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Chad, Malnutrition

### **Chad: Defeating Malnutrition through Education**

As the Earth's population continues to grow, we must continue to grow housing, job opportunities, and, most importantly: food. We currently have enough food to feed our population, but many people are still struggling to get just one meal a day for their entire family. We are not lacking in food production but rather access to food and resources to grow nutritious food. Countries like Chad are experiencing high levels of malnutrition in their country due to limited access to food. These limitations include the climate crisis, poor growing seasons, and the constant intake of refugees from neighboring countries. The food we need is being produced; it's just finding a way for vulnerable citizens like women and children to access this food.

Chad is a country landlocked in Central Africa with a population size of about 17,024,586 citizens. Chad has a drastically uneven population, with almost half of its population under 15 years old. The largest city, which is also Chad's capital, N'Djamena, is the only urban area in the country, leaving the other 76% to live in rural areas (World Population Review). Chadians are ruled by one president, who is the head of state and government. Their country consists of many deserts, equatorial forests, and sand dunes with a hot and tropical climate. The country is split into three climate-ecological zones: The Saharan zone, the Sahelian zone, and the southern semi-tropical zone (Abbink). Chad is a very resource-poor country, but in the southern semi-tropical zone, there are almost 40 million hectares of land cultivated (Abbink). Major crops grown in the south are legumes, sorghum, berbere, corn, rice, and wheat. Moving north towards the Saharan and Sahelian zones, much of their cattle are raised here due to the land being primarily dry with a hot climate. Cattle is one of their major exports, as well as oil, cotton, gum, and sesame. Chad continues to be one of the poorest countries in Africa. Most local communities are self-sufficient in food production, and commercial food is only located largely in the south. From the distance between cities and poor infrastructure, the Chadian government has been unable to create a shared food economy. Because of these things, most families in Chad are suffering from poverty and hunger.

A typical family size is between five to six people; commonly rural families have more members than families living in an urban setting. Urban families often live in largely populated villages with clay buildings, whereas in the countryside, most families live in hut-building styles. From having such different climates in the north and south, depending on the area, the average diet is very different. In the north, an average diet consists of beans, potatoes, dried fish, and lots of meat. Having so many livestock farms around, families can obtain a large amount of meat for meals, and the fish comes from Lake Chad, located in northern Chad. On the other hand, Southerners eat no fish, less dairy, potatoes, and consume forest products and fruit due to having access to farms and many acres of lush forests primarily. Meals are usually cooked over firewood inside their homes. Only families living in urban settings have access to electricity, but almost 86% do not have access (Abbink). Families that live in rural areas get their food from local farms, but Chad is often in a drought. This leads to many families lacking food. Urban families

obtain their food from markets in their cities, but a drought also affects them, with farms being their source of food as well. 80% of the population works in either livestock or agriculture ( Abbink). Drought being a significant issue in Chad, causes many citizens to have very low incomes due to the lack of crops they grow. Almost 87% of rural families are below the poverty line and have very little access to education (WFP USA). Most children and adolescents do not finish primary school. The literacy rate in Chad is only 20% ( Abbink), and if children are educated, it is by their families about how to take care of their home and farm. Chad also has a lack of teachers and money to keep up with education as well as most families need their children to help at home.

Currently, in Chad, 5.1 million people are affected by food insecurity and malnutrition and 1.7 million people are severely affected by both (OCHA). These trends continue to worsen due to COVID-19, climate hazards, attacks from non-state armed groups, and many refugees coming in. One leading cause of food insecurity is the large amount of destructive rain and floods that destroy crops and farmland they are planted on. Also, the commonness of drought in Chad has caused significant food insecurity in rural areas. They do not have enough water to care for their crops during a drought and use the water for household needs. Urban families are experiencing high malnutrition due to the lack of produce in markets and the nutritional value of their meals. Many urban families have access to commercially manufactured foods, but these foods are not giving families the nutrients they need. Malnutrition severely affects women, children, and the elderly. Men have more access to food and healthcare due to religious and government roles. Women move freely in most aspects of life but are at home the majority of the time; these freedoms are often not used. Women do most of the “ dirty work” at home like walking for water, laundry, cooking, and cleaning the house. This leads them to need more nutrient-rich foods. Sadly, women can't stop attending to their daily jobs, so they continue to work and wear down their bodies and health. When families have extra food, most mothers give it to their kids. But children are also highly affected by malnutrition because of the known knowledge that kids must eat food- especially nutrient-rich food to grow and survive. The UN Children's Fund treated over 317,000 Chadian children under the age of five with severe acute malnutrition in 2019 (USAID). This is a problem within itself because if the children can't even survive until five years old, then families do not have anyone helping them around the house, let alone getting an education to help them out in the future. Finally, the elderly are also severely affected by malnutrition, especially during the 2020 pandemic. Already living in a low-sanitized environment and adding on a disease-killing virus (COVID-19) makes their risk of dying even higher on top of being undernourished and weak. Another major cause of malnutrition is the constant flow of refugees coming into Chad due to war in neighboring countries. Since 2003 Chad has received refugees from Sudan and the Central African Republic, welcoming around 450,000 long-term refugees (WFP USA). Although this does not seem like a large number of people, the government can already not feed their own citizens; so with an ongoing flow of refugees, there is an unbalance of food access, leaving Chadians and refugees hungry and malnourished.

Malnutrition is a largely known issue in Chad, so many organizations have stepped in to help. Action Against Hunger, a non-profit organization, has implemented health and nutrition courses throughout Chad. They have also added income-generating activities so women can take charge of additional household expenses (Action Against Hunger). Other broadly impactful steps they

are taking are providing job opportunities for young women, supplying food to villages across Chad, and teaching new agriculture techniques. These activities like providing jobs and teaching new farming skills are very impactful as it helps the citizens take a step forward and pushes them to be “ independent” rather than just putting a bandaide on the issue. The World Food Program (USA) has also stepped in to decrease the number of citizens suffering from malnutrition. The World Food Program has been collecting local food from markets and food producers in the US to ship and distribute to villages in Chad. On top of bringing food in from other countries, they are also trying to help out local farmers. They created a program called school meals program. This gives kids hot meals made with local food daily when they attend school. The program was made to encourage kids to go to school, give kids access to food, and help the local economy as all meals are made from local farms and markets which then they make a profit. This is a great program because it brings in profit for farmers so they can continue farming and provide food for their families. Both of these organizations are continuing to be successful because they are helping the citizens with getting nutritious food but are then also building up the new generation with education and getting women into the workforce.

In order for Chad to overcome malnutrition and hunger, the country needs education. Men need to be educated on different agriculture techniques ( new and old) to find what is best for their land and learn ways to help their crops grow even in harsh conditions. Weather and climate change are significant factors on crops in Chad, so teaching new techniques to farmers could prevent communities from encountering hunger and poverty. As the climate crisis becomes worse, these farmers need to obtain new knowledge to not only keep their crops alive but also themselves. Mindsets need to be changed from always working on the farm to making time to make the farm more successful. Although Chad is an economically poor country, the government should look into ways to obtain GMOs for Chadian farmers in the future because the main reason GMOs were made is to allow crops to grow even in a drought. The government could use ally countries to help them start using GMOs. Once they begin producing crops and giving citizens and the government more money, they could expand their GMO supply to the whole country. It needs to start in a small area so income can be made, and then more GMOs can be obtained throughout the rest of Chad. The government needs to explore these ways to help their citizens survive and make an income. At the end of the day, if the citizens of Chad begin to earn an income, the Chadian government will also start to succeed. Farmers will need to learn how to take care of these GMO crops properly, and implementing these classes will allow farmers to be ready when the GMOs are widely used in Chad. There will be challenges with growing these new crops, but with knowledge from the classes and trials from other countries, Chad can overcome the obstacles. Many African countries have conducted tests and successfully used GMOs for their crops. Eleven African countries have begun trials on GMOs with 16 traits, including drought-tolerance and enhanced nutrient content(CropLife International) which could immensely help Chadains gain food and a better life. Chad would not need to conduct trials which means less land wasted and quickly implement these GMOs into farmer's everyday life.

Smaller households need to be encouraged more because it takes away the stress of feeding five people to only feeding three family members. Men should be discouraged from the practice of Polygyny (the taking of more than one wife, Abbink) because creating more families means more people to feed. Educating women will be an enormous turning point for Chad's poor state. Women need to be educated on birth control to reduce the number of people the country needs to

feed and to encourage smaller families to allow for more food for the families. Education on birth control can also help reduce the number of diseases spread and can help promote women to focus on themselves and their health (Pazol). With only 60% of kids attending primary school (Abbink) but almost none finishing, the kids (especially girls) and mothers are not educated about birth control, nutrition, or agriculture styles, so they continue with their old ways. By implementing health and nutrition classes for women with children, they can learn what nutrients they need to be healthy and discover new cooking and agriculture styles that will help their family become nourished. From Action Against Hunger, it has been seen that implementing these classes can make a difference. 215,517 citizens in Chad were educated in the health and nutrition classes that Action Against Hunger created. For kids, school needs to become a more regular occurrence. The WFP USA's program is a great way to get kids into school. Programs like these give kids food, and education, bringing more jobs and money to Chad. Taking advantage of education, kids can learn about health, nutrition, agriculture, cooking, and jobs they could take advantage of in the future. Teaching these kids will make the next generation more knowledgeable and help the country discover new ways to fight hunger. Educating kids on jobs will help increase the economy for Chad which is one step closer to fighting malnutrition. The government needs to advocate for families to send their children to school so they can bring knowledge back to the home for the family and also collect food for their home to increase their nutrition. This education will also increase knowledge on agriculture techniques, tools, and adaptation to weather conditions, allowing agriculture practices to improve and help feed the country of Chad.

The lack of education in Chad has an enormous indirect impact on malnutrition. Citizens are using old techniques and knowledge to obtain food, and from the current statistics, this is weighing down Chad. Chad needs education because there are no downsides to it. Educating women and men on agriculture and cooking will help them feed their families and give them the necessary nutrients. Educating the children will make the next generation more knowledgeable and help bring up Chad's condition. Educating at first might not seem to affect many, but once the knowledge starts to get put to use, Chad will be on its way to fighting malnutrition. (2336)

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