



Sustainability action · Project Water

Chlorine Dispensers for Safe Water, Uganda

Chlorine dispensers are an innovative, low-cost approach proven to significantly reduce water-borne diseases such as diarrhea, while at the same time contributing to forest and climate protection.

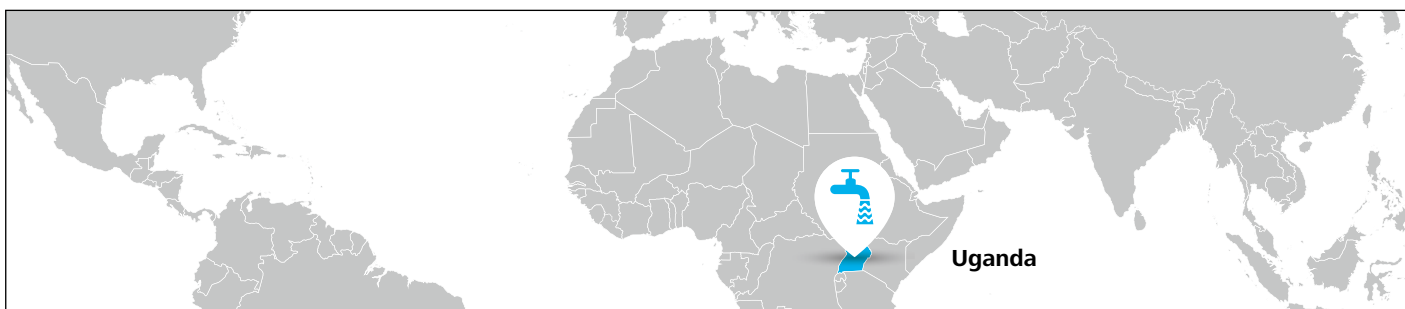
Project

The incidence of diarrhea in Uganda is among the worst in the world: nationally, the diarrhea prevalence rate is nearly one-quarter in all children under five. Approximately 23,000 Ugandans, mostly children, die each year from diarrheal diseases – nearly 90% of which is directly attributed to poor water, sanitation and hygiene. The use of unsafe water sources is most common in rural regions. Treating water with chlorine at the source provides an effective, low cost and safe approach to improving water quality and reducing the impact of child diarrhea in Uganda. Chlorine kills 99.99% of harmful bacteria, keeps water free from contamination for up to 72 hours,

and reduces the incidence of diarrhea by 40%. With the project activity's community-based approach, cost will be less than \$ 0.50 per person per year at scale, so it can be financed through carbon revenues.

Community members go to their water source, place their bucket under the dispenser, turn the valve to dispense the correct amount of chlorine, and then fill the bucket as they normally would with water from the source. Education is given to the communities about the dangers of contaminated water and how to use the dispenser properly. A community member is elected to be the dispenser 'promoter' who encourages use of the dispenser and reports any problems with the hardware. On-going servicing of the dispensers and a sustainable supply of chlorine is provided so that communities will have access to safe water over the long-term.

Checklist	Additionality and permanence	Transparency	Annual CO ₂ -reduction	Social and environmental benefits	Marketing material
Project 301 464	According to the rules of the CDM and Gold Standard	By Environmental Services Inc.	150,000 tCO ₂ e	As documented in our database	High resolution pictures available



Location

The project activity is focusing on Eastern and Western Uganda due to the regions' relatively high prevalence of diarrhea incidences in children under five years (34% and 20%, respectively). The specific water point selection for the dispenser installations is conducted in consultation with local leadership, including the District Health Offices.

Project achievements

Socio-economic impact

- Almost 20'000 people die as a result of indoor air pollution in Uganda each year. With access to chlorine dispensers, community members no longer have to boil water to make it safe to drink. Reduced boiling means less kitchen smoke, improved indoor air quality and improved health, especially for women who do most of the kitchen work.
- Studies have found that fuelwood collection takes an average of 2 hours per day in Uganda. The dispensers program alleviates the drudgery of collecting fuel far from home, freeing up women's time for productive endeavors, education, and child care.
- Widespread early morbidity, malnutrition, stunting, and cognitive impairments associated with chronic diarrhea in early childhood are expected to abate.
- The Ugandan economy suffers from significant productivity losses as a result of time absent from work or school due to diarrheal disease, seeking treatment from a health clinic or hospital, and time spent caring for the sick.
- The project activity also focuses on sharing expertise in encouraging adoption of environmentally-friendly water treatment methods, and also on sharing and improving software to facilitate program maintenance and water treatment usage monitoring.

Environmental impact

- The Uganda 2011 Demographic and Health Survey found that 38% of rural households boil their drinking water. Combustion of large quantities of wood fuel is a strong driver of deforestation. The WWF estimates that 6,000 hectares of deforestation occurs in Uganda every month. The project activity will reduce the amount of wood fuel consumed and thus support reforestation efforts.

