

Evan Larrison

Shelbyville High School

Shelbyville, IN, USA

Water and Sanitation

Ghana, Water Crisis

Ghana: An Infested Water Problem With a Modern Solution

Ghana is a country in the southern Sahara Desert in western Africa. It borders Côte d'Ivoire (Ivory Coast) to the east, Burkina Faso to the north, and Togo to the west, as well as the Atlantic Ocean to the south. Ghana has a land area of 92,099 sq. miles and has a population of roughly 30.8 million people with around 56.7% living in urban areas. Ghana has the second biggest export of gold in Africa, behind South Africa. They are also known for their export of cocoa beans, timber products, and their horticulture. An average farm size in the country is about 10 acres, which is roughly the same size as 10 soccer fields. There are about 13 million acres of land that is cultivated in Ghana.

Ghana's culture is amazing because it's known for their hospitality and cheerful clothes. Southern Ghana is Christian, while the north is mostly Muslim. The north is about 50 years behind compared to the south in education and ways of living. Education is behind in many northern villages and tribes do not have many schools and there are not many teachers willing to teach in the small number of schools. During the Scramble for Africa, from 1881 to 1914, European nations colonized almost all of Africa. Ghana was colonized by the United Kingdom (Operation Groundswell, 2012). It was divided into two colonies, called the British Togoland (Eastern Ghana) and the Gold Coast (Western Ghana). After many African countries gained their independence, country borders were just random lines that combined many cultures. Ghana became a democratic state in 1960 as the first western African country to achieve that. People could not talk to each other, because no one could speak the same language among all the different cultures. Currently there are 72 languages in Ghana today that are used today. As this brought many cultural blending together to unify the people, it took awhile and it has hurt the progression of the country.

The Ghanaian government is a Unitary Presidential Constitutional Republic with Nana Akufo-Addo as the incumbent president. Each individual tribe and village has their own chief, which they act like a mayor of each American city. There are two political parties, the National Democratic Congress and the New Patriotic Party. The NDC is known for their socialist ideology, while the NPP is known for their liberal and conservative views. The two parties respect each other's views and look at what would benefit the country. One problem is their system of trading and exporting. Their resource curse has affected their trading profit, which gives the country limited funding.

An average family has about 4.5 people in each household. The traditional housing in the area are homes made of mud and clay. Some may say that these mud houses are the future, because they are lower cost and more efficient. Most women and girls have a role to get the food and water, they go to street shops and markets to get locally grown food and get water from the

borehole or community pond twice a day (Hallett, Vicky, 2016). It takes them about 30 minutes to go get water and wait in line. They carry a 40-pound water jug to go fetch the water. In conclusion, it could take at least an hour of their day collecting water. Also with girls, many of them do not go to school because besides primary school, it's not free and many do not see why a girl should continue their education. Instead many girls stay and work at home. Including making rice, cassava, maize, beans, plantains, and hot, spicy yams.

My cousin works for the Bureau of Conflict and Stabilization as an advisor in the State Department. She has worked in conflict for 12 years, including the Peace Corp. She has also worked with peacekeepers on the ISIS issue in western Africa. In her visit to Ghana, she had experienced many good sides of Ghana, like their great culture and hospitality, but also has seen this water crisis first hand.

Around 80% of families in Ghana do not have a clean access to water for basic sanitation and 85% do not have access to use clean water for cooking. They have three sources of water, including: community ponds, boreholes, and open wells. A community pond is used for animals to drink out of, kids to swim, and people to drink and bathe in. A borehole is supposed to have one for each household, but many of them do not work and could take several months for someone to come fix it. An open well is a well that has a bucket and you just drop it down and fetch water, but there are also many dead rats in there (Ghana's Water Crisis, 2020). There is also an open dam people use, which is infested with guinea worm. The problem with three of the four sources is that they are very unsanitary and can get many people sick from all of the different types of bacteria, including: worms and E. coli. Many Ghanaians are used to being sick, due to the fact that the poverty-stricken country cannot afford to help the citizens.

The solution to the water crisis in Ghana would have many steps, but would also trickle into many other solutions in Ghana. My solution would be to educate Ghanians on how to build more boreholes and fix the ones that they already have in the country. We could begin this process in local schools, or even in local universities and colleges by professors that have an understanding of how to fix a borehole. Boreholes work the same as a water well. You dig them deep into the ground to bring up water. They are built with a drilling rig that digs from 150 to 1000 feet to reach the water. They have a screen that surrounds it and keeps it from caving in and from contaminants from the surface. This source of water is tremendously cleaner than a community pond that has many diseases in it. If Ghanians can increase the numbers of boreholes and make them more efficient by fixing the ones already built, that will give the country cleaner water and get rid of the other unclean sources of water.

The strong suit of this solution is that it would create more teaching and production jobs for the 6.71% unemployed of the Ghanaian population, according to the Borgen Project. It currently takes months until someone can come out and fix a borehole, mostly because not many people are not educated on how to work on the boreholes. Another positive would be that many women and children could be getting more of an education and a guaranteed sustainable job. This project would positively affect the Ghanaian economy, by creating more sustainable jobs and leading to cleaner water for livestock, so they are healthy. Many women and girls wouldn't have to spend at least an hour fetching water from the community pond or a borehole that is further away.

Some problems would be that it would be expensive to get an educational program started and to get the right materials. This program could be funded by the United Nations (UN) through their Bill of Human Rights. In Article 25, it states, "Everyone has the right to a standard of living

adequate for the health and well-being of himself and of his family”(Universal Declaration of Human Rights. 2018). This means that every single human in the world deserves clean water and shelter. This bill helps with problems around the world like this one that is impacting Ghana . This Crisis should be a call-for-action by the government, who cannot promise their citizens that the limited water they can use won't have bacterial diseases in it. The unsanitary conditions are not acceptable for any human and animal to have to endure. Through this bill and funding, Ghanians would receive the jobs and bacterial-free water that they deserve.

Other ways of funding would be through educational grants and private investors (Yu, 2020). Some grants could include: the Crowder-Messersmith Conservation Fund, the Conservation, Food & Health Foundation, and the United Nation Women’s Guild Charity Programme. The Crowder-Messersmith Conservation Fund is a grant that promises children in third-world countries will have long-term educational benefits and programs. The Conservation, Food, & Health Foundation (CFH) gives grants to nonprofit organizations that will make lasting effects in their plan to better the area through the environment, food, and medicine. The United Nation Women’s Guild Charity Programme (UNWG) focuses on developing countries and children’s education in their respective countries. Children of poverty and other unfortunate circumstances could use this grant to set them up for a future after secondary school.

The price of building a new borehole is somewhere around \$5,500 to \$12,000 per construction of a borehole and the price to fix a borehole would be around \$1,775. A source of education would be the Kwame Nkrumah University of Science and Technology and their affiliated institutions around the country of Ghana. This program could start in areas that have a very limited resource of water, where they need boreholes drilled in the ground more urgently. As well as the abundant resource of water that is created using boreholes, the difference that will be made in gender roles will make a huge impact on female education for an even larger employment rate.

With our determination, grit, and dedication to the people of Ghana, we can change the outcome of the nation by creating a start to a non-dependable economy, a decrease in unemployment, and overall a better way to live. This starts with the World Food Prize Institute to create a great impact on the lives of many Ghanaians.

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