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Mozambique, Factor 11: Malnutrition
Mozambique: Nutrition for All in Mozambique

The beautiful South African country of Mozambique consists of swamps, rain forests, mountains, grasslands, beaches, and sand dunes. The large cities lie on the coast; they flourish- although the slums on the outskirts struggle (Leonor). There are public gardens in the cities, markets, and low cost apartments that the government is trying to construct to keep up with the rapid population increase. Mozambique also has the Zambezi River that gives power through Africa's largest hydroelectric projects, the Cahora Bassa Dam (Leonor). However, this diversity of geography causes only 5% of Mozambique's land to be arable- able to be plowed. Diverse geography mixed with a devastating civil war in 1990's caused Mozambique to have major barriers (Leonor). Mozambique is receiving help for these barriers; however, some aspects of life, such as malnutrition, the citizens have been left to fix themselves. The largest problem of malnutrition in Mozambique is the fact that their diets are full of grain with little micronutrient foods ("Mozambique," *FAO*). Although malnutrition can be improved by increasing imports of animal products and products high in protein, the continuation of markets being constructed, and bettering the trade imbalance for Mozambique. The traditional farming Mozambique family is five people, with multiple generations living under one roof, and the average farm size is 3.5 acres of land- or 1.4 hectares ("Mozambique," *FAO*). The citizens speak Portuguese and the majority are farmers. Most of the crops originally grown in Mozambique have been substituted for European exports because they cannot grow enough food to sustain the country themselves (Leonor). Although farmers still seem to grown millet, which is used to make beer, corn, cassava, coconuts, peanuts, cotton, sugar, and cashews (Leonor). Most farmers just grow crops for their own consumption however the excess can be sold in markets or transported to the capital to sell. Agriculture is the largest industry in Mozambique by far, fishing accounts for 1/3 of all exports- due to the ready coast (Leonor). Along with fishing the other main exports would be shrimp, cashews, cotton, sugar and timber. Mozambique trades mostly with Spain, United States, Portugal, Italy and Japan, although they struggle with a trade imbalance (Leonor). Small farmers are not alone; they are receive aid from Feed the Future, U.S. Agency for International Development and International Maize and Wheat and Improvement Center (Smallholder). The help from these agencies include agriculture conservation, crop management with minimum soil disturbance, and crop rotations ("Smallholder"). Aid really seems to be making a difference in Mozambique, causing one to think that since they are already receiving help in these areas the-still prevalent-food insecurity problem isn't necessarily largely due to incapable farmers.

Americans and Portuguese introduced corn into the Mozambicans diet (Leonor). The Mozambican diet consists mainly the cassava root that they create into dough (Leonor). It can also consist of leafy greens and beans; however, they struggle with getting micronutrient foods, which consist of fruits and animal products, that are high in protein (Leonor). Lack of protein is why the anemia rate is so high. The animal life in Mozambique consists of zebras, water buffalo, elephants, giraffes, lions, hippos, and crocodiles(Leonor). Wildlife can live on the country's Nationals Parks and Reserves (Leonor). 80% of Mozambican diets are starchy roots- like the cassava root- and cereal (Chikakuda). Imbalance in diet causes malnutrition and an increase in anemia. If one has low iron levels, such as one would if they didn't intake enough protein, then one's cells in their bodies won't be getting enough oxygen which can lead to

bigger health issues. The diet of the citizens, especially in rural areas are very one sided. On the coast it is easier to maintain fish for food, due to the large fishing industry there (Chikakuda). However, the street food in the city can consist of high sugar intake (Chikakuda). From 2005-2007 38% of citizens of Mozambique were undernourished and in 2008 it was reported that 44% of children under 5 were malnourished (Chikakuda). Canada's Department of Foreign Affairs has started to build markets in Mozambique (Chikakuda). Building of markets is great for Mozambique and is instrumental in my proposal for how to decrease malnutrition in Mozambique. Influx of markets also means increase in commerce and a more diverse diet.

Access to health care can be complicated for the Mozambican, and so a solution is complex. After independence the country went to free health care, private practice was outlawed causing many doctors to leave the country ("Nutrition"). Mozambique's health care became more focused on preventative medicine, sanitation education and the creation of clinics ("Nutrition"). Then, Mozambique had a civil war where many of the health clinics were destroyed. After the civil war private practice for doctors was legalized to try to coax some of the doctors that left the country to come back into practice- because there was a lack of doctors in the country at that time ("Nutrition"). The government continues to rebuild the health clinics due to the wreckage of the civil war. The infant mortality rate is the highest in the world, 130 deaths per thousand ("Nutrition"). This is shocking, although if the country continues to support the job outlook of being a doctor, and trying to regain the doctors they lost before the civil war, then the small amount of doctors in Mozambique could begin to change. The two biggest diseases that Mozambicans struggle with is malaria and AIDS ("Nutrition"). Vitamin A deficiency and anemia in women and children is being treated by medical clinics- where they can reach. The rich coastal cities don't have a lot of problems reaching clinics. But the slums on the outskirts of the cities and rural areas struggle ("Nutrition"). Therefore rural areas anemia and lack of Vitamin A will continue to be prevalent, until more clinics are built. And when these clinics are built, they need to be put in the areas of greatest need first. Education has become a priority after the civil war in Mozambique. Literacy is increasing but lack of schools and teachers makes it difficult. In 1995 the literacy rate was 40% of the population (Leonor). Illiteracy can be tackled the same way the access to health care can, continuation to encourage students to go to school, and continuing to build schools when they can. If the citizens of Mozambique are educated and value education then they will pass that down through their children. If a woman is educated then she is statistically more likely to have less children than an uneducated woman. Statistically, if education and literacy can increase then the country is killing two birds with one stone- educating the population, and theoretically decreasing the birth rate. Another way the country could attempt to reach uneducated and unhealthy citizens is through making almost a "strip mall" style clinic and school. If the two were either in the same building or side by side it could provide the citizens with a 'hotspot' for education and health care. A citizen could theoretically go to the clinic for treatment and then go to school- or vice versa, instead of having to make two trips to two separate places. The proximity could allow for the citizens to be more inclined to make the trip to the clinic and to school. Due to the complexity of a war-related history, coupled with disease and literacy issues, a solution to Mozambican health needs will require a unique, complex plan.

A major barrier hindering agricultural production seems to be climate change, although as previously stated Mozambique is receiving immense agriculture help already. International agencies are helping farmers deal with climate change by implementing new farming practices such as crop rotation that

allows the soil to go from one crop that takes a lot of nutrients out of the soil one year, to planting a crop the next year that puts a lot of nutrients back into the soil. Similar to how many midwestern farmers do a corn-soybean one year rotation, corn takes a lot of nutrients out of the soil, and soybeans replenish those nutrients back into the earth. Problems earning a minimum wage is still very apparent. Mozambique has the highest GDP (Growth Domestic Product) at 7% but there is still 50% poverty in Mozambique. The imbalance is due to the job outlook; 80% of Mozambicans work in agriculture but the lack of employment in the agriculture industry is concerning (Jones). Most working class citizens go into agriculture because there isn't much of a choice. And with the growing problem of underemployment- working less than full time or working at a job without proper training- is causing economic hardships for the people of Mozambique. The natural resources industry is having great growth; however, it is not labor intensive so it is not likely to create many more jobs (Jones). The growing problem of poverty and lack of ability to earn enough food for one's family can be combated with the continuation of local market places being built. If there are more opportunities for these farmers to sell their goods, then it allows for more commerce to circulate. However, another way to stimulate economic growth in Mozambique is through foreign investment. "The Government of Mozambique is receptive to foreign investment, which it views as a means to drive economic growth and promote job creation. Virtually all business sectors are open to foreign investors. The government has processes in place to review and approve each foreign and domestic investment; however, there are almost no restrictions on the form or extent of foreign investment" ("Mozambique." *U.S.*). Mozambique placed well in the World Bank's report for protecting their investors; they placed 49th out of 195 ("Mozambique." *U.S.*). If foreign investments would continue then the economy in Mozambique would be stimulated, and it would create a positive outlook. An even better scenario would be if the foreign investors would invest in the markets, or even the farmers. Foreign investments would allow for more circulation of commerce, therefore boosting the economy.

Malnutrition is a large barrier standing in the way of the people of Mozambique, as previously stated. If a citizen does not have access to proper nutrition then all other aspects of life seem to be a challenge as well. If one is not properly fed then employment, taking care of one's family, and simply enjoying life can be a struggle. One way to combat lack of macronutrient foods is by increasing animal consumption. Mozambique is struggling in animal production, and the animals that they do have are small animals, such as chickens, bovine, sheep and pigs ("Mozambique," *FAO*). One proposal for the Mozambicans would be to trade their exports of fish and grain for animal meat. Trading would boost the economy, because it would increase global trade and then increase local commerce as well through the selling of these products at local markets. Circulation of animal products and commerce would really help Mozambique. Their diet could then become more micronutrient rich, and the malnutrition would decrease. Animal meat can be expensive in third world countries due to its scarcity and how highly it is regarded by citizens. Mozambicans should also try to eat protein rich foods that aren't necessarily meat, such as chicken eggs. The *FAO* projected that in Mozambique in 2005 there were 14 million chickens ("Mozambique," *FAO*). Eggs are very high in protein and contains good vitamins and nutrients as well. Chickens are relatively easy to take care of for small scale farmers, it is also relatively easy to sell eggs at local markets for income. But that's not all, the farmers of Mozambique also harvest beans regularly. Beans can also be a great source of protein. Increased intake of beans along with increased production and circulation through markets will immensely help the malnutrition, and anemia problem, in Mozambique.

However, it is understood that the plan proposed cannot happen overnight. For it to work there are few variables that need to occur. The production of markets must continue, in all places in Mozambique- not just the rich coastal cities. Farmers must be able to raise chickens or beans for protein, this could mean that they might need help understanding the causes and effects of disease and proactive measures that can be implemented to proactively guard against such problems. Aid could come from the assisting international agencies. The trade imbalance between Mozambique and its trading countries must be corrected, Mozambique must get a fair share for their exports. With these factors taken care of, the people of Mozambique can begin to combat malnutrition in rural areas. Mozambique is a very rich economic country, however, the citizens still deal with barriers, such as access to healthcare, rebuilding after the civil war, and having a richer diet, that lead to food insecurity and an unhappy lifestyle. Many of these issues are being addressed with the help of international agencies, including the building of markets and the aid to farmers. Mozambique is blessed with rich coastal cities, although the problems in their lives derives from the slums and rural areas. But divide of income can affect lots of aspects of life for the citizens who are on the lower end of the economic range. Malnutrition is a large cause of these barriers, and through increased imports of animal meat or products high in protein, and the continuation of markets being constructed, Mozambicans can begin on the road to a more macronutrient diet. Once the issue of malnutrition is addressed the citizens are able to succeed in other aspects of life too, putting them on the road to excellence- not just for the rich, but for all.

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