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Ghana, Water and Sanitation

Ghana: Water We Gonna Do?

Four years ago, I had the pleasure of meeting Mordecai Nsabaah, a foreign exchange student from Ghana. I didn't know him well, but all the times I was around him and all the stories I heard, showed how interested he was in the way we lived here in America. I remember at a soccer tournament (he was on my brother's team) the guys were being guys and throwing worms at each other. Well Mordecai freaked out because in Ghana they didn't touch the worms. This was the first time I thought about how different life was in another country. The videos I've seen of him back in Ghana where everyone's singing in the streets, celebrating events like Easter, have always spiked my interest in the country and what it's like there. When looking through the countries available to me for this project I saw Ghana on the list and realized this would be the perfect time to learn about this country I've been so interested in for the past four years. Then as I furthered my research I learned that 18% of the country doesn't have access to sanitary water. They are getting their water for everything from streams and open bodies of water. This water carries all sorts of unknown diseases and bacteria that could be harmful without proper cleaning. Upon further research I was introduced to the fact that 81% of people don't have access to improved sanitation and were forced to resort to open defecation or the act of publicly defecating.

Ghana is a small country in Northwest Africa along the Gulf of Guinea. It is home to 28.83 million people with an urban population of 50.06% and a rural population of 43.94%. The government is a Parliamentary Democracy which means the people vote directly for their president without a need for an electoral college. Their President is William Addo Dankwa "Nana" Akufo-Addo and each president gets one, four year term. The country is located only a few degrees north of the equator making it sweltering year round. This is an economical benefit

for residents since they don't have to heat their homes. The average household houses four to five people. The majority of Ghanians live in average houses like you and me. Two different types of housing that interested me for several reasons. First the Traditional House, it's been around since the 10th century and is constructed from locally available materials like mud, thatch and grass, which makes it very undurable, but cheap. They usually are either built into a hill or are made in a circular shape. Second, is a Toa home, these homes could help solve a lot of environmental problems and should be used more commonly worldwide. It's made entirely from recycled water bottles which makes it incredibly environmentally conscious and cheap. (Agyei). A home that is stable, cheap, and good for the environment is perfect for Ghana since it's the most expensive country to live in in Africa and 21st most expensive country to live in on the planet. Despite the fact that 56.9% of the population is living in poverty. A diet in Ghana consists of locally grown foods, as it is difficult and expensive to import things to Ghana especially the rural parts and you can buy things from small outdoor markets. Most countries have an import budget which is quickly reached. The government puts a limit on how much they're allowed to import. So only the most important are brought in and luxuries are not. (Middleton). Crops are few since the average farm is less than an acre of land. Farming is an unsteady job in Africa. Depending on rainwater to make their crops survive and thrive since irrigation systems are expensive and don't have proper plumbing systems to connect to. (What Climate Change). Other than farming, common careers in Ghana are: Hauling, Cement Block Manufacturing, Tailor, and Service. The average wage is 61,320 GHS a year which equals \$10,660.56 in American currency. The country is currently facing a water crisis, 18% of people don't have access to clean water. This can cause contraction of water spread illnesses like: diarrhea, cholera, dysentery, typhoid, and polio (Unsafe Drinking Water). Diarrheal deaths make up 25% of deaths in children under five in Ghana. This issue is worsened by the fact that 81% of people in Ghana don't have access to proper sanitation. Many don't have access to any sort of waste disposal. Meaning citizens in these areas are susceptible to fecal diseases. There must be something that can be done!

The country realizes the problem and is receiving 155 million US dollars from the World Bank. This funding is going to families living without proper sanitation in urban areas. They're funding building restrooms in homes without them. I believe that there are smarter ways to use this money. Like building wells and building public restrooms that more people can use. There's roughly 4 million in Ghana without a toilet private to their family. I can't imagine having no bathroom, but also no clean water. As I stated earlier 18% of the country doesn't have access to clean water leaving them at risk to many diseases. There are options available to them like rainwater harvesting equipment, wells, and latrines. The problem is these come with a large upfront cost that most can't afford. Since over half of the country is in poverty. As of 2016, 56%

of Ghanaians were living below the poverty line. Although this number seems high, it's an improvement compared to 1998 when 86% were living in poverty. What happens when they don't have access to a toilet? The disgusting reality is that 18% of Ghanians are resorting to open defecation in places like fields, open bodies of water, beaches, and several other locations. This causes the spread of many diseases like E. Coli especially through water. Which is why it's important that not only they have access to clean water, but that the water can stay clean. Since the issues of sanitation mainly affect those lacking the funds to install systems someone needs to take action to help these people.

Every well built can provide clean drinking water for 2,000 people. There's a charity that's been working to build wells across other countries in Africa like Malawi and Mozambique. It's called WWFA and bringing the organization to Ghana would have a great impact. Not only would building these provide clean drinking water and a healthier lifestyle for millions. The process of building them offers more job opportunities which may help with the poverty issue. Each well costs about 8,000 USD depending on many factors like location, labor wages, materials, depth, and type of pump (Water Wells). Broken down it costs four dollars to supply a single person with water for up to 20 years. That's less than the cup of coffee you go get everyday from Starbucks. To supply the 23 million without safe water they'd need to build 11,500 wells. Which means a funding of 92 million needs to be funded. This can be done many ways such as: donations, through taxes, or through a sponsor. This may solve the problem for clean water, but many still don't have access to restrooms. Trying to put a bathroom in every house is a long shot and the dream situation. If public restrooms could be built they could help many at a time and cost less. Still, building these would offer more jobs for people who would build them and clean them. A building with even 10 stalls could support hundreds of people if need be. Even if they aren't the greatest or the cleanest it's better than the current situation. We shouldn't settle for less than the best, but in dire situations we need to work fast to help these people. In Tanzania there was research done on E. Coli presence in public restrooms vs. private latrines. Research showed the E. Coli presence was much slimmer in the shared spaces. Shared spaces are actually now considered protective against E. Coli bacteria. (Erb). One issue with the shared restrooms is that the caretakers lock them at night. So there isn't 24/7 availability to the facilities. So in those times open dedication is the only available option. If restrooms were open all the time it would more largely benefit the public. This does leave time for vandalization of the facility and costs more to keep them running over night. The Bill and Melinda Gates foundation recognizes the issue of open defecation. They are sending help to South Africa, East Africa, and China. Getting the top ten percent to see the issue and care about it is an important step in the process. This

project needs a large sponsor, be it a billionaire, a company, or the government. Money will have to be put upfront.

As with any solution there is a downside. Since this is something that costs less there is more downsides. Spread of bacteria is one. The rope is difficult to clean since it's made of fabric. Also you have to use a bucket to pull the water from deep underground. The water is heavy and its difficult for elders and children to raise. It's also not ideal for pregnant women who aren't supposed to do heavy lifting as it puts stress on the fetus which may result in miscarriage. Public latrines are also often given hours. So they aren't always available to the public. With those there's also a risk of bacteria spreading if not cleaned thoroughly and properly. Which is another expense, cleaning supplies. Funding would also be need to pay workers for building and cleaning. Water bills and electricity.

You wouldn't expect the impact this has on education. 115 Million primary aged Africans aren't in school 66% being girls. What does this have to do with water and sanitation you may ask? Most of the time young girls have to spend their days collecting and sanitizing water. This does not give them time to go to school and get the education they need. (Sanitation and Education). Without a proper education these children have slim chances of getting a good job and improving their lives.

I hope this may spark ideas. You may be wondering, "Where's Mordecai now?" After graduating high school back in Ghana he returned to Clear Lake to attend school at North Iowa Area Community College. He's studying business and lives with a friend of mine, about a block away from my house. As of May he graduated from NIACC and is now attending Waldorf to play soccer. Luckily he had the opportunity to come to America unlike many. I'm not sure how the conditions were in his area, but from my understanding there aren't many places where there are good conditions. I think as Americans we take things like toilets and clean water for granted. When we were kids they told us to turn off the sink while brushing our teeth and we just rolled our eyes. The fact that water is a luxury in some places is insane and I think if everyone did this research, we as a species would be more willing to band together to help each other. We as humans are notorious for being selfish. Not understanding or caring about problems that don't directly affect us. Lets get better and make a difference.

Bibliography

Agyei, Rita. "Types of Houses In Ghana." *Meqasa Blog*, 15 Jan. 2019, meqasa.com/blog/different-types-of-houses-ghana/.

Erb, Stefan, et al. "High Prevalence of ESBL-Producing *E. Coli* in Private and Shared Latrines in an Informal Urban Settlement in Dar Es Salaam, Tanzania." *Antimicrobial Resistance and Infection Control*, BioMed Central, 6 Jan. 2018, www.ncbi.nlm.nih.gov/pmc/articles/PMC5756337/.

"Ghana - People Practicing Open Defecation." *Ghana - People Practicing Open Defecation*, www.indexmundi.com/facts/ghana/people-practicing-open-defecation.

Middleton, John F.M., and David N. McMaster. "Transportation." *Encyclopædia Britannica*, Encyclopædia Britannica, Inc., 14 Aug. 2020, www.britannica.com/place/Africa/Transportation.

"Sanitation." *Related UNICEF Sites*, www.unicef.org/ghana/sanitation.

"Sanitation and Education: How Poor Conditions Keep Children Out of School." *Lifewater International*, 17 Dec. 2014, lifewater.org/blog/sanitation-education/.

"Unsafe Drinking-Water, Sanitation and Waste Management." *World Health Organization*, World Health Organization, 4 Aug. 2016, www.who.int/sustainable-development/cities/health-risks/water-sanitation/en/.

"Water Wells for Africa." *Water Wells For Africa*, waterwellsforafrica.org/whats-the-cost/.

"What Climate Change Means for Agriculture in Africa." *One Acre Fund*, oneacrefund.org/blog/what-climate-change-means-agriculture-africa/.

"The White House Building." *The White House*, The United States Government, www.whitehouse.gov/about-the-white-house/the-white-house/.