygiene.

Improved sanitation facilities (defined as a facility that hygienically separates human excreta from human contact) and basic hygiene—including handwashing with soap and water at critical times (such as after using the latrine)—prevent the bacteria, viruses and parasites that are found in human excreta from contaminating water, soil and food. They thereby drastically reduce the incidence of diarrhea and improve a host of related problems including high rates of child mortality, high rates of school drop out and poverty and food insecurity which are exacerbated by productive time lost to illness.

By adding sanitation and hygiene interventions to the provision of safe and adequate water, WASH programs dramatically multiply the health benefits of both: preventable child deaths can be reduced by up to 57 percent (World Health Organization); chronic malnutrition reduced by 40 percent; and school absenteeism—particularly among girls—can be reduced by as much as 50 percent.

World Vision is working closely with its partners at all levels—from community leaders and grassroots health workers to teachers, parents and students—to awaken an awareness of the importance of proper sanitation and hygiene and, through participatory, community-driven approaches, to promote lasting behavior change.

Priest and WASH promoter Tebebu Belaye talks with members of his congregation about sanitation and hygiene after Sunday services. He ends on a positive note: "Our village stands first in sanitation and hygiene among all of the others in our district. If everyone stays healthy we'll soon put the health workers out of a job! Thank God for that. Clap your hands for these great achievements."

Members of Luda Primary School's Water Sanitation and Hygiene (WASH) club sing a song at a school assembly. The basic lyrics don't begin to reflect the song's catchy beat: "Being dirty can bring disease. We can protect ourselves by washing our hands, washing our faces, washing our hair, washing our bodies, cutting our fingernails and brushing our teeth."

"Of all the people who are out there working for change, children are among the most effective," says World Vision Ethiopia's WASH Director Robel Lambisso. "Once they understand the impact sanitation and hygiene practices have on their health, they pass on what they learn to their families and their communities and push them to take action."

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targeting sanitation and hygiene

As part of Ethiopia's comprehensive Growth and Transformation Plan, the Government of Ethiopia's Universal Access Plan for Water, Sanitation and Hygiene commits to ensuring that 100 percent of its citizens have access to at least basic sanitation facilities—and 84 percent have access to improved facilities (see page 60)—by 2015. It is a goal that far exceeds Ethiopia's Millennium Development Goal target which calls for providing improved sanitation coverage to 58 percent of the population by 2015.

World Vision supports the Ethiopian Government's efforts to achieve this and the other key sanitation and hygiene components of the plan, including: ensuring that Ethiopia is 82 percent 'open defecation free' (see page 59) by 2015; increasing the number of households practicing handwashing with soap at five critical times (after visiting the latrine, after cleaning a child, before preparing food, before eating or feeding a child) to 77 percent; and establishing safe water handling, treatment and storage practices in at least 77 percent of Ethiopian households.

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Health Extension Workers (HEWs)

Less than a decade ago, the vast majority of Ethiopians, 80 percent of whom live in rural areas, had little or no access to health facilities and trained health personnel. The health problems they faced stemmed largely from predictable and preventable causes related to poor nutrition, low levels of health awareness, and lack of proper sanitation and hygiene.

With the roll out of the Health Extension Program (HEP) in 2004 the government took a new approach to addressing these challenges. The HEP is designed to address gaps in access and to empower communities to take responsibility for their own health by equipping households with the right knowledge and skills.

Sixteen key areas—or 'packages'—have been identified for improved health in four main categories: family health, disease prevention and control, health education, and hygiene and environmental sanitation.

Spearheading this revolution in health are the government's network of over 38,000 Health Extension Workers (HEWs)—two for every kebele. Armed with a minimum of a tenth grade education and a year's training, this all-female force live and work in their own communities where they provide basic health services, transfer knowledge and skills and follow up with community members to ensure implementation.

Still less than a decade old, the HEP and its primary agents, the HEWs, have been tremendously successful. They have brought basic health care within reach of some 67 million rural residents for the first time and now cover more than 85 percent of the population (source: USAID).

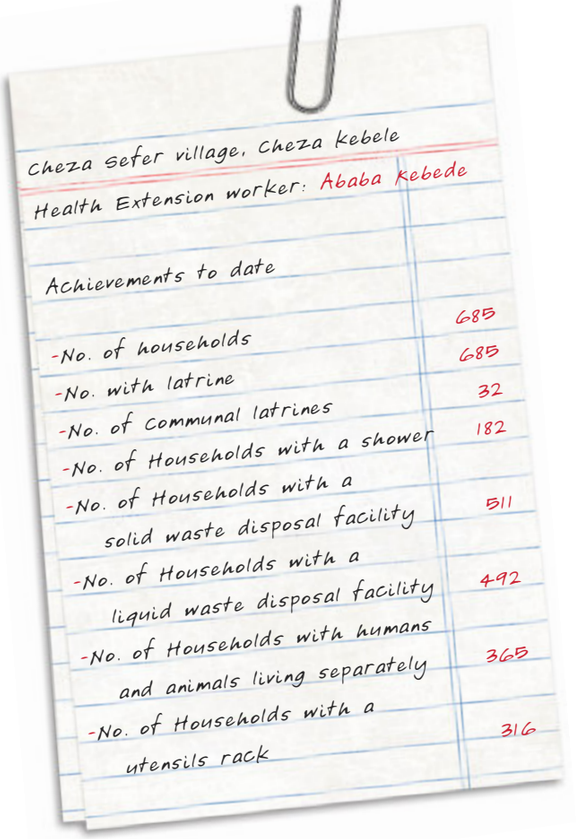
World Vision supports the broad goals of the Health Extension Program by working closely with the more than 2,700 HEWs working under the organization's 70 Area Development Program (ADP) sites, providing them with refresher trainings that enable them to better deliver all aspects of its WASH program.

Today is the day I check with households on how they are implementing the government's water, sanitation and hygiene interventions. I check that everyone in the family is using the latrine and washing their hands afterwards. I also check to see if they have taken action on the suggestions I gave each of them a few weeks ago when we talked again about the proper disposal of solid and liquid waste.

It has taken time and effort, but over the last few years our community has changed. Now everyone has a latrine and each latrine has hand-washing facilities. Most people are doing pretty well with waste disposal and many have separate living spaces for animals and humans. But we are still struggling to get people to understand the importance of constructing a dedicated shower room. I think this is because unlike many of the other interventions we promote, this is not one where cause and effect are immediately apparent. When you drink water from an unprotected source without boiling it you get sick, but when you shower in an area where there is animal waste, the consequences take time to show up. We have learned that the best way to mobilize those who refuse to take action is to have them talk with another woman in the community who has already implemented that part of the health package. She explains how she and her family have benefitted from taking action. Through that, change comes.

—Ababa Kebede, Health Extension Worker

Ababa Kebede (in pink scarf), one of two Health Extension Workers in Cheza Sefer kebele, visits Abarach Sifer and the other women in her kebele at home every three days to talk about best practices for their families' health.



Cheza Sefer village, Cheza kebele
Health Extension worker: Ababa Kebede

Achievements to date

-No. of households	685
-No. with latrine	685
-No. of communal latrines	32
-No. of Households with a shower	182
-No. of Households with a solid waste disposal facility	511
-No. of Households with a liquid waste disposal facility	492
-No. of Households with humans and animals living separately	365
-No. of Households with a utensils rack	316

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gender, sanitation and hygiene

In Ethiopia women are responsible for fetching water, cooking, cleaning the house and its surroundings, doing the laundry and caring for the children. Thus, in its efforts to transform health practices at the household level—including water, sanitation and hygiene (WASH) practices—the government and NGOs alike target women as the key agents of change in their families and communities. Reaching mothers—especially mothers of young children—is critical. Children under 5 years old are the segment of the population most affected by diarrhea and other diseases caused by poor hygiene, and it is their mothers who are almost entirely responsible for their care.

By 2015 World Vision will have trained over 8,100 mothers in 162 communities in improved sanitation and hygiene practices. This includes handwashing at critical times (a simple act that can reduce the incidence of diarrhea by as much as 35 percent); face washing; bathing; the sanitary disposal of infant feces and environmental sanitation.

"When Ababa comes to my house we usually spend half an hour or an hour talking," says Abarach, whose daughter Yetemwork, 9, has decided to join today's discussion. "Is it an intrusion? No. Never. I am always happy to see her. I have learned a lot from her, and since I started practicing all of the things we talk about I have seen a big improvement in my health and the health of my family. And as we all know, there is nothing more important than good health."

a different kind of army

The group of women (and their daughters) gathered around Zida Essa's fireplace for one of their twice-weekly coffee mornings look nothing like an army. But under Zida's leadership they have joined the ranks of millions of women who are revolutionizing health practices in families and communities throughout Ethiopia.

Set up in 2011 as a means of accelerating the process of change set in motion by the government's Health Extension Workers (HEWs), the 'Health Development Army', or 'One to Five Development Army' as it is also known, is a network of all-female groups consisting of a group leader and five of her neighbors.

After receiving intensive training from her local HEW on the government's 16 'Health Extension Packages' (see page 40) the group leader works to implement them in her own home. She then serves as a model for the other women and supports them in following her lead—monitoring their progress as the group moves from one house to the next for their morning meetings.

Zida's group is committed to the process. In the two years they have been meeting she has helped them to successfully implement all of the packages. But, as Zida explains, some were harder to implement than others. "The most difficult one required us to make separate living spaces for people and animals. Previously our cattle lived in the same room with us. They defecated and urinated and ate here—and we slept and showered and ate just there.

"Looking back, I sometimes remember thinking there was a bad smell in the house, and sometimes I would find larvae in our food. I also remember the cow's tail flinging mud and dung all over us and the walls and everything else in the house. But I didn't think any of it was really a problem until I attended trainings given by World Vision and our Health Extension Worker. They helped me to understand that this was causing health problems for my family. So I knew I had to act.

"The first problem was the cost: building a wooden divider through the middle of the house was expensive. In the end we spent over 6000 Birr (US $335) for materials and labor.

"The second problem was that we had always been told that cattle need the warmth of the fire and the breath of humans in order to thrive. I was really worried that if we moved them to the other side of a barrier their health would suffer and we would get less milk. But I was also worried about what keeping them with us was doing to our health. So I decided to give it a try.

"I moved them and I watched to see what happened. They were fine. We got the same amount of milk as before. Plus my house was cleaner and my family healthier.

"I invited the other women in my group to see what I had done and I talked with them about the benefits. It wasn't long before all of them had followed my example."

(Left) Zida is eager to show off some of the WASH-related amenities and activities of her model household. After washing the dishes using a three tub system she dries them on a drying rack; she properly disposes of both solid and liquid waste; and uses a dedicated shower room and a latrine with hand-washing facilities. She has also separated her family's living space from that of the animals. World Vision provides Zida and others like her with regular follow up training and works with them to promote their WASH-related work at both the household and community level.

leading by example

As one of over 3,200 World Vision trained 'wash promoters' nationwide, priest Tebebu Belaye has used his position and influence to help transform his community's sanitation and hygiene practices.

> **I always wanted to be a priest**, just like my grandfather. While serving he became blind. It was me who took him to church and to do his service work. I was always with him. My grandfather died when I was 13. When I was 15 I told my father I had decided to become a priest and he forced me to leave the house. He wanted me to go to the city and work at some sort of business. I went to the church and the priest took me in. I am now a priest at that same church—the same church where my grandfather served.

> **In addition to being a priest** I am a father, a trader, a farmer and for the last year and a half I have also been a volunteer WASH promoter.

> **Because of my position in the community**, I was one of the first people in this kebele to receive training in sanitation and hygiene. At that time this village was very dirty. There was feces everywhere. The children's faces were covered with flies. Many children had diarrhea.

> **Service to the community is in the Gospel** in many ways.

> **I am a spiritual leader.** My main role is to teach people the word of God. But I also realize that taking care of your spiritual health depends on maintaining your physical health.

> **Priests have an important place in our society.** But I don't want to use my spiritual authority to push anybody around.

> **When I talk people listen.** And if I say do, people act. I think that's because I am not just talking empty words, I am taking action. For example, after the sanitation and hygiene training I was among the first to implement it fully in my own home. After that I invited others to do the same.

> **During Meskel and other holidays** I go house to house, cleansing people's homes with holy water. I have added to that ritual. Now I also check whether or not they have implemented the sanitation and hygiene measures everyone in the community has learned about from the Health Extension Worker (HEW) and others. I give them advice about what they can do to better protect their family's health.

> **Development is one thing, religion is another.** I go with the HEW to every house, whether the people in it are Orthodox or not. We teach them about sanitation and hygiene. I advise them to construct latrines and showers and to dig holes for solid and liquid waste disposal. I tell them that if they don't have money to do it, they should let me know. More than once the HEW and I have contributed from our own pockets to help a household build a latrine or a shower.

> **Today this village is born again.** There is a white flag at the health post that indicates that we are 'open defecation free'. Everyone has a latrine and they are washing their hands and taking care of their drinking water. And they are seeing the benefits in better health. Now if anyone were to defecate in the open it would be as obvious as a black spot on a white shirt.

> **For my efforts** the Regional Health Bureau gave me a solar radio. I danced when they gave it to me.

> **I still meet with a group of parishioners** every Sunday after the service. I give different messages and new ideas—including ideas that come from the radio—about maternal mortality, vaccinations for their children, getting their children to the clinic early... and though we've come a long way, I continue to talk about sanitation and hygiene.

> **My next project?** I am going to build a latrine that is more than just functional—one that looks as nice as my house. Then I will encourage others to do the same.

a new life

Open defecation is a big concern in rural Ethiopia where poor sanitation and hygiene combined with a low level of awareness result in a high burden of disease. By working together to put and end to this practice, residents of Kurfo Gute kebele have transformed every aspect of their lives, as Kebele Manager Taye Shalema explains.

JUST ONE YEAR AGO things were very different in this kebele [a kebele is Ethiopia's smallest administrative area]. There was feces everywhere—on the roadside and around people's homes. Most people did not have a latrine and many had never used one. But none of us was aware that the practice of open defecation was the reason for so much of our suffering.

Many people were sick, especially in the rainy season, with diseases like typhoid, giardia, intestinal parasites and diarrhea. This is a poor community and those diseases were making it poorer. Farmers couldn't work in their fields because they were home in bed; students were absent from school so they were not learning and dropped out; families were spending all of their money just to pay for medicine, and when they ran out of money they would cut down their trees and sell them to cover the costs. Soil erosion is already a big problem here, and with so many trees being cut down, it only grew worse.

In early 2011 World Vision and the woreda Health Office invited a group of influential community members including our health extension workers, development agents, the kebele administrator, a number of teachers, and me, to a meeting where we would 'discuss the sanitation and hygiene situation in our kebele.'

Far more than that happened. Over the course of a couple of hours they led us in a series of practical exercises that are part of a process called Community-Led Total Sanitation and Hygiene (CLTSH). Through this we came to understand very clearly what the practice of open defecation was doing to the health and well-being of the communities in our care and we committed to taking action to change things.

Those of us who had participated in the CLTSH 'triggering' (see pages 50-55)—started meeting up to look

"You can't just show up at someone's house and ask to have a look at their latrine," says Kebele Manager Taye Shalema (in orange shirt). "You have to talk with them a little, ask about their family, ask about their farm and how things are going. Only then can you ask to see their latrine. Our kebele is now 'open defecation free', but all of us—from the kebele administration and Health Extension Workers to the WASH promoters, development army leaders and World Vision staff—must continue to follow up. It takes time to create new habits."

for open defecation areas in each of the four villages in our kebele. Nobody else knew what we were doing and we didn't say. We would just walk around and talk with people with a view towards creating a conducive environment for triggering people in those communities.

When we had done the groundwork we invited a group of mothers and influential members of that community 'to discuss the sanitation and hygiene situation in their village.' Those of us who had participated in the first triggering were all there. I will never forget the looks on their faces when they came to realize that every year their village was producing enough feces to fill 50 Isuzu trucks—and that all of it was running off into the water they were drinking and getting into the food they were eating. It was then that they understood: that's why we keep getting sick.

Once they know this most people are inspired to take immediate action. They decided we must all construct latrines and become 'open defecation free' within no more than two months.

In the end it took us nine months to be declared open defecation free (ODF). Some households were slow to construct their latrines and had to be fined to get them to comply, and it took time to fulfill all of the government's requirements. But our efforts paid off almost immediately: within a very short time disease prevalence in our area had been reduced by more than 75 percent. Today there is almost no diarrhea and only a handful of cases of intestinal parasites. As a result, people are stronger and more productive. Because they are no longer spending all of their money on medicine, they are better off. Children go to school consistently, so far fewer drop out. And our trees are left to grow, making for better soil, a beautiful environment and fresher air.

—Taye Shalema, Kebele Manager, Kurfo Gute kebele

triggering change

Just two years ago almost 60 percent of Ethiopia's population still practiced open defecation. Today, thanks in large part to interventions such as Community-Led Total Sanitation and Hygiene (CLTSH), this number has dropped to just 46 percent. CLTSH is an approach that uses a series of practical exercises to 'trigger' awareness of the problem in communities that still practice open defecation and facilitates them in taking action to end it. By 2015 World Vision will have worked with its partners to conduct 'triggerings'—like this one in Haro Kono kebele—for 110,000 people in 2,200 communities across Ethiopia, helping to support the Government of Ethiopia in achieving its goal of an 82 percent 'open defecation free' Ethiopia by 2015.

10:31

Eyob: We are here to learn from you about sanitation in your community and to share our experience. Would you be willing to show us around your village?

[The community agrees and walks as a group]

Eyob: Your area produces many crops. What are the main things that are produced here?

Community: Maize, teff, wheat, sorghum and barley.

10:25

Some 30-40 influential people and mothers and children gather on the edges of Geredimitu village for a 'meeting about sanitation and hygiene' in the community. In attendance are community members who have already completed a previous round of CLTSH training and, without the knowldege of the others, have been creating a 'conducive atmosphere' for this training. They include the Kebele Manager, Kebele Chairman, teachers and local Health Extension Worker Gobineh Kebede. Eyob Lagesse, World Vision Ethiopia's Wonchi Area Development Program's WASH Officer, joins them to lead the exercise.

10:44

Eyob: Why did you stop here?

Community: You wanted to see the place with dirty things.

Eyob: When I asked you what are the major crops of your area you said 'maize, teff, sorghum, barley and wheat'. I believe I have found another thing that is produced in your area: udan (feces).

[People are shocked by the use of the word udan, which is considered a bad word, but this is part of the process, as Eyob explains: "We don't use nice words about it. For the community, standing here and experiencing the disgusting sight and smell with someone who is an outsider triggers change."]

Eyob: Wow, this place smells bad. Whose udan is this? Is it animals' or people's?

Community: It is people's. But this is where passersby defecate. It's not ours.

Eyob: If there is rain what happens to it?

Community: The run off takes it away.

Eyob: Where does it go?

Community: To the river.

10:47

Community member Tadela Badada: It is not our culture to stand around in a place with a lot of feces. I felt so embarrassed and ashamed. Walking back to the circle after being in that place we all kept silent.

10:45

Eyob: Where do you get the water that you drink?

Community: From the river.

Eyob: So you're telling me this feces is going to the river and you are all fetching water from there? So is your community drinking feces with your water?

Community: Actually, that must be true. We must be drinking feces with our water.

Eyob: And this feces is also going into your homes. It travels there with your children, your animals, chickens, flies…. And once it is in your home it comes into contact with your food. So you are also eating feces with your food.

11:18

Every member of the community that is present puts their name and the number of family members living with them on an index card and is invited to place it on the map in the location of their house.

11:06

Community members make a sanitation map of the village, drawing the borders of the village with ash.

11:24

Eyob: Now, who among you has a latrine? [Two men raise their hands] Right, please come up and put a card with a latrine next to the card for your house.

[They do]

Eyob: So this community has 34 households and only two of them have a latrine.

Man: [shouts] No, I also have a latrine. I don't know about your standards, but I do have a latrine. I use it. I don't defecate in the open.

Eyob: Please come up and put it on the map.

[He does]

11:29

Eyob: Can someone locate on the map the open defecation area we just visited?

[A man does]

Eyob: Now, since not everyone has a latrine, and you said that area we saw was used by people passing through the village, there must be other open defecation areas in the village. Can you show me these areas on the map? Can you all show me the area where you defecate?

[People refuse, but eventually, reluctantly, holding their wraps across their faces as if covering their nose from a bad smell and laughing with the shame of it all they pick up a piece of cow dung from a pile in the circle and put it on the map in the place where they defecate.]

11:34

Eyob: Wow. Look how contaminated your village is! It is full of feces! And all of you are eating and drinking it.

11:45

Eyob: I wonder how much feces this village actually produces?

Community: There are 34 households and on average each household has seven members, so the total population is 238.

Eyob: How much feces does each member produce in a day?

[The community discusses and reaches the conclusion that each member defecates on average two times a day.]

Community: What is the weight of the feces that is defecated each time?

Eyob: I usually estimate about 200g.

Community: No, that is too small. It must be more than that.

[The community discusses and reaches the conclusion that 500g per incidence is more likely—so 1 kg per person per day.]

Eyob: Ok, we'll go with that for our calculations. So if each person defecates one kg per day, how much feces does this village produce in a day?

[A man from the community steps forward to do the calculations.]

Man: 238 kg

Eyob: If we change that to quintals [the standard measure for crops; 1 quintal=100 kg] that makes almost two-and-a-half quintals of feces a day. How much is that in a week... a year?

Man: That is 17.5 quintals in a week, 910 quintals in a year.

Another man: [calls out] If that was a crop it would be a great harvest—but nobody wants that much feces!

11:54

[Eyob washes his hands and eats a piece of bread. He breaks off a piece and gives it to a man from the community and one to a woman. They eat the bread. Then Eyob asks a woman for a piece of hair. He touches the hair to feces collected from the open defecation site and runs it across another piece of the same bread and offers it to the same people.]

Man: No, I'm not eating that. Take it away.

Eyob: Why?

Man: It has feces in it.

Eyob: You can't see it Maybe it's okay.

Man: No. Please. Just get it away from me.

11:58

[Eyob repeats the process, this time with water. The participants take the water that is offered the first time but then after a stick touched to the feces is put into the same water they refuse it.]

Eyob: But you can't see anything. The water looks exactly the same.

Man: But I know it's not.

12:02

Eyob: Now that you know the water in the river and the food in your homes is also contaminated with feces, do you want to continue on like this or make a change?

12:04

Community: It isn't good to continue like this! We have to all construct latrines and stop open defecation.

Eyob: How soon do you want to do this? How many days should everyone have to construct their latrines?

Community: This is the harvest time. We're busy. We need time to construct them!

Community member Taye Debele: [shouts] Today we were caught red-handed defecating under the trees. Please, please, please don't make the rest of us eat and drink your feces any longer. It may be harvesting time but we have to construct latrines as well!

[There is a lot of shouting and yelling as the community discusses this. "This is normal," says Eyob as he steps back to watch them. "It is the 'ah ha' moment—when everyone suddenly realizes they have been eating everyone else's feces." Finally they reach a consensus. Everyone agrees that they will construct their household latrines within 15 days.]

12:11

Eyob: And what about the roadside defecation like we saw this morning. That came from people passing through. What can be done about that?

Community: We need public latrines.

Eyob: Where will you build them?

[There is a lot of shouting]

Some community members: I'm not going to build anything except my own latrine. That area where they are defecating is far from my house. It is not my responsibility.

Taye: If I wash my trousers and leave my jacket dirty am I clean? Surely you can see that we must have both kinds of latrines or we are still eating and drinking feces.

[After more discussion they agree to construct public latrines within two months.]

12:13

Three community members that emerge as 'natural leaders' over the course of the discussion—are asked to help coordinate the community's efforts. Top to bottom: Abebech Alemayehu, Tadela Badada and Taye Debele.

12:23

Community: We are not a community that eats feces. Soon we will be 'open defecation free'!

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CLTSH: igniting change with collective action

Unlike previous initiatives that focused primarily on constructing latrines, the CLTSH process aims to ignite behavioral change in sanitation and hygiene through a process of social awakening. In order to achieve this it addresses all segments and age groups of the community and focuses on the benefit to be had from collective action, rather than on changing individual behavior. This cooperative approach empowers communities to work together and to take responsibility for creating a clean, hygienic environment. The outcomes include ending open defecation, using hygienic locally constructed latrines, washing their hands with soap or ash at critical times and handling drinking water in a safe manner.

After the triggering

The map the community produced on the ground is drawn on paper and the three natural leaders agree a time to meet with the community's Health Extension Worker, Gobine Kebede, to plan how to achieve what has been decided.

The following day

Gobine, Abebech, Tadela and Taye meet to formulate the community's action plan on the outskirts of the village.

Gobine: It is important that our plan is kept secret until we put it before everyone in the village. If someone hears us discussing it they may say 'He made that rule' or 'She said that' and then the community may be angry with that person as an individual and blame them for the plan.

Taye: Every one of us has the resources to build a latrine. The villagers are not afraid of death—but they are afraid of fines. I suggest the following rules, if the kebele administration agrees: Rule no 1: There will be a penalty of 50 Birr (US $2.75) for those who fail to construct a household latrine within two weeks. Rule no. 2: Those who do not show up on the day they are appointed to help construct the public latrines must pay a penalty of 25 Birr (US $1.40). The four of us will follow up by visiting each household. If people don't follow the rules we will inform the kebele administration. Then the Kebele Manager can check on them and, if necessary, impose the fine. This process should continue until everyone has taken action and our village is 'open defecation free'.

Abebech: As a volunteer health promoter I talk to people every day about the benefit of latrines—without much effect. I am used to people getting mad at me when I talk about this. It sounds like a good plan to me.

Tadela: I also agree with this plan. I see this as an opportunity to serve the community. In the beginning they may resist me and even come against me, but as their awareness grows I know they will thank me. We are doing this for their well-being and the well-being of future generations who will adopt this behavior. I too say we go ahead.

[Epilogue: When Eyob returned 15 days later to follow up, the kebele and the community had accepted the rules and 20 households had taken the first step towards becoming 'open defecation free' by constructing their latrines.]

Alemayehu Ankarso, who is in the kebele management in Teticha kebele, mops out the roadside latrine near his house in Mana Adami village. "Next week they are coming to inspect our kebele. Hopefully it will be declared 'open defecation free'," he says. "Part of that is ensuring that all of our communal latrines are clean."

When a village or a kebele is declared 'open defecation free' a sign is erected outside the village. The community also receives a certificate and a white flag is raised at the health post.

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'open defecation free' (ODF)

To be declared 'open defecation free' a village or kebele must meet the following criteria:

1. 100% latrine coverage: one for every household and others on the roadside for passers by. All latrines must consist of a covered pit, walls, a roof and door.
2. Public facilities including the health post, schools and government offices must have latrines with a cement floor, walls, a roof and a door
3. There must be hand-washing facilities—water accompanied by soap or ash—outside all latrines.
4. Training and follow up on safe water handling from source to mouth must have been conducted for all households.
5. There must be no open defecation in the area as verified by a visual inspection.

By 2015 World Vision and its partners will have facilitated the construction of more than 80,000 household latrines and supported over 2000 villages in Ethiopia in becoming 'open defecation free'.

public sanitation

Access to sanitation is not just an issue for rural households and communities. World Vision works with communities in its areas of operation to provide public venues—including markets—with access to much needed improved sanitation facilities.

Twice a week more than 5,000 people flood into the town of Hulla from the surrounding countryside bringing everything from crops and livestock, to clothes and handicrafts, to sell at the town's market.

Until recently they were also bringing something the people of Hulla didn't want: a problem with open defecation. In the absence of a latrine near the market, people used the bushes.

After working with the community to clean up the area, World Vision answered the community's request to build a public latrine on the site. "Now no one is defecating in the open anymore," says Meselech Moke, who is part of a group of 12 people that is in charge of managing the latrine. "The town is 'open defecation free'. Everybody has a latrine at home and they use it. And now when people come to the market from the rural areas, even though they may not use a latrine at home, they have learned that they must use one here. We put up a sign and had people teaching about it in the market. There are also policemen and other authorities posted all around the market. If they see someone looking for a place to urinate or defecate they tell them to use the latrine or face arrest and a fine."

Meselech and her colleagues now spend market days here, collecting 50 cents (US $.03) from every person that uses one of the latrine's eight cabins. The money they collect each week is put into a bank account that the management committee uses to engage in small scale businesses that help to support the members and also maintain the latrine.

Meselech and the others are looking forward to the completion of the next phase of the latrine project, when the facility is provided with water. "I can't wait," says Meselech. "That will make it much easier for us to clean the latrines." But even better is the allure of the shower facilities that will be installed. "Many more people will come to use that," she says. "It will also have a proper ticket room where I will sit collecting the 1 Birr fee (US $.06) and watching our bank account grow."

(Right top) Bustling Hulla market on a typical market day.

(Right bottom) Women wait to use the privately managed public latrine at Hulla market.

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improved sanitation facilities

An improved sanitation facility is defined as one that hygienically separates human excreta from human contact. In rural Ethiopia this typically includes pit latrines, and 'ventilated improved pit' (VIP) latrines.

All of the public latrines built by World Vision, whether they are built to serve public institutions such as schools, health centres and government offices, or public venues like markets, are of the VIP type. VIP latrines have distinct advantages over simpler pit latrines: their design eliminates flies and improves air circulation, thereby reducing odor.

World Vision is also currently piloting a newly designed inclusive VIP latrine that it plans to roll out as the standard model for all of its public latrines in the future. While it has all of the features of the VIP latrine this one is specifically designed with the physically disabled in mind. There are access ramps, wide verandas, hand rails throughout and a toilet with a seat

By 2015 World Vision will have constructed 15 privately managed public latrines at markets and other public gathering places—half of which will also have showers—and helped to train small groups of men and women to manage and maintain each one (on behalf of the local administration) so that the enterprise is sustainable.

Our WASH club meets under the big tree after school

put your trash in the right place or it will attract flies

xaraduu

We used to use leaves to clean the latrine. now we use a broom. It works much better.

use SOAP!

Sammuna

WASH YOUR HANDS after using the latrine

clean your JERRYCANS regularly so your water stays safe

if you don't have soap you can use ash

WASH YOUR HANDS before you cook or eat

Poor sanitation and hygiene have a profound impact on school attendance and completion rates. In WASH clubs like this one at Kurfo Gute Primary School, students work together to improve their school's sanitation and hygiene practices. In the process they not only help to make the school a better, healthier place to be, but also improve the health of their families and communities.

What was your school like before it became 'open defecation free'?

Meseret: Students were defecating on the field and in the trees. Then they would carry it into the classroom on their shoes and their hands—because there were no hand-washing facilities. The whole place smelled so bad and was so disgusting that I didn't want to come to school.

Mluken: I remember the flies. They were always on our faces. A lot of students used to get sick. In the first grade I got really sick with diarrhea and vomiting and had to quit school for the rest of the year.

Weren't there any latrines?

Keneni: There was a pit latrine but nobody wanted to use it—especially the girls. If we did the boys would follow us when we came out. They would laugh at us and say 'Look, that girl was just defecating!' Because of this we came to believe that our normal bodily functions were something shameful. That made us never want to go to the latrine or even come to school.

Semenesh: It was really difficult if a girl was older and she was menstruating. The latrine was disgusting and she felt ashamed using it. And if she had an accident and needed to change her clothes there was nowhere to do it. So when their menstruation came to them, most older girls just stayed home.

How did things change?

Abebech: Last year one student from each class started meeting with teacher Abebe to talk about sanitation and hygiene. Later we attended a five-day training on it from World Vision.

Adanech: Before that training I didn't know anything about the negative health effects of open defecation and not washing our hands. When they told us we were eating and drinking feces I said 'Wow, I've been doing that?' For me the change was immediate.

Abebech: When we came back we shared what we had learned with the rest of the students. We taught them why it is important to use the latrine for defecation and to wash their hands afterwards with water and soap or ash.

Adanech: We also took the training home with us and shared it with our families and neighbors.

Right when I got home I told my family what I had learned and I asked them 'Do you want to continue eating feces?'. Within a week everything at home had changed. We had built a latrine with hand-washing facilities and we were using them.

How are things now?

Adane: We are happy to come to school because it is clean and we have good latrines.

Semenesh: And because the girls have their own latrines. Our block is far from the boys' so we have more privacy. We can even go in there at break and change our clothes if we need to. That means older girls can easily come to school all the time.

Birki: We also have clean latrines with hand-washing facilities. For now the WASH club manages them. We clean the latrines twice a week while the rest of the students clean the schoolyard. In the future we will make all of the students take turns cleaning the latrines, but for right now it is up to us. We had the training so we know what to do.

WASH watchdogs

Members of Luda Primary School's WASH club, known as the 'WASH Watchdogs', perform several dramas at a school assembly. In one of them, a student who has made a mess in the latrine is found out by the 'WASH Watchdogs'. He is escorted back to the latrine where he is forced to clean up his mess. Putting school WASH clubs in charge of cleaning—and policing—the school's latrines (and hand-washing facilities) helps to ensure the proper use and long-term sustainability of these essential facilities.

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WASH in schools

In a process that is both similar and complementary to what the broader community learns in a Community-Led Total Sanitation (CLTSH) triggering (see pages 50-55), World Vision conducts School-Led Total Sanitation and Hygiene (SLTSH) triggerings for students and other members of the school community. However, instead of asking them to build latrines, students are triggered to use the school's VIP latrines—many newly constructed by World Vision—within their compound.

In the wake of the triggering a group of students comes together under the leadership of a trained teacher to form a WASH club. These students take responsibility for the new facilities and also undertake activities to improve awareness about sanitation and hygiene practices not only among their peers at school, but also at home and in their community. Common WASH club activities include putting on songs and dramas, participating in community marches and campaigns and a organizing variety of sporting activities.

World Vision provides WASH clubs with material support that helps them to transmit messages to other students and the wider community, including stationery materials, pamphlets, posters, t-shirts, an electronic megaphone, speakers and tape recorders.

By 2015 World Vision will have constructed 195 VIP latrines—with separated blocks for girls and boys—in 98 schools in Ethiopia, immediately benefitting almost 100,000 students and many more than that in the years to come.

The 2015 targets for SLTSH triggerings (150 were targeted and 166 have already been conducted), and the number of WASH clubs (150 were planned and to date 276 have been formed) have already been exceeded. Over the coming years they will be exceeded still further as the WASH team continues working to ensure that more and more young people are involved in the work of passing on these essential messages to their families, their communities and to future generations.

about World Vision

Our vision: for every child life in all its fullness, our prayer for every heart, the will to make it so.

World Vision is a Christian humanitarian organization dedicated to working with children, families, and their communities worldwide to reach their full potential by tackling the causes of poverty and injustice. We serve all people, regardless of religion, race, ethnicity, or gender.

World Vision provides emergency assistance to children and families affected by natural disasters and civil conflict, works with communities to develop long-term solutions to alleviate poverty, and advocates for justice on behalf of the poor. World Vision serves millions of people in nearly 100 countries around the world. Our work is evident in approximately 1,600 community development areas, where we join with local people to find lasting ways to improve the lives of impoverished children and families.

Our passion is for the world's poorest children. The ability of these children to reach their God-given potential depends on the physical, social, and spiritual strength of their families and communities. To help secure a better future for each child, we focus on lasting, community-based transformation. We partner with individuals and communities, empowering them to develop sustainable access to clean water, food supplies, healthcare, education, and economic opportunities.

For more than 60 years, World Vision has served as a bridge between those who have resources and those who need them, changing lives on both sides. We are also responsible to both sides. We carefully monitor and review programs and costs, use donations and grants for their intended purposes, and look for ways to leverage the funds entrusted to us.

World Vision offers its donor partners a number of powerful ways to impact the lives of children around the world and help break the cycle of poverty. In addition, we continually strive to keep our overhead rate low. In fiscal year 2012, 85 percent of World Vision's total operating expenses were used for programs that benefit children, families, and communities in need.

World Vision monitors project progress and evaluates performance to ensure its work is making a positive and lasting impact on the people we serve. Project outcomes are measured against objective standards to continually improve the quality of our programs.

Ninety percent of World Vision's nearly 44,000 staff members come from the region or area where they work—including some of the most difficult places in the world. World Vision's local presence and community partnerships enable us to create sustainable and effective solutions to chronic poverty. Grass-roots participation in and ownership of programs have proven to be the most effective ways to tackle the underlying causes of poverty.

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