

Melanie Taylor
Hauser Jr-Sr High School
Hope, IN
Rwanda, Factor 11: Malnutrition

The Land of a Thousand Hills

A normal, daily routine for the average child and teen in the United States consists of the following: waking up early in the morning, going to school, coming home in the afternoon, a variety of school sports or homework on most occasions, relaxing or playing if time is available, and going to bed. This repeats for four more days, leading up to a two-day weekend. The amount of complaining from students about school is inconceivable. Either it is too hard, extremely monotonous, useless, or all of the above. Criticism over the lunch provided by schools is also frequent. The lunch is “disgusting” and is commonly thrown away unfinished. Numerous individuals fail to remember, or are oblivious to the fact, that thousands of children would do anything just to have the unfinished food that lies on that plate. Millions of children dream of being able to go to school. Sadly, a meal and an education is inaccessible for countless of children. Without nutritious foods, or any type of food in general, life is unimaginable, hopeless, and impossible. Many factors contribute to food insecurity, such as: water and sanitation, human rights, climate volatility, human diseases, education, demographics, conflict resolution, and malnutrition.

Located a few degrees south of the Equator, at the central part of Africa, is a small landlocked country, Rwanda. It is also designated as the Republic of Rwanda. The country occupies the far western edge of the Rift Valley, bordering countries such as: Burundi, the Democratic Republic of Congo, Uganda, and Tanzania (Longman). Within Rwanda’s borders are several breath taking bodies of water. The country is mainly mountainous, especially in the west and Savannah in the east, giving it the nickname the “Land of a Thousand Hills.” Rwanda is at a high elevation compared to surrounding countries, as a result the country is cooler. Rwanda has two rainy seasons. The large season rains from mid-February to May. The second and smaller season occurs from mid-September to mid-December (“Climate”). It may seem that the location and climate of a country has no effect on the lives of the hungry, but it as a bigger effect than expected.

Rwanda is one of the most densely populated countries in the continent. To be precise, it is the second most densely populated country in sub-Saharan Africa. Rwanda has an estimate of around four hundred fifteen people per square kilometer, according to Atteher Maigaa. The population of Rwanda is 11.4 million and has a growth rate of roughly 3 percent (“Major”).

Rwanda is greatly and widely known for its genocide that started and ended in the year of 1994. The genocide contributes to the extensive changes and major difficulties of which the country faces today, and is supported by the statement made by Timothy Longman, “Prior to the 1994 war, Rwanda was among the most rural countries in the world...” The war initiated due to complications between the Hutu and the Tutsi, two groups of which make up the Rwandan population, along with a small percentage of the Twa. The genocide resulted to an estimate of one hundred thousand deaths. The gory genocide lead to total chaos, and more than eighty percent of the Tutsi population were murdered. Several hundred thousand Hutu died from diseases, such as cholera. Cholera spread throughout refugee camps once the war came to an end, and several million Hutu fled to Tanzania and Congo. Corruption destroyed the functioning country. Thousands of families are still effected by the disasters caused from the genocide today.

Rwandan families are typically large. Once married, the pressure to have offspring is heavy, for without children, a family is considered incomplete. As a result, families in Rwanda consist of many individuals, which leads to the fact that the country has the highest rate of fecundity in the world (Longman). A

typical family in Rwanda includes the parents, multiple children, and occasionally the grandparents from either one, or both parents. Julius Adegunle states that a male in Rwanda can have more than one wife. In a few situations, a family will consist of two or more wives and their children. It is believed, by anthropologists, that men who marry more than one wife obtain special social, economic, or ritual status because they need assistance from women (Adegunle). The typical location for a Rwandan family to live is on a hillside. Rural families live in compounds, which consist of several buildings, surrounded by fields and scattered across the hillside. The compound will hold several houses. Each wife, if more than one, and the elderly, will typically live in their own house inside the compound. The majority of Rwandans own the land that they work on and live off of. The average and normal size of a family's farm is less than one hectare ("Aid"). One hectare is about 2.471 acres ("How"). Despite the fact that two acres is roughly enough land for crop production, the ground is steep, which can cause complications when farming.

Agriculture continues to be the key player in Rwanda's economy. Agriculture productivity makes up one third of the GDP (gross domestic product) and employs eighty-eight percent of the active population (Maigaa). An overwhelming amount of the population is rural. Residents live mostly off of subsistence farming. Earning an income from their products, such as coffee, is normally not enough to provide for a family's needs. Incomes are so low that more than sixty percent of Rwandans live below the poverty line. Poverty is significantly worse in rural areas, due to crop failure, not enough production, and more threatening factors. The hilly terrain of Rwanda, erosion, and limited resources are critical determinants of rural poverty. These factors also complicate agricultural production. As a result, Rwanda attains a position in the list of the top ten poorest countries in the world.

Agricultural practices in Rwanda are far from being defined as modern techniques. Hutu farmers were delayed, and had great difficulties, from being able to produce a large-scale production because of small pieces of owned, or rented, land and the use of traditional farming methods and tools. Traditional tools include hoes, diggers, knives, machetes, sickles, and more. These tools are very much still in use due to the farmers lacking, or not being exposed to, modern mechanized agricultural methods. Modern tools are inaccessible also due to the Rwandan economy procuring a weak base (Adegunle). Without modern agricultural tools, farmers are not able to produce enough food to make an income, let alone feed an entire family.

Considering the fact that farming is the main source of income, it is also the main source of food. "Most smallholders are subsistence farmers, growing their own food, and selling some crops, such as coffee plantains, or bananas for cash" ("Climate"). The country's climate effects what Rwandans grow. The most popular crops are plantains, bananas, potatoes, beans, sweet potatoes, cassava, wheat, and corn. These crops are also frequently sold for local consumption.

According to many sources, Rwandan food is indubitably simple. The most common foods include beans, bananas, sweet potatoes, sorghum, and potatoes. Another widely consumed product by Rwandans is comprised of dairy products. Dairy products normally just include curdled milk, the accustomed and conventional drink. Meat, including beef, goats, and chickens, are only consumed by families and individuals who can afford it. Otherwise, meat products, and the nutritional value which it contains, are not present in thousands of families' diets.

Healthcare in Rwanda is accessible, but only for the ones who can afford it. A national health insurance system was set up in the country. Although payments are very low, around two dollars per year, the poor struggle to pay. The healthcare insurance covers the basic medical conditions for all popular and common illnesses, but operations and specialist treatments, such as surgery, have to be paid for. "Rwandans practice both western and indigenous forms of healthcare. Christian churches have built numerous hospitals and health centers, but many Rwandans continue to visit indigenous healers, combine herbal medicines with spiritual curses" (Longman). Medical centers, hospitals, and dispensaries have essential

drugs and basic lab facilities, but with the lack of specialists, equipment, and employees, it is close to impossible to care for the injured and sick. “White-collar professionals were especially targeted during the genocide of 1994, leaving a severe shortage of trained medical staff in the country.” Throughout the 2000s, only two hundred and twenty-one physicians were working in the country (“Poverty”). With a shortage of medical personnel, healthcare is unattainable in Rwanda.

Education in Rwanda has potential, but is still lacking in multiple areas. Rwanda has a literacy rate of around seventy percent for the total population of the country. The female literacy rate is an estimate of sixty-four percent. This means that about seventy percent of Rwandans over the age of fifteen can at least read and write. Although this percentage is considered to be very high, the country still falls below education expectations (“Major”). “Rwanda puts little emphasis on higher education. Less than 10% of Rwandans attend high school, and another small portion attends technical training schools” (Longman). Families with little money strive, or are unable, to pay for costs such as uniforms and school equipment. Therefore, several children are not able to complete primary school, and only a third of young people are able to read and write (“Education”). According to this information education is lacking, leading to children not being able to pursue in well-paying jobs which require an education. It is common for mothers to be responsible for their children's education, and the uncles also ensure that children learn social traditions. On the other hand, education is becoming free in Rwanda. This results in an increase number of children enrolled in school, especially among girls.

Many factors contribute to food insecurity in Rwanda. These factors include water and sanitation, human rights, climate volatility, human diseases, education, demographics, conflict resolution, and malnutrition. Although all effect the country, malnutrition has been the biggest threat. Malnutrition is the lack of proper nutrition. This can be caused by not having enough to eat, not eating enough of the right things, or not being unable to use the food that one does eat. When you are malnourished your body does not function to its highest abilities and you are more prone to getting diseases. Malnutrition affects food insecurity in many ways. There are three major points that tie in malnutrition to food insecurity. The first point is due to malnutrition, Rwandans, that are malnourished, are less able to produce food because they are not being effective nor efficient with their farming. The second point is that malnutrition leads to illnesses, thus decreasing the ability for Rwandans to produce. This also creates more nutritional needs that cannot be met. The third and final point is that malnutrition increases the need for more nutrition that isn't being met causing even more issues for Rwandan families and increasing their food insecurity.

Women and children are most affected by malnutrition. In Rwanda, a tenth of women, between the ages of 15 to 49, are malnourished. Pregnant women that deal with inadequate nutrition, contribute to the babies born with low birth weight. This rate is notably higher than average. It is not common, or frequent, for malnutrition to kill directly, but it can increase the rate at which an infant or child can die from other diseases. These diseases include diarrhea, pneumonia, and newborn complications (“Health”). Malnutrition rates are overwhelmingly high among children and young ones. Two out of every ten children, who are less than five, are underweight and over half are stunted, or not growing properly (“Poverty”). According to Casey Ernstes, malnutrition costs the nation an estimated five hundred and three billion six hundred million RWF, which is approximately seven hundred and forty-six million USD.

Water and sanitation includes providing access to safe, potable water supplies, toilets, and pit latrines. Without access to clean water, Rwandans must collect water from local streams and ponds, which puts them at risk for many waterborne diseases. If citizens are not consuming clean water and become ill from diseases, it will put their family at risk. Without an extra pair of hands, the income percent will decrease. With a decrease in income, food supplies and money will be scarce. If there is not enough food to feed the whole family, nutrition, and food itself, is fatally low. Demographics refer to the challenges and opportunities posed by population growth and urbanization. Following the genocide, precipitation of rapid urbanization of many Rwandans occurred. Families never returned to their farms, and with the

population expeditiously rising, the country's food production was unable to satisfy the nutritional needs of the population. Thus, causing families to not receive enough food, and even food in general. Human diseases attribute to illnesses and infectious diseases such as HIV/AIDS. "Around one hundred and forty thousand adults are living with HIV/AIDS in Rwanda. The epidemic has meant an estimated one hundred and thirty thousand children have lost either one or both parents to the disease. This has added to the already high number of orphans created by the genocide of 1994" ("Poverty"). With children parentless, it is crucially burdensome and laborious to take care of themselves. Without parents, some families are led by young children. Making money and providing adequate nutrition for the members is nearly impossible.

With all the factors that contribute to food insecurity in Rwanda, the ideas of solutions are endless, but it is easier said than done. When it comes to malnutrition, solving even the smallest problem can have a ripple effect and eventually clear up other obstacles which are preventing the country from being successful. Factors which are able to be potentially solved, providing a positive effect to food insecurity, include education, human diseases, demographics, water and sanitation, human rights, and sustainable agriculture.

Education will provide one of the biggest ripple effects out of all the given factors that have potential. Education, granted to children, will give students the knowledge of farming, ability to teach, nutritional food value, and other important life skills, which will greatly help the citizens' lives. If students are given the knowledge to farm a successful crop, then income will increase. Increased income will provide families enough money to have food, and not just any food but products which contain nutritional value. The average Rwandan families diet does not consist of meat, which is protein. Protein is a necessity in a nutritional diet. If education is provided, incomes can increase, and nutritional value will be guaranteed.

If education is provided, then more Rwandans will be given a chance to achieve well-paying jobs, such as nurses, doctors, physicians, and other medical employees. After the genocide, there was a significant decrease in doctors. If education is provided, then an increase of doctors can solve and cure disease such as HIV, Human immunodeficiency virus. Parents who have HIV are vulnerable to diseases which can be fatal. Families who lose one or both of their parents will not be able to receive income or food. If Rwandans become educated to pursue a job in the field, then parents will be less vulnerable to diseases.

Providing education is a very broad idea. In order to solve food insecurity, you must initiate at the roots of all of your problems. A good example is to start with the hills of Rwanda. The hilly terrain of Rwanda causes crop production problems. The hills cause erosion to occur. When erosion occurs, the nutrients and fertile soil get swept away. This allows crop failure, and when crops fail, incomes and food production decrease. Thus, causing Rwandans to be malnourished, because food and money for buying food is unavailable.

A solution to malnutrition, and possibly even to food insecurity, in Rwanda is the check-log system. This system is the idea of preventing the negative effects of erosion on steep hillsides. The mechanism of check-logs, also referred to check dams, is simple and very inexpensive. The method consists of logs and brush to be laid across a hillside. The logs and brush are held up in place by wooden stakes. Following these steps, new soil is added. Finally, the plants and crops will be planted. Their roots will soak up and slow the rain as it rushes down-hill (Stross). The check-log idea will help farmers use land efficiently and effectively. Most Rwandan families are subsistence farmers, and if these families are able to grow enough produce, incomes and food production will increase.

The key stakeholders in this method include the government, farmers, teachers, and conceivably foreign aid. The government must provide the country the idea, natural resources or supplies if necessary, and the education. Farmers must fulfill the idea by practicing the method of check-log. Teachers will have the

responsibility of teaching students the method so that they may succeed in their future crops. Foreign aid, or other countries, may contribute by helping jump start the whole process, such as financially. One of the most difficult parts of the whole process of finding and practicing the solution is educating and getting the word across. According to the World Factbook, the Rwandan government owns and operates the only TV station in the whole country, along with several radio stations. Telephones, mobile cellular and fixed lines, are owned by over two thirds of the population. With the government obtaining a great connection to the citizens of the country through technology, sending out the information of the solution would help with spreading the word.

Coming up with ideas of solutions is more than simple to come up with, but considering the cost, transportation, and other obstacles, these goals are difficult to accomplish. These solutions must start diminutive, and eventually they will produce a ripple effect. Food insecurity effects the whole world, and it occurs in many countries. Although Rwanda's economy is slowly increasing, the country still is ranked one of the poorest countries. The country also remains one of the most war-torn countries in Africa ("Major). With determination and dedication, the countries state will increase in a positive way. Food insecurity is a drastic and fatal problem occurring all around the world today. Due to the possession of power and rights, countries do not have enough production or imported food to stay healthy, or even alive. Rwanda is one out of the many countries which receive and grow less than the average amount of food supplies. World hunger and food security can be solved, it is completely possible. We just have to solve it, one problem at a time.

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