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Togo, Factor 9: Water and Sanitation

### **Rescue of the Togolese: Providing Clean Water and Sanitation**

Six hundred and sixty-three million people in the world lack access to improved water sources, and 2.4 billion people lack access to improved sanitation facilities (World Health Organization 1). One country that contributes to this high number of people is Togo, a small country in Western Africa. Lack of clean water and access to sanitation facilities can cause many problems for the people in Togo. The education of children, poverty rates, and agriculture are just three examples of what can be affected. Most importantly, the lifestyles of the people in Togo can change when there is not enough clean water for families or when there is not easy accessibility to sanitation facilities. Even though there are many problems that lack of clean water and poor sanitation bring to Togo, food scarcity is one of the biggest issues that is affected. Availability, quantity, and quality of food are three components included within food scarcity. Food quality, one of the essential components of food scarcity, is affected the most in Togo due to lack of clean water and sanitation facilities because of the contamination of water and food sources (Chasse para. 2). Food scarcity is a problem that should be solved in all countries because of the negative effect it produces. Food scarcity, along with the three components of food scarcity, can worsen in any country when the water that is provided is unsafe to use and the sanitation does not meet healthy standards. There are many solutions that can help improve sanitation and water quality in an underdeveloped country. Although lack of clean water and poor sanitation negatively affect food quality, the people in Togo can help implement and utilize solar powered water pumps, potable water chlorinators, and latrines that supply access to safer, clean water, which can improve food scarcity.

Togo, officially known as the Togolese Republic, is slightly smaller than West Virginia and has a population of about seven million people (CIA). More than thirty-seven ethnic groups, or tribes, make up the Togo population, called Togolese, with the largest and most important groups being Ewe, Mina, and Kabre. (CIA). The official language in Togo is French, but other languages such as Kabye and Dagomba are also practiced. Togo is located between Benin and Ghana, and due to its size and location, climate varies from tropical to savanna. Most of the Togolese experience a hot and humid climate and a normal level of precipitation but have had periodic droughts in the past (CIA). Overall, Togo's size, location, and climate are beneficial to the Togolese.

Even though Togo has a moderate climate, most families still struggle with maintaining a healthy lifestyle. According to UNICEF, 81.2% of Togo's rural population live under the poverty line. Most of the Togolese make less than two dollars a day, making it one of the world's poorest countries (UNICEF 1). Health care standards are also low in Togo with only 225 doctors available in 2014 (Department of Immigration and Citizenship 12). Since Togo also lacks medical facilities, health problems are “compounded due to lack of infrastructure” and it can be difficult to pay for a doctor (Department of Immigration and Citizenship 13).

Because poverty rates are so high in Togo, most families do not have money to pay for public services such as education. A “traditional Togo family has up to five children in it,” but with lack of money, it can be difficult to provide all children with education (Department of Immigration and Citizenship 10). Children typically spend “6 years in primary school and seven in secondary school” (Department of Immigration and Citizenship 12). In 2000, the secondary school enrollment rate was even lower with 30% for boys and 14% for girls, but the government has been working on providing a free education for poorer families (Department of Immigration and Citizenship 12).

While Togo faces many challenges and struggles due to the high poverty rates and lack of education, the major problem there that creates additional problems for Togo is food scarcity. The Togolese are greatly affected by lack of nutritional foods. Foods eaten in Togo include rice, maize, beans, and fufu, but most families do not have enough money to pay for these foods, which leaves many families with lack of healthy meals (RPCA 2). The low percentage of healthy grain production, which is only 3.9%, contributes to the 1.1 million people in Togo who suffer from undernourishment and malnutrition (Mensah 38). Because of the undernourishment and malnutrition rates caused by food scarcity, 16.6 % of the Togolese are either severely or moderately underweight (UNICEF 1). As shown by the high number of Togolese who are undernourished and not fed properly, food scarcity is a huge problem in Togo.

Because food scarcity is a major problem in Togo, the economy is low. Right now, the economy of Togo ranks 156 in the world (CIA). Its economy is mostly dependent on agriculture, which “provides 60% of the employment” where food production takes place (CIA). Because the agriculture is very important to the economy and is the leading employment source in Togo, most of the Togolese work on farms to provide money for their families. If water and sanitation are properly managed, the Togolese can “contribute to decent work and economic growth,” but if there is poor management of water and sanitation, the economy could experience unfavorable changes and be negatively affected (United Nations, 2).

Because water is needed for agriculture, water that is unsafe to use is a factor that increases food scarcity. Whether it is for growing crops, or raising animals as a source for food, the Togolese need clean water. Clean water is needed to water crops and plants because crops and plants are a source of food for the Togolese. Dirty water used for the crops and plants will result in the poor quality of food. Clean water is also needed to make sure that animals, which are also a source of food, have a clean drinking supply. If animals have clean drinking water, the quality of their meat will improve, leading to safer food for the Togolese to eat. Even though clean water is needed in Togo, it is not granted. Water in Togo is not clean because of the contamination caused by improperly disposed chemicals, animal waste, and naturally occurring elements in groundwater (White, para. 7). Unfortunately, in rural areas of Togo, 43% of the population do not have access to clean water, while in urban areas, 90% of the population do not have access to clean water (UNICEF 1). Having no access to clean drinking water within a thirty-minute walking distance is also a problem for a quarter of the Togolese (UNICEF, 1). Having clean, safe water is essential for a well-balanced life, a healthy diet, and the improvement of food scarcity. By managing clean water, the Togolese will “be able to better manage their production of food” (United Nations 1).

Not only does lack of clean water affect food scarcity, but poor sanitation does too. Proper sanitation is needed to make sure that food is safely handled and free of bacteria and contamination that is caused by the improper disposal of human waste. Bacteria can be passed onto food in Togo due to poor sanitation because of the lack of healthy practices such as cooking with clean utensils and hand-washing (Action Against Hunger, para. 2). Inadequate waste disposal also drives the infection cycle of many agents that can be spread through contaminated soil, food, water because of the bacteria that is passed (Chasse para. 1). Safe waste disposal can not only “ensure that the environment is free from contamination by human feces,” but it can reduce “fly and mosquito breeding,” which is also another way food is contaminated (Sphere Project 71). The contamination of food, caused by improper sanitation, results in the quality component of food scarcity being negatively affected. In Togo, an estimated 6,000 people per year were losing access to improved sanitation facilities (AMCOW 24). In the rural parts of Togo, only 10% of the population have access to adequate sanitation facilities (UNICEF 1). Because having “proper sanitation is needed to keep the environment clean and to prevent the contamination of food,” the chance of food contamination will decrease, therefore, improving food scarcity, if proper sanitation practices are installed in Togo (United Nations para. 5).

Because poor sanitation leads to the contamination of food, the Togolese are at risk for developing

disease. Most importantly, the children of Togo can develop illnesses, such as diarrhea, which keeps them from attending school (World Health Organization para. 7). Approximately 137 liters of water is also needed at home to be used for many things including cooking and drinking (Morelli para. 3). Because of this, children also miss school because they must help their families collect water, which can take up a large portion of their day (World Health Organization para. 12). Improved access to sanitation facilities and a drinking water source could not only improve food scarcity because of the quality of the food, but children can have the opportunity to receive a better education and, thus, learn more about hygiene practices. (World Health Organization para. 13). Learning more about healthy hygiene practices and spreading awareness about the importance of clean water and sanitation is one way the Togolese could help implement solutions to improve the issues in Togo.

Currently, only 11.9% of the Togolese population have improved sanitation facility access and 88.4% have unimproved sanitation facility access (CIA). The percentage of Togolese with improved drinking water source is 63% (CIA). Unlike the improved sanitation facility access, the improved drinking water source is higher than the percentage of Togolese with unimproved drinking water source, which is 36.9% (CIA). This shows that Togo has been improving on providing clean water and proper sanitation but there is still not clean water and sanitation provide for everyone.

Even though lack of clean water and proper sanitation are growing issues in Togo, the Togo government has overseen the improvement and progress of food scarcity. Togo currently has a presidential republic type of government with Faure Gnassingbe as their president (CIA). Faure Gnassingbe has led the country to “political reconciliation and democratic reform”, which has led to the improvement of many issues in Togo, including lack of clean water and inadequate sanitation, which are two factors that impact food scarcity. (CIA). In 2014, the Togolese government made six commitments aimed at solving the country's water and sanitation issues, including "political prioritization" of high quality sanitation and "increased funding for clean water provisions" (Riebl para. 8). Since 2014, the Togo government has prioritized sanitation and clean water by "adopting a clear investment plan that enables financial resources to be used towards the improvement of dirty water and poor sanitation" (AMCOW 5). The investment plan puts into action a "coherent and comprehensive system for monitoring" water and sanitation activity in Togo (AMCOW 5). In February of 2018, the government Togo created a "new ministry of hydraulics, sanitation, and water access in rural areas" (APA News para. 1). Currently, Togo has also made progress with two of their commitments and are still working on solving these issues. These commitments have helped improve food scarcity so that the Togolese can receive better quality food.

Solutions that can help give the Togolese, and people from other underdeveloped countries, safe water and sanitation incorporate appropriate technology that is “simple enough that people can manage it directly and on a local level” (Isa para. 1). One appropriate solution is installing solar-powered water pumps. Boreholes have been used in developing countries in the past, but solar powered pumps are a more effective solution. Boreholes are holes made into the ground to retrieve water, but solar powered water pumps treat and store clean water in tanks while the sun is shining instead of using batteries, charge controllers, or inverters (McSwain, "Solar Powered",1). Appropriate technology uses renewable sources such as energy from the sun, and the solar power water pumps do exactly that (Isa para. 4). Not only can solar powered water pumps serve more people at once and require no electrical power grid, but they also reduce power costs (McSwain, "Solar Powered",1). Other advantages of solar powered water pumps are that they "provide high levels of service in remote areas" and can distribute water from both "ground and surface areas" (McSwain, "Solar Powered",2). Solar powered water pumps are beneficial financially wise because pumping equipment cost an estimated 2,000 USD and can last up to fifteen years (Armstrong, “Local Action with International Cooperation,” 6). Solar powered water pumps have reduced “the overall life-cycle costs of more than 40% when compared to boreholes fitted with hand pumps that are designed for equivalent service areas and lifespans.” (McSwain, "Solar Powered", 1). Not only have solar powered water pumps reduced life cycle costs when compared to boreholes but "a single solar pump on a single

borehole will produce the same flow as multiple handpumps on multiple boreholes" (McSwain, "Solar Powered", 1). A common misconception about solar-pumping is that it is an inappropriate technology to use in "remote settings" because of "perceived technical and management challenges" (Armstrong, "Demystifying Solar Powered Water Pumping", para. 2). The design and installation processes associated with solar-pumping are actually no more complicated than other motorized pumping schemes, and operation and maintenance are more straightforward (Armstrong, "Demystifying Solar Powered Water Pumping", para. 2). Solar powered water pumps can be an effective solution to help the Togolese receive access to clean water.

Another solution that can offer safe water to the community in Togo is providing potable water chlorinators. A potable water chlorinator is a patented water treatment device commonly used on water that is clear but is still contaminated with harmful bacteria and viruses (McSwain, "Potable Water", 1). Even though the potable water chlorinator is commonly used on clear but contaminated water, it can also be used to disinfect water that come from various other sources such as borehole, wells, and springs (McSwain, "Potable Water", 1). Potable water chlorinators are easily transported, have a simple operation, have no power requirements, and have low operating cost (McSwain, "Potable Water", 1). Other advantages to this solution are that installed potable water chlorinators meet the "World Health Organization bacteriological guidelines", can be easily added to existing water systems, and have "inline chlorination that disinfects water" (McSwain, "Potable Water", 1). Potable water chlorinators are just one of many ways that Togo could take water that may be contaminated and turn it into water that is safe for them to use. With clean water, the Togolese can have better quality food for families.

Besides solar powered water pumps and potable water chlorinators, latrines are an appropriate solution that can help give the Togolese better sanitation. Better sanitation can ensure that food is not contaminated. Over 20,000 latrines have been built for families in developing countries, so if installed in Togo, the latrines could be a huge help for families (McSwain, "The Healthy Latrine", 1). Latrines are "pour-flush toilets that ensure the separation of waste from user" that have "pits to ensure waste is adequately treated before being released to the environment" (McSwain, "The Healthy Latrine", 2). Each pit can last up to fifteen years but after fifteen years "plumbing can be re-routed to a new pit" (McSwain, "The Healthy Latrine", 2). The water seals in latrines are very beneficial because "they create a physical barrier that separates waste from the environment, which prevents the transmission of disease" (McSwain, "The Healthy Latrine", 2). A negative factor associated with latrines is that there is a risk of groundwater contamination in areas where ground water used for drinking is not adequately treated, but this would not be an issue in Togo if potable water chlorinated were installed as well (Water Mission, "Healthy Latrine", 1). The prevention of disease transmission can reduce the amount of food that is contaminated, thus giving the Togolese higher quality food.

These three solutions are all part of the Water Mission. Water Mission is a nongovernment, Christian organization founded in 2001 by Molly and George Greene (Water Mission, "About Us", para. 1). This organization has helped many underdeveloped countries suffering from "water crisis" where families are "forced to drink dirty water every day" by providing clean water and proper sanitation (Water Mission, "About Us" para. 3). Without the help of many corporate partners and sponsors, the Water Mission organization would not be as successful as it is today (Water mission, "Where We Work" para. 1). Water Mission has received more than \$10,000 from sponsors such as FedEx and Microsoft (Water Mission, "Our Partners" para. 2). Networks and International Development Organizations, like UNICEF, also support Water Mission in "finding new opportunities to advance their responsibilities of service to many communities by offering new technologies, engineering capabilities, and offering direct funding" (Water Mission, "Our Partners" para. 3). Water Mission also offers church partnership programs that gives "churches the opportunity to be the hands and feet of Jesus in a tangible way through the ministry of safe water" (Water Mission, "Engage Your Church", para. 1). The help of sponsors and partners have helped the Water Mission become successful in serving many countries and if the solutions that Water Mission

has provided for other countries were installed in Togo, the Togolese could improve the quality of their water and sanitation.

A similar organization, Water Charity, has completed a Borehole Project that "provided potable water through the installation of a deep borehole well" in Dagma, a small village in Togo (Water Charity, para. 7). Even though the Borehole Project helped many people in Dagma, Water Mission works towards long "lasting benefits" in a country by encouraging community members in a country to implement solutions that will be accessible to all and safe to use (Water Mission, "Community Development", para. 1). Before Water Mission installs a solution in a country, a meeting is held to introduce the project to the community (Walls, para. 4). To involve ordinary people in implementing the proposed solutions, Water Mission encourages the community to participate in the "design and investment" of the solutions (Water Mission, "Community Development", para 3). Training is also offered by local Safe Water Committees to cover "roles, responsibility, and operational management" associated with a solution. WASH also provides training for local leaders in a country to "further engage their support in the project" (Walls, para. 4). After installing a solution in a country, Water Mission then ensures that the community is ready to take ownership of the project by providing a minimum one year of follow up support (Walls, para. 4). If Water Mission began providing solutions to Togo, the Togolese could take part in the project by attending community meetings, learning about the management of the solutions, engaging in training that provides necessary information about the solutions, and properly using and managing the solutions.

It is very important that the issue revolving around the lack of clean water and proper sanitation gets resolved in Togo because access to clean water and enough water supply is an "essential gift from God" (Gehrig, para. 3). Pope Francis also shares that "Assess to safe, drinkable water is a universal human right" and that water is " a universal and inalienable right" (Gehrig, para. 2). Two Catholic Social Teachings that help demonstrate why people with no access to safe water and sanitation facilities should receive help is Option for the Poor and Vulnerable and Right and Responsibilities. Option for the Poor and Vulnerable explain that people in need should receive help and they those who lack the necessities of life, such as clean water and proper sanitation, should be cared for. Right and Responsibilities show how a healthy community can be granted if human rights are met and responsibilities are fulfilled. If Water Mission works alongside the government in Togo to ensure that there is clean and proper sanitation that includes good hygiene practices, the community of Togo can receive the opportunity of having a healthier and better lifestyle.

Having no access to clean water and healthy sanitation can have a negative impact on the lives of the people in Togo but with solar powered water pumps, potable water chlorinators, and latrines, the government of Togo can help give the Togolese safe water to use and better sanitation. This will then lead to decreasing food scarcity and increasing improvement rates. Solar powered water pumps are a solution with a simple operation that will provide the Togolese with safe water. Potable water chlorinators are a solution that can allow the Togolese to disinfect water so that it can become be more useful and inadequate sanitation can be solved with latrines, which can ensure the proper disposal of waste in Togo. Solar powered water pumps, potable water chlorinators, and latrines are three solutions that complement each other and would be beneficial to Togo. These are only three of many solutions that can help to ensure clean water and proper sanitation in Togo. With clean water and adequate sanitation, the Togolese can prevent the contamination of food and food sources, thus improving the overall quality of their food. The education of children and poverty rates, along with the lives of many families would also improve. With the many benefits that clean water and proper sanitation bring, the Togolese could not only receive a healthier lifestyle, but food scarcity can decrease. If Togo obtains cleaner water and better sanitation, the number of people in the world that lack access to improved sanitation facilities and water sources would decrease significantly.

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