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Uganda, Factor 9: Water & Sanitation

Uganda: Food Security and Water Sanitation

The country of Uganda first won independence from Britain in 1962, and has since struggled with several major issues. After winning their independence, Uganda was overtaken by Obote. Obote was dictator of Uganda from 1966-1971, when Idi Amin took over the country. It is reported that between 100,000 and 500,000 people were murdered or tortured while Amin was in power (historyworld.net). In 1980, Obote was voted back into office with an official election, but was driven out once again only five years later. In 1986, President Yoweri Museveni was elected. There is a lot of controversy regarding Museveni as president. He has been president for 30 years and counting, and some theorize that he has been lying about his age in order to remain president. With all that was going on with the Ugandan government, food security and water sanitation slipped through the cracks. Today, Ugandan citizens suffer from various issues such as food shortage, malnutrition, and poor water sanitation. Each of these issues is extremely prevalent throughout the entire country, and each problem causes thousands upon thousands of fatalities per year. People of all ages, both in rural and urban areas, are affected by each problem accordingly. If we do not help Uganda with these problems, this country has the potential to crumble. With the possible solutions I present in this essay, Uganda has a chance at a better future for its entire people.

During the dry season, the 40.4 million citizens of Uganda can expect no more than three inches of rain. This makes crop growth increasingly difficult and slow, leading to a shorter harvest season, and therefore, making food more scarce and expensive. According to a study by News Vision Uganda, 63% of families in poverty live on less than $2 per day, and if they cannot afford the higher food prices, those families will not get enough to eat. More than half of the people within Uganda are living in poverty of various levels of severity, with most of these people living in the rural areas of the country where most of the farms and small villages are located. Because the rural areas are so far away from the urban cities, getting healthcare or certain supplies can be difficult. According to newsvision.co.ug, malnutrition is the cause of death in 60% of babies and 25% of mothers, more commonly in rural areas. The rural areas of Uganda often consist of poor families and farming communities. Even those who can afford high food prices in Uganda are not getting the proper nutrients from the food they eat. Pregnant women especially are often not getting the nutrition needed to sustain proper health in both her and her unborn child, because of a lack of diversity in their diet, and certain superstitions towards some foods during pregnancy. Pregnant women in Uganda are forbidden to eat certain herbs such as Ensugga (a common spinach-like plant), for fear it will harm the child and cause he or she to over salivate, which is generally frowned upon, as it causes the child's clothes to be wet. An expectant mother naturally needs more of a supply for her and her child. What happens when a pregnant woman misses out on these important vitamins can be disastrous for both mother and baby. In a study done by the Ministry of Health, women who were malnourished before, and during their pregnancies, had a higher chance of dying in childbirth and delivering stillborn or malnourished babies. In addition, malnourished mothers are known to give birth to premature and underweight babies. Children who lack the proper nutrients, especially Iron and Vitamin A, are at a higher risk for stunting, which is the inability to grow as fast as the average child, and even death (USAID). A 2010 study by USAID indicates that malnutrition starts very early for young children in Uganda. It is proven that 11% of infants are already suffering from stunted growth rates at birth due to the absence of these nutrients. Any person lacking in Iron can become anemic, and while anemia can be cured, it can only be done by eating a proper diet and getting iron supplementation. Iron supplements are generally hard to access for most people throughout the country, especially for those who reside in the rural areas of Uganda. Mothers who are malnourished will not be able to supply the needed nutrients that usually occur in breast milk, and it is shown that breast milk is very beneficial to children during the first

year of life. Breastfeeding is known to help with brain growth and early development, as well as supplying sufficient Iron and Vitamin A. However, because of superstitions and a lack of breast-feeding knowledge, mothers are not taking advantage of the free nutrients their bodies produce.

There are three essential macronutrients needed for a healthy body to have the energy to flourish: carbohydrates, which mostly consist of sugar, lipids, which are fats, and proteins, which help build muscle mass inside the body. Each of these three macronutrients are the building blocks for the creation of the energy needed to live a healthy life, all of which many of the people of Uganda are missing out on because of a lack of diversity in their diet. The most common foods eaten in both rural and urban areas are Matoke and Posho, which contain very little of the required nutrients, but contain a lot of starch and simple sugars. Matoke is a classic Ugandan dish made of fried plantains, onions, peppers, garlic, and a meat broth which is traditionally beef. Posho is a more commonly served dish and a Ugandan favorite, which is made of crushed cornmeal. The lack of nutrients in these two commonly eaten foods is causing many of the Ugandan people to suffer from malnutrition. A solution to ensuring the macronutrients become a part of the people's diet could be something as simple as revising the recipes of these two favorite Ugandan dishes to include a better variation of carbohydrates, lipids, and proteins.

Malnourishment makes people of any age more susceptible to disease, and a malnourished body does not have the proper nutrients to fight off infection. It is likely that those who do get sick will not recover quickly or may even die. Poor health and lack of proper healthcare is a devastating combination. Healthcare is mostly stationed in the urban cities of Uganda, far from the countryside where most of the population lives. Not only is healthcare harder to access for some people, it tends to be very expensive. Since proper care is so difficult to access and sometimes hard to pay for in the countryside, many people often resort to unsanitary practices in a makeshift facility, which are not always sterile. These unsafe practices often lead to a higher rate of infection and disease. The Ugandan government spends $254 million per year treating cases of diarrhea, anemia, and respiratory infections linked to malnutrition in people of all ages (wfp.org). That is $254 million dollars that could be going towards things like improved water sanitation, healthcare, education, or better water distribution throughout the country. The malnutrition crisis in Uganda can be helped or even fixed if each citizen of Uganda received proper food education from trained nutritionists and healthcare professionals, and started growing their own crops. However, gender inequality in Uganda creates a barrier for implementing the needed education.

In a recent study done by USAID, gender inequality is an extreme factor in poverty and a lack of food security throughout the country. Because gender inequality in Uganda happens to be very prevalent, women do not often make as much money as men, if they happen to make money at all. Women in Uganda are seen as property to their husbands making it very difficult for those women to space the timings between their pregnancies. A lack of timing between pregnancies leads to bigger families, and making it very hard for each member of every family to have good food security and nutrition. Women and young adults in Uganda do more work in food harvesting and preparation than men. Therefore, if more of the male population were to start working in food production, the amount of work it takes for each family to grow and harvest their own food would decrease by half. Homegrown, varied crops can help ensure the amount of food that each family gets, therefore decreasing the amount of disease linked to a lack of nutrients and poor eating habits, and increasing food security as a whole.

Another aspect of this crop-growing solution can even extend into the younger generation through the school systems. Schools in Uganda and other African countries are starting to create gardens outside their schools in which the students themselves tend. According to the FAO, a garden outside their school can teach children how to plant and harvest for themselves through hands on experiences and learning. If each school were to have a school garden, each student could learn how to take care of him or herself by what they eat. Students could learn how to grow and maintain their own crops during times of crisis. Examples of crops that could be grown that are rich in nutrients include vegetables such as carrots and potatoes, grains such as corn and wheat, and fruits such as tomatoes, and mangos. Although expensive at first, the

overall effects on the growing population would be priceless. However, in order for this solution to be successful, water sanitation must also be addressed.

An issue with homegrown crops is the lack of a clean water source for the plants themselves. Contaminated water could make the plants, and the people who eat the plants, very sick. Although Uganda is home to Lake Victoria, which is incidentally the largest man made reservoir of the Nile River, the people of Uganda still have trouble accessing clean and safe water. Water sanitation has always been an issue in Uganda. 8.4 million citizens do not have access to clean water and 31.5 million do not have access to improved water sanitation. The human body can only go three days without water before the vital organs begin to shut down, and since there are not many ways of accessing clean water by the poverty-stricken rural areas of Uganda, those who live there rely on contaminated water sources, such as streams or still water in wells (water.org). According to a 2010 study by Cso.Uganda, the country's population continues to grow by 3% every year, which happens to be among the largest in the world. With the amount of people presently living in Uganda, it makes water sanitation and hygiene education very difficult to reach each and every individual. The money supplied for the general public is not enough to cover the demands of expansion and replacement rates in water sanitation, making it increasingly difficult for people living in poverty to find clean, safe water. The use of contaminated water can lead to water-borne diseases, which can be dangerous, or even fatal. Recent studies show that 17% of all deaths in children under five occur due to diarrheal disease. Poor hygiene is also common in the rural areas of Uganda, and with no one to educate them on proper hygiene practice; disease becomes very prevalent throughout the whole country. People often defecate or urinate out in the open, rather than in latrines which are legally required to be outside each public building. Those who do use the latrines often do not have a water pump with soap to wash their hands, which spreads bacteria and can lead to various types of disease. The main diseases caused by poor hygiene are trachoma and general infections. These illnesses combined with poor access to proper healthcare and malnutrition can make something as seemingly simple as the common cold, fatal.

Solutions to the water problem in Uganda are not easy to come by, as it is very expensive to keep and maintain the expensive system required to make sure uncontaminated water is provided to each and every citizen. Water-borne disease and bacterial infections can be greatly reduced if the government were to fund healthcare professionals to teach the people of Uganda better hygiene methods, as well as how to access clean water. Simply providing a hand-washing station at every latrine is enough to decrease the number of diseases treated each year. These programs can also be integrated into a school's curriculum, to provide the students of Uganda with proper hygiene education and ways of finding clean and safe water, teaching them ways to better take care of themselves. As we slowly fix other problems within Uganda, the country can eventually afford to pay for water sanitation and hygiene education as a whole. However, until these funds become available, the best solution for poor water sanitation is to teach and practice proper hygiene methods.

Once Uganda has stabilized health care options to help end malnutrition, this country's next goal can focus financial energy into water sanitation. In a recent technological development by Jung Uk Park, Myeong Hoon Lee and Dae Youle Lee, a water purification device known as the Life Sack was created. The Life Sack uses Solar Water Disinfection, also known as SODIS, to kill off all of the bacteria that may reside in contaminated water. Bacterial and pathogenic substances are vulnerable to the two components of natural sunlight, the first being the radiation from the UVA rays and the second being heat. The two combined are proven to kill most, if not all pathogens within contaminated water (sodis.ch). The Life Sack also happens to double as a sack for grain and food transportation. The distribution for these effective and inexpensive devices can be done by the military or through food shipments throughout the country.

As for solutions to food security and malnutrition, it is believed that we should start within the Ugandan schools. Though few children actually happen to go to school for a prolonged period of time, if

professionals are sent in to educate the children on the importance of hygiene, or how to grow their own food in times of crisis, they will teach their peers and their parents what they have learned. As hygiene and food education is brought throughout the country, less people will come down with infectious diseases regarding water contamination. Theoretically, since less people will come to healthcare centers, the amount of money that Uganda spends on emergency healthcare will decrease dramatically. With these leftover funds, Uganda can potentially afford to start a community or school garden within each and every village. The gardens can help teach children and other residents how to grow the food needed for a balanced diet and help them learn how to take care of themselves. If the school gardens happen to work, the amount of malnourished and starving people in Uganda could be almost nonexistent, and the diseases related to being malnourished will be lowered.

Uganda has several major problems: malnutrition, lack of general hygiene, and water sanitation issues due to contamination. Each problem contains a vast amount of needed education, lifestyle changes, and money, none of which will happen overnight. These issues are extreme and very real to the population of this country. People of all ages, both in rural and urban areas, are affected by these problems on a daily basis. If we do not help Uganda with these problems, this country has the potential to crumble. However, with the varying solutions stated earlier, Uganda has the potential to provide the people better access to healthcare, better food security, better water sanitation, and better hygiene education. Hundreds of thousands of Ugandan citizens die each year due to consumption of contaminated water, a lack of food, and malnutrition caused by a lack of food. All of these problems tend to go hand in hand, and if we fix one, we can eventually fix them all. If we solve these problems, the country of Uganda has the potential to become a better and safer country for each and every citizen.

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