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Ghana: A New Approach to Clean Water

The country I have researched is Ghana, located in west Africa, Ghana in 2020 had around 57.3 percent of its population living in urban areas and around 42.7 percent of its inhabitants living in rural areas. Ghana's government is a Constitutional Democracy, which is very similar to the United States of America's government. Nana Akufo-Addo is the current president of Ghana and has currently served in office since 2017 for a total of two terms which will end in 2025. Regarding its cultivated land, "About 136,000 km2 of land, covering approximately 57 % of the country's total land area of 238,539 km2 is classified as "agricultural land area" out of which 58,000 km2 (24.4 %) is under cultivation and 11,000 hectares under irrigation. About 60 % of all farms in the country are less than 1.2 hectares in size, and 25 % are between 1.2 to 2.0 hectares, with a mere 15 % above 2.0 hectares. This means the farm size is less than 1.6 hectares. Small-size and medium-size farms of up to 10.0 hectares account for 95 % of the cultivated land (SRID, 2001)" (*Ghana at a Glance*). the crops produced are mostly oil palm, cocoa, coffee, and rubber. Edible foods range from palatine to yams, cash crops are cotton and tobacco. According to Ghana's Ministry of Food and Agriculture, the average farm size is about one acre. In Ghana, it is typical for it to have a tropical climate since it is close to the equator similar to Florida.

In terms of family structure, the typical family has a mother, father, their children as well as the parents' aunts, uncles, nephews, nieces, etc. The typical household has the whole kinship, and they typically live in a compound and apartments, not much different from America. What they eat on the other hand is much different, in Ghana they tend to eat foods with many spices' fruits, and vegetables. A common food is called 'fufu' it is mashed cassava and yams and is normally served with some type of stew or curry and is eaten with the whole family. Families mostly grow their foods or get them from a market and are cooked over an open flame or stovetop. "Ghana's abundance of natural resources may be an important factor in terms of GDP, but when it comes to employment, another sector is the leading force. More than half of the population is working in the agricultural sector." (Working and Getting a Job in Ghana) This goes to show that the country relies heavily on agriculture to provide jobs, food, and economic stability. Farmers can make anywhere from 690 Ghanian cedi which is around 88 U.S. dollars to 1,550 GC, equivalent to 200 USD. Families have access to healthcare, and it is affordable as stated by (Farmer Average Salary in Ghana 2022). Regarding healthcare "Access to health services has increased. In rural communities, health posts are the primary healthcare providers. A 2019 study found that 81.4% of the population had access to primary healthcare in Ghana, while 61.4% have access to secondary-level, and 14.3% to tertiary care." (Thelwell) The families in Ghana have more access

to cell phones than they do to toilets as stated in the following." In Africa, less than one in three people have a proper drainage system, half of the population live in areas without paved roads, and only 63% have access to piped water. Yet, 93% of Africans have cell phone service." (*Parke*) This is also happening in other parts of the African continent like Zimbabwe, and Malawi.

A major barrier that many families face, is the lack of transportation to local markets. In Ghana, most people walk to get groceries and clean water. There are not many cars for people to carry large amounts of food which can make it hard for families to eat healthy meals. Plus, they are also stretching extraordinarily little money for a whole month for many people. This is a major issue regarding the water and sanitation situation.

It is concerning that more people in Africa have access to phones than to running water, which is essential to life. "Ghana has made significant progress in providing basic water services at the national level. However, only 36 percent of people use a safely managed water source, while only 18 percent have access to at least basic sanitation. Maintenance and management of existing infrastructure also remain a challenge, as population growth and draining of wetlands combine to make water scarce, and rapid urbanization is further stressing access to safe drinking water and sanitation in cities." (*Ghana*)The fact that less than 50 percent of the population has access to clean water is a cause for concern. This issue has become more controlled, but it is still a call for action. Something that contributes to this is the fact that Ghana deals with a lot of polluted water as well as the issue of the rapid urbanization of the land.

Rapid urbanization leads to unsafe housing for families. It affects everyone who is in the area, especially in rural areas because the lack of clean water can have a huge impact on the growth of cash crops and plants that are used to feed families and strengthen the economy. It can affect the urban areas because it can make people sick with cholera, which is a disease that affects the small intestine, it is generated by a bacterium that comes from unclean water. According to academiccommons.columbia.edu "Some women are not able to have the ease of access to toilets and this causes women to hold onto their bodily fluids, which can lead to chronic health issues" It also states, "According to the World Vision, on average 72% of household water is collected by women and 14% by children." Diseases such as diarrhea can be caused by the lack of proper clean water and lead to malnutrition and health issues It is the same with children. With men, however, it can have the effect of making them sick which can lead to them not being able to work to provide for their families. This affects everyone, no matter what their social class is or who they are. The effect of polluted water is that it poisons the crops and makes It harder to farm.

A great solution would this crisis is to have better water filters that could help separate the waste and purify the water consistently." Surface water is water from rivers, lakes, or freshwater wetlands, which can be treated using different methods, such as Ultrafiltration Systems, and Brackish Water RO. Desalination can be used for water from the ocean, or sea source, which can be treated using Seawater Reverse Osmosis Systems; Desalination Systems Ground Water or brackish water is from water located in the pore space of soil and rock "Borehole well", which can be treated using Reverse Osmosis Systems, Chemical Dosing, UV Water Sterilizer." And "Government water supply, which could have a high level of hardness or high level of chlorine, can be treated with Water Softener System, or Media Water Filters Though, a major challenge that can stem from this is maintenance." (*Home*) It would be costly due to the economic state of the world, and it would be hard to find volunteers to do hard labor for cheap. But it would also offer more jobs that have the power to allow individuals to earn more money so that families can have more access to a better quality of life. This can work by providing classes to students while they are in school so they can learn more about their future jobs. It would also encourage people to reach for higher-paying job opportunities so that they would be able to pay for higher-quality food to feed their families.

Another solution would be to stop the rapid urbanization and focus on the land that has already been urbanized. The government is not able to effectively sustain the building processes. "They also build as and when they can afford to. Buildings may take years to complete – long enough to develop structural problems even before work is completed, partly because materials and incomplete sections are exposed to the weather." (*Ghana's Unstable Building Problem Is About More than Lax Regulation*) This shows that Ghana is having some economic struggles, and poor management when it comes to the housing policy.

The people who would manage this project would be The United Nations because it would help build stronger positive relations between countries as well as help put an end to people living without basic human necessities. This project can be funded through grants or nonprofit organizations that pay individuals who are knowledgeable about planning where there are areas best suited for housing to advise on building projects in Ghana. The Government can help by providing a layout of the geography of the land as well as providing areas for wells to be built closer to families' homes. The community could help by pointing out areas they frequent to help developers build in areas that are easily accessible to the public.

This project would need to be performed by people who can be culturally sensitive and understand that not everything is like their home country. For example, if the people in the community don't feel like they would be safe then we need to have them express where they would feel more comfortable having the wells placed. This would take a lot of community effort and participation seeing that we want everyone to have a say and an opportunity to voice their concerns. An easy way to accomplish this would be to have an anonymous tip ballot that people could fill out with any concerns they may have.

Policies would need to be put in place so that they will encourage everyone to take what they need, not what they want until there are changes on how accessible clean water is. Also, there would need to be a provision for those who do not have immediate access to clean water to have the opportunity to do so first. Cultural norms that would need to be taken into consideration would be that families eat together and the new jobs that would be provided would need

employers that can understand that family is important. This is where cultural sensitivity come in seeing as women would more than likely oversee domestic home life as stated, "In almost all parts of Ghana, the general practice is for mothers and their female relatives to be responsible for the early care, training, and discipline of children." (*Boateng*) This project would be sustained by the growth of Ghana's economy; The people would be able to better provide for their families and produce better crops that would be able to be traded and sold for more so they could keep the system going on for years to come.

In conclusion, there is a need for people in Ghana to have clean water. It is not going to be an easy fix, but it can be done with the right knowledge, support, and resources. Ghana is a very traditional country that has its practices, traditions, and beliefs, but the country needs help from others around the world to help families have access to clean water within their communities. It would benefit all its inhabitants, including the people, animals, and plant life. This plan could be a step in the right direction to Ghana being a better and long-lasting country.

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