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Sudan, Factor 11: Malnutrition

Introduction

The country I chose as a focus for my World Food Prize paper is Sudan. Within Sudan, I looked at malnutrition and its relationship to women and children in particular. The following paragraphs describe the socio-economic culture within Sudan with an emphasis on the cultural roles of and subsequent problems experienced by women. Towards the end of my paper, I have also included possible solutions and programs to help alleviate both women's problems and malnutrition in Sudan.

Background – The Socio-Economic Culture of Sudan

Sudan is the largest country in Africa. Located in east-central Africa it's bordered by Egypt to the north, Chad to the west, Ethiopia to the south and the Red Sea on the east. There are over 45 million residents. For the first half of the twentieth century it was ruled jointly by Egypt and Britain. Shortly after gaining its independence in 1955, the first north-south civil war broke out and continued until 1972. After only 11 years of cease fire, a second civil war erupted in 1983 and continued until 2005.

<http://www.bbc.com/news/world-africa-14094995> In 2011 the southern part of the country seceded and became the independent country of South Sudan., which profoundly affected Sudan's economy because 75% of the country's oil revenue comes from the southern region. In 2013 Humanitarian Development Index placed Sudan at 171 out of 187 countries in terms of development, income and food security.

<https://www.wfp.org/countries/sudan/overview>

In Sudan the basic unit of society is the extended family. In rural areas typically three generations of males, their spouses and children live in the same household. Families are usually large with six to seven children because children are needed to help with farming and animal care. A man's social status depends on how many wives he can support at one time. Some men have up to four wives, each with their own house.

The Sudanese diet consists mainly of grains such as sorghum, millet, and maize. Areas with heavy rainfall grow cassava, potatoes, peanut butter and mangos. Other domestically grown produce consumed includes guava, bananas, tomatoes, okra, carrots, onions, eggplants, beets, cucumbers, pineapples and oranges. Sudanese enjoy beef, chicken, goat and mutton but meat is expensive and consumed in small amounts. Nomadic people in the north rely on dairy products from camels, goats and sheep. Common drinks are tea and coffee.

Children are required to attend school through the 8th grade but the requirement is not often enforced. Arabic is the official language of instruction, and English is taught beginning in the 5th grade. Most rural schools lack basic supplies. The best schools are located in large cities like Khartoum where wealthy families send their children to international and private schools. Because the good schools are in the cities, rural families send their children to live with relatives and attend school there. Public schools are segregated by gender, with boys more likely to attend school than girls. Some families traditionally

believe that a girl's education is not a worthwhile investment because girls will marry and become part of their spouse's family. Or, they believe a girl's place is in the home. Typically students from urban families are expected to attend a university after passing an exam called the Sudanese Certificate Exam. Sudan has 31 public universities and 38 private ones, with majors in technology, medicine, law, economics and business.

Sudan lacks an effective public health system. The country is plagued by yellow fever, cholera, malaria and malnutrition. Rural healthcare is rare. Some people travel to larger cities in search of better healthcare, but even urban hospitals and clinics lack supplies and medicine. International relief agencies provide some care to war refugees. Severely malnourished children are referred to supplementary feeding programs run by organization such as World Vision. Those who do not improve with supplemental feedings are referred to government-run rehabilitation centers for further medical support.

<http://www.wvi.org/sudan/article/malnutrition-continues-affect-children-sudan>

A typical family farm is about 15 acres. Sudan's main production crops are sorghum, groundnuts, sugar cane and millet. They also grow potatoes, wheat, sweet potatoes, onions, tomatoes, dates, maize, and rice. <http://sudan.opendataforafrica.org/pnvvyod/sudan-agriculture-sheet> Sudanese agriculture is comprised of 6 sectors: livestock (33%); rain-fed traditional (25%); irrigated (25%); rain-fed mechanized (12%); forestry and fisheries (5% combined).

In the rain-fed traditional sector, women make up 57% of farmers. They are typically subsistence farmers. Farming tasks are traditionally gender based. Women are responsible for planting, weeding, and food processing in addition to their duties within the household, childcare, and water and firewood collection. They also assist the men with land clearance, harvest, marketing and transportation of crops. http://postconflict.unep.ch/sudanreport/sudan_website/doccatcher/data/documents/Women%20agriculture%20and%20rural%20development.pdf Sudanese subsistence farming is guided by certain traditions and customs. Women enjoy the same land access rights as men. Government-owned land is also available for lease to both men and women. However land is typically registered in the name of the male head of the household, even when women own the land. This limits women's access to credit for lack of collateral.

http://postconflict.unep.ch/sudanreport/sudan_website/doccatcher/data/documents/Women%20agriculture%20and%20rural%20development.pdf In addition, government aid programs traditionally exclude women from receiving benefits. <http://www.madre.org/page/sudan-women-farmers-unite-41.html>

Cultural customs and traditional gender roles contribute to lack of nutrition for women. In Sudanese culture, women do much more physical labor than men, but often don't get as much food. They also go without food so their children can eat. Lack of education causes some pregnant woman to avoid foods high in nutrients such as eggs and liver because of false belief that those foods will cause birth defects. Malnourished pregnant woman give birth to malnourished children, creating a malnutrition cycle.

<http://www.irinnews.org/report/101250/women-and-malnutrition-the-case-of-south-sudan>

A number of nutrient deficiencies plague Sudanese women and children. Iron deficiency causes a lack of energy, affecting a woman's ability to carry out the hard physical labor required of her. Women often walk an hour or more away from their home to collect water and firewood. Vitamin A and zinc deficiencies weaken the immune system, especially in children under five years of age. This increases their risk of dying from diarrhea, measles and malaria by 20 to 24%. Lack of vitamin A also leads to

childhood blindness. Iodine deficiency in pregnant women is serious because iodine is needed for brain development in fetuses. Children born to women deficient in iodine are typically mentally impaired.

<https://www.wfp.org/hunger/malnutrition/types>

Civil war combined with intermittent floods and droughts have caused food deficits, loss of livelihoods and population displacements in Sudan. http://www.fao.org/ag/AGN/nutrition/SDN_en.stm The number of Sudanese suffering from food insecurity was expected to hit four million in 2014. 80% of rural Sudan residents rely on agriculture for food and income. Food insecurity has been impacted by poor harvests due to recent droughts, an increase in fighting between tribes which forces people to flee their homes and miss critical planting and harvest windows, an increase in staple food prices, and an increase in refugees fleeing to Sudan from South Sudan. <http://www.fao.org/news/story/en/item/223368/icode/>

Possible Solutions – Suggestions and Successful Programs

To address the malnutrition crisis in Sudan, below is a list of suggestions that I think would be the most effective. I would focus on helping Sudanese women in traditional rain-fed agriculture. By providing Sudanese women farmers the tools and supplies needed, they can grow more food for their families, grow a larger diversity of produce to provide more variety of nutrients in their diets, and sell extra produce to provide supplemental income. The first three suggestions involve improving farming practices, while the fourth focuses on a different approach to working with the Sudanese government.

- 1) Sudan has distinctly different climate regions. Continue to educate the Sudanese women farmers regarding which crop and seed varieties are most effective in specific climate zones. Provide varieties of seed for their main crops – sorghum and millet – that will grow better in drought conditions. Promote other crops that will grow in the rainy season to further supplement families' nutritional needs as well as provide extra income.
<http://www.fao.org/news/story/en/item/223368/icode/>
- 2) Sudanese women farmers often lack the basic farming implements that would allow for increased productivity. Provide Sudanese women farmers the tools and supplies needed to grow subsistence food for their families and additional food to be sold as supplemental income.
- 3) Cultural barriers often prevent Sudanese farmers from adopting more effective and productive farming practices. Institute a “Demonstration Farm” system to educate women farmers regarding farming practices. Use a combination of educators and local citizens to staff the demonstration farms in order to improve the rate of acceptance from local farmers.
- 4) Governmental corruption and inefficiency is a barrier to food security in Sudan. Use a “territorial approach” to combat this barrier. In the territorial approach, collaboration with the Sudanese government is targeted at the local level rather than the state or national levels. This “grass-roots” approach would give ordinary citizens, including women farmers, a chance to make a change in their communities and solve problems in small, effective steps rather than working through a larger governmental system. (<http://www.thebrokeronline.eu/Articles/Territorial-approach-A-paradigm-shift-in-policy-making-to-fight-hunger-poverty-and-inequality>)

A number of existing programs, some already running in Sudan, are listed below. I believe all of these programs could be scaled up successfully to help address many different problems including lack of education and malnutrition in women and children.

- 1) A Lutheran World Federation pilot project supplies seeds and tools to Sudanese refugees living in camps in Ethiopia. The seeds can be sprouted in burlap sacks filled with rocks and soil and then transplanted to gardens. Spinach, onions, carrots, eggplant and radishes can be grown to supply families with vital nutrients. Spinach and carrots are high in Vitamin A; even onions supply some Vitamin C. Extra produce can be sold to supplement the family income.
<http://news.stanford.edu/news/2013/july/ethiopia-project-food-071113.html>
- 2) “Credit for Education” is a program currently in over 17 countries across Africa and Asia, not including Sudan. This program targets women living in rural poverty. “Credit for Education” provides small financial credits for rural women to run businesses that help support their families. In exchange for the financial credit, the program educates women on numerous topics from child nutrition and health to household finances. Starting off in only two countries with 50 members, “Credit for Education” has now reached over 1.6 million women, proving this program is a successful and expandable enterprise. “Credit for Education” should be brought into Sudan.
<https://www.freedomfromhunger.org/credit-education>
- 3) “Zenab for Women in Development” is a Sudanese NGO
<http://www.zenab.org/#/agriculture/3157683> that partnered with MADRE to provide young Sudanese women farmers with seed and supplies. The women started a Women Farmers Union. By networking with other women farmers they were able to increase their agricultural yields, which in turn increased food security, supplemental income, and economic status. The women were able to pool their income and invest in local projects such as refurbishing a local adult education center for women in one community, or bringing electricity to another community. One of the most exciting effects was that the women were able to use their extra income to send their daughters’ to school. This helped to break the cycle of poverty.
<http://www.madre.org/page/sudan-women-farmers-unite-41.html>
- 4) Combatting Childhood Malnutrition and Disease - “Anemia No” Campaign. Currently up and running in Peru, the program “Anemia No” is targeted at treating malnutrition. The organization interviews families who have children struggling with anemia. They uncover the causes of malnutrition in these families and then supplement solutions. Their goal is to reduce the anemia rates in children under five years old by 30% in the next four years. Part of this program includes a successful government program that will provide nutritional supplements to families in need. These supplements provide the essential nutrients that children need for healthy growth.
<http://www.actionagainsthunger.org/blog/peru-fresh-take-combating-childhood-anemia> A program such as “Anemia No”, which targets specific areas of malnutrition rather than all malnutrition in general, could be instituted in Sudan. Since rural healthcare is rare in Sudan, training local citizens to combat specific malnutrition deficits may be a more effective approach.