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Chad: Fighting Malnutrition through the Ripple Effect

Malnourishment affects such a large number of people living on planet Earth; especially in the African continent and more specifically, the nation Chad. Without food and proper health, how can one become educated? Without food and proper health, how can one better their society through sustainable agriculture practices? The answer is they cannot. Food and sufficient health is the baseline goal to be able to change the world. Chad is one of the poorest countries in the world, and one of the many nations who suffer most from malnutrition. Fighting for nourishment in a single country suffering greatly from malnutrition can serve as dropping a stone on Africa, creating a ripple effect to fight this problem globally.

Located in Central Africa, Chad is a landlocked country with a population of over 15 million ("Chad Population", 2019). The Chadian government identifies as a Republic, although the nation lacks economic freedom from a corrupt, failing system ("Chad: Government", 2019). The poor political situation results in a poor economic situation. Chad's overall economic score is 49.9, making it substantially lower than the regional and world averages ("Economic Freedom", 2019).

In 2014 it was reported that 39.66% of Chad's land is used for farming, but over 80% of the population has an agriculture-related job ("Chad: Agriculture Land", 2019). This includes working with crops to working with livestock like cattle, goats, sheep, donkeys, and even horses. Food crops are crucial as well for the Chaiden economy. About 10% of Chadian land is known as the Sudanian zone, containing the most fertile cropland in the country. The Sudanian zone is known for an average rainfall of 800 millimeters or more. Sorghum is the staple food crop in Chad. Other crops grown include cotton, millet, corn, rice, wheat, peanuts, sesame, and legumes. Chad's main exports include oil and cotton. 40% of Chad's GDP comes from agriculture ("Culture of Chad"). Cotton is native to southern Chad ("Agriculture"). The average farm size in Chad is around 1-2 hectares, which is translated to around 2.5 to 5 acres ("Chad", 2012). Comparing farms to football fields, the average Chadian farm is around three football fields.

In Central Africa, Chad is surrounded by the countries Libya, Niger, Nigeria, Cameroon, the Central African Republic, and Sudan. Chad has a hot and tropical climate and the southern rainy season is from May to October, with the central area rainy season from June to September. The north has very little rain year-round ("Weather and Geography"). Most of Chad's land is composed of either desert, semidesert, or sayannah.

Chad's average family size is five to six people. (Chad, 2012). Chadians typically live with all their extended family. The average Chadian diet consists of sorghum, millet, maize, manioc, potatoes, rice, and sesame. As for careers, around 40% of Chadians herd livestock, while 40% work in crop production. The remaining 20% of the population does anything from working in manufacturing to the military. Chad has extremely limited healthcare, with only 1 physician per 38,000 people. Chad has a dangerously low literacy rate at 20%, and only about 60% of children attend primary school. Most children learn what they know from their families because formal education is not accessible. Pursuing higher education is extremely rare because of the lack of development in a quality education system ("Culture of Chad"). 48% of Chadians have access to clean drinking water ("Access to Clean Water") and only 8.83% of Chadians have access to electricity ("The World Bank", 2016).

One-third of Chad's population suffers from chronic malnutrition. 40% of children in Chad under 5 are stunted because of malnutrition. Due to the nation's unpredicted rainfall and varying climates, Chad continually suffers from harvest failure, causing negative ripple effects into the nation's food production. Chad's rural population suffers immensely from food insecurity, considering 2.4 million Chadians living in rural areas suffer from this problem ("Hunger in Chad"). Child malnutrition is not as prevalent in urban areas because economic activity still allows families to have little access to food (Barbiere, 2018). The nation's problem with malnutrition is not improving by any means. In recent years, Chad's population has suffered from a 29% increase in people affected by malnutrition. The hope for the rest of 2019 looks less than promising because more and more Chadians are expected to be severely food insecure during the "lean" season of June through August ("Chronic Poverty in Chad", 2019).

Conflict from surrounding countries such as Nigeria, Central African Republic, and Sudan has resulted in Chad taking in refugees. This contributes to the nation's problems because it adds more mouths to feed to the already starving Chadians ("Ten Hungriest Countries", 2018). An estimated 480,000 refugees fled from surrounding countries to Chad because of political conflict and violence occurring in their own countries ("Hunger in Chad").

Malnutrition affects the lives and well being of children in Chad. Children make up over half of the country's population. 10% of children die before their first birthday due to a variety of deadly diseases including cholera, malaria, diphtheria, and meningitis. These diseases can infect children at any point in time, causing the country to lose hundreds of children every day. Children in Chad are not the only people suffering, as women in Chad are also in a dangerous position when they give birth to children because of Chad's lack of professional medical help ("Children and Women in Chad").

Many organizations are working towards decreasing malnutrition in Chad. Those organizations have programs already in place that are decreasing the number of people suffering from malnourishment. One of those organizations that are making a huge impact is the World Food Programme (WFP). This program is a branch of the United Nations that works towards food security and fighting world hunger. The WFP does work with many countries, including Chad.

In Chad, the WFP has been implementing solutions to prevent malnutrition in young children before it becomes a problem. They have provided nutritional support for children ages six months to two years which helps tackle malnutrition from the start. There are health centers in Banda, Chad with weekly seminars that help women and their children learn about basic nutrition and working towards food security. In these educational sessions, they are able to learn how to farm vegetables, which help their community become more food secure. The WFP has also provided nutritional support and crucial food to over 370,000 refugees that are currently living in Chad. These refugees come from the Central African Republic and Sudan ("Fighting the Scourge of Malnutrition", 2017).

The WFP has provided a school meals program that has changed the lives of many students in countries in the African continent, including Chad. The meal they receive at school can be the only routine meal those children have. This solution fights malnutrition and hunger affecting a large portion of Chadian children. The meal that is provided by the school also serves as a great incentive for kids to attend school. This solution proposes that students can be fed and educated at the same time. School meals encourage children to stay in school longer as well. Currently, only 60% of Chadian children attend school, and higher education is rare ("Culture of Chad"). In Niger and Chad, the WFP has provided meals for hundreds of thousands of children.

The WFP not only benefits students by providing school meals but also benefits the local economy and supports farmers in the area. The WFP partners with local farmers and purchases foods like yams, cassava, potatoes, and palm oil to provide nutrients to students. Buying food from local farmers is

beneficial to the development of communities, local farmers, and students consuming the food. By helping countries become self-sufficient, the solution is more sustainable. WFP's goal is to target areas where malnutrition is the highest.

The school lunch program, lead and managed by the WFP, meets the needs of students and children, who will hopefully become tomorrow's productive citizens who are educated and well-fed. The WFP is funded by the United Nations, foreign governments, corporations, and individual donors. In the past, key donors of the specific school lunch program have been Canada, the European Union, Japan, Luxembourg, Saudi Arabia, and the United States of America ("School Meals", 2017).

The United States supports eliminating world hunger as evidenced by passing the Global Food Security Act. This act has already helped many countries like Chad take steps towards self-sufficiency. This is because the United States has shared its expertise in agriculture through its partnerships with research and academic institutions. By the United States giving this knowledge on topics like nutrition and raising crops, the countries will eventually stand on their own. In Chad's case, the crisis is complicated by the unrest in the area. The United Nations is assisting with emergency aid to provide food to the people who have been displaced and reach those whose crops are devastated by drought ("Global Food Security Act")

Another non-profit organization who is working hard to make Chad a better place is the International Rescue Committee (IRC); one of the top charities in the world. The IRC has been around since 1933 and aims to help places all around the world with education, health, environment, safety, and economic well being. The IRC strives to make communities around the world more self-sufficient. They have teams and support in forty countries, including Chad ("Current Crisis").

The IRC became involved in helping Chad back in 2004 when hundreds of thousands of refugees from neighboring countries fled the nation due to internal conflict. Since then, the IRC has provided a multitude of services for the Chadian people. Regarding malnutrition, they have started screening children to prevent acute malnutrition, as well as treatment for those severely malnourished. The IRC is funded by private and institutional donors. The United States government also plays a major role in funding the IRC ("Current Crisis").

There are many organizations and nonprofits trying to combat malnutrition in Chad. These charity organizations have helped thousands of people recover or be prevented from malnutrition. A lot of times, these organizations like the World Food Programme and the International Rescue Committee, are supported by nations far away and out of touch with Chad. Although most countries in Africa surrounding Chad are considered very poor as well, there is one in particular that has the capacity to help Chad more than they are. Nigeria has one of the most stable governments in this African region. Nigeria is a nation close to Chad and has the potential to help Chad immensely with stability in this malnutrition crisis.

One area, in particular, they could contribute to would be in agriculture. Agriculture has played a major role in the development of Nigeria. 30% of the Nigerian population is involved in agriculture. This has helped their own nation become more food secure as well as creating jobs (Iknde, 2018). Because of Nigeria's advancements in agriculture, they could help educate the Chadian people on agriculture practices. This would for one, educate their people on how to grow food. It would also provide them with food for the Chadian people and help prevent malnutrition. On top of that, improving their agriculture practices would allow them to improve their economy with exports.

The government in Nigeria, as well as other stable governments surrounding Chad, could have a major role in solving this malnutrition crisis in Chad. Their governments could create education programs, similar to those of the WFP and the IRC, helping the Chadian people become agriculturally literate. This needs to start in schools so that it will allow young people to learn how to grow food for their

communities. Working with charities as well as surrounding governments, these programs could make a big difference in preventing malnutrition in young people.

The biggest thing preventing surrounding nations from helping Chad is conflict within the African countries. Nigeria's conflict has intensified in the last couple of years and is not only affecting Nigeria but is also causing problems in neighboring countries, including Chad. The IRC has pointed out how big of an issue the conflict has become. This African humanitarian crisis, originating in Nigeria, is affecting 21 million people in the African continent ("Current Crisis").

Although this issue of malnutrition in Chad seems nearly impossible to improve or let alone solve, becoming educated and informed about what has been done is the first step in learning how to help. The WFP and the IRC programs like school meals and malnutrition screening are a great start to helping the people of Chad. They are currently being funded by the United Nations and the United States government, as well as individual donors. Many United States citizens as well as people from other wealthy nations want to contribute to problems like this but do not know how. If these programs continue to be expanded, they require a lot more funding than is currently been given to this growing problem. Using the knowledge and technology these prosperous nations are using for agriculture and health could help advance Chad in almost every area, but especially food security

Recent steps have been taken to improve agricultural production in Chad. Because of the poor and unpredictable climate, agriculturist in Chad have a hard time having success with harvest. In recent years, farmers have adopted a rainwater water technique that helps prevent desertification and increases productivity. This harvesting technique, called Zaï, could result in helping Chad become more food secure despite the unpredictable climate. The downfall of Zaï is that it is considered labor intensive. The Chadian government is well aware of the need of improvement of development in the area of agriculture. The government released a plan to develop increased agricultural production, as well as industrialization (Doran, 2018). By using techniques like Zaï, the Chadian people have hope for improved food security.

As Chadians continue to suffer from malnutrition, the country desperately needs ways to work towards a well-fed, healthy nation. Taking small steps towards improving things like agricultural practices, education, and infrastructure has a ripple effect on the issue of malnutrition. Feeding the country is a huge and difficult task that no organization can solve on its own. Working with public and private companies, the United States, as well as economically well-off surrounding countries, have a huge role in eliminating malnutrition in Chad.

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