Water and sanitation technology

Turning on the tap for a drink, boiling water for pasta, taking a shower, and flushing the toilet are activities that most of us take for granted, but there are many millions of people around the world who struggle daily to obtain clean water for their basic drinking, bathing, cooking, and sanitation needs. When water is available in their communities, it is often contaminated or prohibitively expensive. Both rural and urban families in developing countries are unable to count on a reliable water supply.

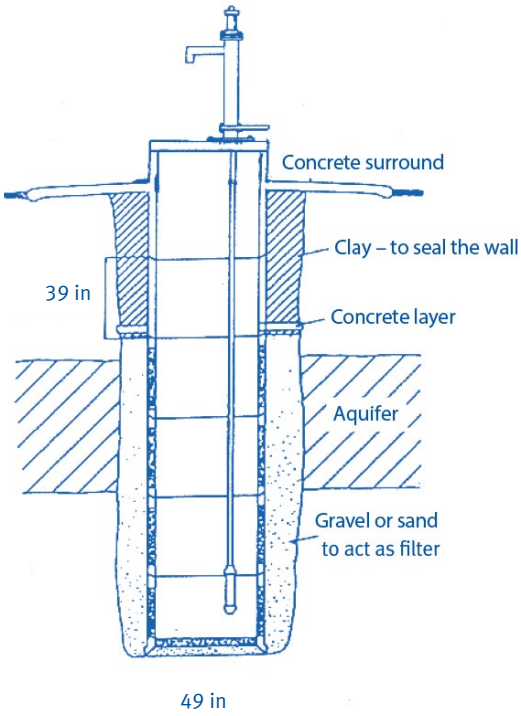
Delivering services

WaterAid is dedicated to improving access to safe water and sanitation in developing countries. We work with the poorest communities on low-cost water, sanitation and hygiene projects that improve their daily lives. We contribute financial support, training and technical advice as well as help with planning, budgeting and institutional development. Collaborating with local partners and the community ensures the selection of technologies that are appropriate to the needs of the people.

Technology choice

Our technological approach is dependent on the financial and geographical conditions in a community; local and national governmental guidelines; the availability of local materials and parts; as well as the ability of the community to operate and maintain the technology.

Water supply technologies include but are not limited to: protected hand-dug wells, boreholes, tubewells, rainwater harvesting systems, protected springs, gravity flow networks, sand dams and infiltration galleries. If pumping is necessary, we explore hand, electrical, diesel and solar options. Sanitation technologies include a variety of latrine options. WaterAid encourages innovation and is always seeking improvements in water and sanitation technology.



The hand-dug well is a traditional and low-cost technology to obtain groundwater in rural areas.

A borehole being drilled.

Bokola village, Malawi

Sustainability

Our goal is not simply to provide technology, but to ensure the long-term use of water systems and sanitation services. Sustainability requires the selection of technology that can be managed and maintained by local communities well into the future. We work with local partners to train communities in maintaining technologies, identify a local source of spare parts, catalyze local businesses to provide technical services and secure support from local authorities. To drive our learning about long-term effectiveness, WaterAid is rolling out a ten-year post-implementation monitoring program.

Community participation

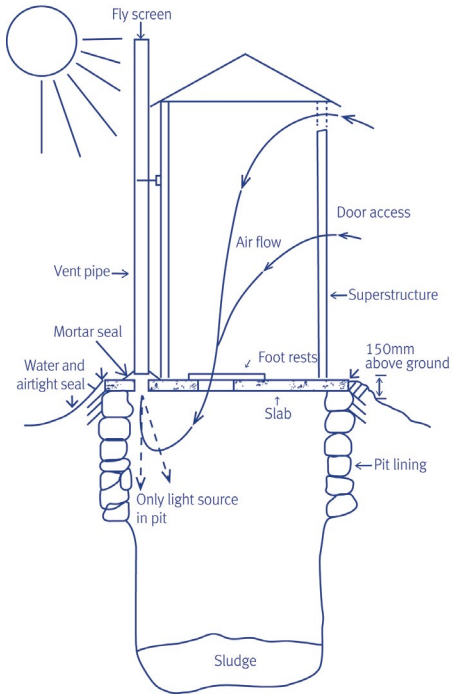
WaterAid recognizes that the ultimate owners of our water and sanitation projects are the community members, who must feel a sense of responsibility and ownership in order to ensure long-term use of the new technology and facilities. In the initial stage of the project, a local committee is formed, comprised of women and men who can serve as a voice for the entire community. This committee assumes full commitment to the project, including planning, training, maintenance and collecting small fees from households that cover the ongoing operating costs. WaterAid includes community involvement as a requirement for every project.

Hygiene education

Regardless of the technology used, a hygiene education program is an essential aspect of every project. There may be attitudes and traditional practices of water collection and consumption that expose communities to health risks. These must be addressed and may take time to change. The entire community must be involved so that all members benefit from an improved quality of life. Women are often the focus because of their interest in their family's health, and we have found that children are excellent hygiene ambassadors, eager to implement changes in their family.

Transforming lives

Helping the world's poorest communities to set up sustainable water and sanitation facilities has a transformative effect that extends beyond the obvious improvements to health and hygiene. The active involvement of local people in our projects results in an empowered community that feels a sense of pride and accomplishment in addressing its most urgent needs.



The ventilated improved pit (VIP) latrine has proved successful in rural areas in overcoming problems with flies and odors.

Lucenia Nuvana and Maklena Bukowa at the latrine.
Choobana focus village, Monze District, Zambia

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