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South Sudan, Conflict

South Sudan: How 2 Wars Caused An Eternity of Food Struggles

The world's youngest country: South Sudan. South Sudan is located in Central Eastern Africa, just south of Sudan and west of Ethiopia. With a population of 12,769,972 people ("South Sudan Population," 2018), South Sudan is the 28th largest country, in regards to population, in Africa ("African Countries by Population," 2018). Out of the roughly 13 million people who call South Sudan their home, 83% of the population resides in rural areas ("About South Sudan," N/A). The country also has a landmass of 644,329 square kilometers ("The World Factbook," N/A) and up to 90% of that land is arable. However, only 4% of that land is cultivated (Foltyn, N/A). South Sudan has the 209th (out of 221 countries) largest export economy in the world. In 2015, the country exported \$12 million dollars worth of goods and imported \$426 million dollars worth of goods. Their main exports in 2015 include oil seed flowers, other oily seed products, telephones, scrap iron, and other resources ("South Sudan," N/A). The main crops that people of South Sudan produce include sorghum, maize, rice, sunflower, cotton, sesame, cassava, beans, and peanuts ("Crops Growing in South Sudan," N/A). These crops are grown on farms that range from 2 to 5 hectare ("Southern Sudan, Equatoria Region, Cassava Baseline Survey Technical Report," Geoffrey et al). These farms must survive a hot climate with seasonal rainfall influenced by the Intertropical Convergence Zone. The rainfall is heaviest to the south and gets lighter as it moves north. There are two main seasons: wet and dry. The wet season begins at the end of April and continues until the end of November and the dry season running from beginning of November to the beginning of April ("Military," Pike).

The citizens of South Sudan are controlled by a mixed presidential system called federal presidential constitutional republic. That consists of a president that heads both the state government, and military. The president also has roles and responsibilities such as heads a cabinet that makes the decisions on behalf of the country, the ability to dismiss any member of the cabinet, and make any other state appointments including those of ambassadors and judges. The cabinet is composed of a president, two vice presidents, and a number of ministers. In 2017, the cabinet consists of 29 cabinet ministers. The government of South Sudan was actually created on January 9, 2005, six years before declaring its independence from Sudan, through the Comprehensive Peace Agreement (Misachi, 2017). The Comprehensive Peace Agreement was an agreement between the Sudan government and the Sudan People's Liberation Movement that states that the parts of Sudan that were excluded from any political access and economic benefit through the central government will now have the ability to make those decisions themselves through their own form of government (Sudan Peace Agreement Signed 9 January Historic Opportunity Security Council Told, 2005). Along with the cabinet, there is also a national legislature and a judiciary of South Sudan, similar the United States branches of government. The parliament consists of two legislative branches: the national legislative assembly and the Council of State. The Council of State is made up of 50 members from 50 different voting districts while the legislative assembly is composed of 400 members. The national legislature is responsible for overlooking the national government, approving policies and budgets, and ratifying not only national laws and policies but international treaties as well. A chief justice who is appointed by the president heads the judiciary system. The system has state courts that hear cases involving both civil and criminal nature in accordance to the law. The laws, and the extent of the laws, are outlined in South Sudan's constitution. The country also has a supreme court, the highest court in

South Sudan, which is the court of appeal (Misachi, 2017).

The typical family in South Sudan consists of 5.7 people, and 93% of these people live in “grass-thatched mud houses” they themselves made. The Sudan Tribune reports: “Despite the fact that individuals and families in South Sudan own those huts and the lands they are built on, the populations continue to live below the world standard in housing as the nation has not yet taken giant steps in fulfilling the constitutional rights of citizens to live in decent houses,” (“93% Of Houses in South Sudan Are Grass-Thatched Mud Huts,” 2014). Housing is not the only issue in South Sudan; food security is another major problem. In 2015, it was declared that at least 30,000 people were malnourished and facing death because of extreme living conditions despite the signing of the recent peace agreement. Due to this, South Sudan has a Phase Four level food emergency. This caused by planting season taking a turn for the worst because of abundant rainfall resulting in floods. Furthermore, the lack of infrastructure in the country due to conflict has made it difficult for food agencies to bring food to remote locations such as the Greater Upper Nile. The conflict has also caused a disturbance in the planting and harvesting cycle in villages around the country resulting in farmers’ inability to maintain stable food supply. However, some of the food the people consume comes from World Food Program via airdrop, but people in those remote locations still suffer from starvation because the agencies do not have access to those places (Hornor, 2015).

South Sudanese typically eat two meals a day that consists of a sweet hibiscus tea called karkade throughout each meal. These teas and tea spices are grown at home rather than bought. Sorghum is a main crop in the South Sudanese diet because the grain can be eaten by itself, turned into stew, and ground into flour to be used to cook traditional flat bread called kisra. The crop is also a major export for the country. The process of making meals is usually an all day event due to the lack of markets and resources. Women spend most of their day preparing meals and gathering water. Ignition oil comes from leftover fat from another meal (but processed oils may also be used), and they use that to ignite a fire to cook the meals. Traditions on how to eat and what to do prepare the meal vary from region and culture; however, usually it involves the adults waiting until the children are asleep to eat, eating from one single bowl (Hornor, 2015).

Education in South Sudan is challenging due to low enrollment. There is a limit on girl’s participation and a poor school infrastructure. According to the 2016 AEC, half of all children that are at the schooling age are still not attending. The reasons families give when asked why their children are not in school include that the distance to school too long, cannot afford tuition and/or uniforms, and that they are not safe on the way to school. Insecurity is also one of the main reasons schools are closing in South Sudan.

There are attacks targeting the schools. In fact, an assessment done in November 2016 revealed that one in three school have endured an armed attack dating back to December 2013 (“South Sudan,” 2017). Finding health care is difficult, particularly hard for people located in the northern areas by the border of Sudan because of fighting that were occurring there in 2012. There are shortage of medical facilities, medical professionals, and supplies needed to treat the patients completely (“South Sudan: Desperate Struggle for Health Care in World's Newest Nation,” 2012). The citizens how do have access to medical treatment may not be able to pay for it considering 80% of the population are living on less than a dollar a day and are defined as “income-poor” (“About South Sudan,” N/A). According to the Ministry of Health in 2012, there were only 120 registered doctors and 100 nurses to treat a population of roughly 9 million at the

time. Due to the minimal number of medical professionals available, the access to healthcare is very poor because the citizens are contracting disease such as yellow fever that cannot be treated without attention by one of the few doctors. Also, diseases are thriving in South Sudan because of the lack of medicine to treat and/or prevent them. The government and the International Committee of the Red Cross have collaborated to help improve the health care of the country and to open and manage a physical rehabilitation facility, a one-of-a-kind to the country, because about 50,000 people are physically disabled because of armed conflict (“South Sudan: Desperate Struggle for Health Care in World's Newest Nation,” 2012).

In July 2011, the southern part of Sudan (now South Sudan) declared its independence from its home country of Sudan. This comes 6 years after it was decided they would claim independence as an outcome of the peace deal signed in 2005 that was mediated by the Intergovernmental Authority on Development (IGAD) in East Africa. This was the outcome of the Second Sudanese Civil War that started in 1985 that is considered a continuation of the First Sudanese Civil War, also known as the Anyanya Rebellion (1955-1972). The First Sudanese Civil War was settled by allowing the southern part of Sudan a “significant degree of autonomy.” In 1983, however, Sudan’s president, President Nimeiri, decided to repeal parts of the deal, including the parts stating the region had power to govern on their own. This caused uproar in southern Sudan, and the group now known as the Southern People's Liberation Army (SPLA) took action against the state. This was essentially the start of the second civil war. It is estimated that 1 to 2 million civilians lost their lives during the war, most of them a result of starvation (“Sudan: 1985 - 2005,” 2015). Despite the second civil war ending in peace, conflict erupted once again in South Sudan in December 2013. This occurred because of the political conflict between Salva Kiir, the President of South Sudan, and Riek Machar, the Vice President at the time. The ethnic group, the Dinka, sided with Kiir and the other major ethnic group, the Nuer, took sides with Machar. Although the dispute between the two political leaders ended in a shared agreement in August 2015 and Machar’s exile in 2016, the fighting continued between the groups and still occurring today (“South Sudan,” 2018). The violence has prevented the farmers to plant and harvest their crops, which caused a nationwide food shortage. The situation got so severe that the UN Security Council declared the food crisis the worst in world, and the UN warned that 4 million people will be affected (“Global Conflict Tracker,” 2018). In February of 2017, famine was declared due to the lack of food production caused by the most recent civil war. The number of cases that are considered “in emergency” has doubled in the last year. Although the famine is improving, there is still a threat will continue into 2018 (Welles, 2018).

The main problem in South Sudan is food production, or the lack thereof, which is causing food shortages all over the country. This is due to conflicts, both man-made and environmental, and the impact they have on the farms of South Sudan. The amount of land available to produce crops is low due to the overwhelming amount of fighting despite 90% of the land being arable. One possible solution to the food shortage is creating vertical farms in the available land. According to Interesting Engineering, vertical farming can reduce the amount of water needed by the crops by 70% and it can save a significant amount of space and soil amount (13 Vertical Farming Innovations That Could Revolutionize Agriculture, 2018). Not only would vertical farming help reduce the food shortage in South Sudan; there would be a global benefit. In a 2017 report from the Food and Agriculture Organization of the United Nations, 21% of the greenhouse gas emissions are from land used for agriculture, forestry, and other uses, which released carbon dioxide, methane, and nitrous oxide into the atmosphere. According to Dickson Despommier, a vertical farm evangelist, vertical farms can reduce the amount of land used for farming resulting in a serious impact on the climate change issue because less greenhouse emission gases area

getting released (Goldstein, 2018). A similar farm is opening in United Arab Emirates in hopes to start selling produce in early 2019 thanks to Masayoshi Son, SoftBank CEO, investment in the project. He is interested in how farms can help nations grow enough food to withstand its growing population. Creating a vertical farm is possible in South Sudan, for the same issues are present in the both the Middle East and South Sudan such as food insecurity, growing population and situations causing the inability to grow crops (conflict, land use, climate, etc.) (Wang, 2018).

Another possible solution to the food shortage in South Sudan is to start practicing the method of intensive farming. Intensive farming is an agricultural system that provides large yields using a small piece of land by utilizing genetically modified organisms (GMOs), pesticides, and chemical fertilizer. This method is known to produce more food at a cheaper cost per acre, which can be suitable to South Sudan's current situation. There is an abundance of land that could be cultivated and used to produce the food the country needs to control their shortage. However, the war has taken over most of the available land causing the food problem to enlarge to the point where it is affecting people's health. With intensive farming, the country can use the amount of land that is not involved in the war and cultivate it to provide food to its citizens. The use of GMOs and pesticides can prevent the crops from being affected by diseases and insects that will allow for a larger amount to grow to full maturity and eventually supply relief to the food shortage. Also, because intensive farming requires compact pieces of land means that more crops can be produced per piece of land meaning more food overall (Intensive Farming, N/A). Overtime as the techniques are being implemented and more land is being cultivated, the food shortage in South Sudan will begin to receive the relief it needs to be able start to diminish the impact it has on the people of the country.

In conclusion, South Sudan, the youngest country in the world, has presented a plethora of problems that is causing their citizens to suffer. The lack of food due to conflicts of political differences and environmental struggles has caused the nation to declare a Phase Four level food emergency. The political conflict between the president and former vice president caused unstable infrastructure resulting in the disturbance of planting and harvesting patterns in the country. This has caused a steady pattern of food insecurity for the country. Also, politically induced conflict between ethnic groups has made it difficult for help, such as packages barring food, to arrive in some areas. All of which have caused citizens of South Sudan to suffer from starvation, and in some severe cases, death. To offer some relief to the food crisis, one of the possible solutions is to build vertical farms in areas that war has not taken over yet. Constructing vertical farms will take up less space, use less water, and provide a stable food supply. It will also have a global impact by producing less greenhouse emission gases, which will help the overall problem of climate change. In addition to vertical farms, implementing intensive farming practices can aid the food shortage. Being able to produce a higher yield of crops per piece of land will allow the country to gather a large supply of food using the land not affected by the war. Eventually, the amount of food produced from using these practices will put a dent in the food insecurity problem. It only takes a few small changes to create a large impact on a problem. As Nelson Mandela once said, "It always seems impossible until it's done."

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