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Zimbabwe, Factor 6: Sustainable Agriculture

Sustainable Agriculture in Zimbabwe

Zimbabwe, formerly known as Rhodesia before gaining independence from United Kingdom, is a landlocked country located in the South Eastern part of Africa**.** Bordered by Zambia, Botswana, Mozambique, and South Africa, Zimbabwe has approximately three-hundred ninety thousand and seven-hundred fifty-seven square kilometers to its name, leaving it about the size of the United States' Montana. This land is mostly plateau, with Mount Nyangani being the highest point in elevation. The climate is tropical though it ranges with altitude. Though Zimbabwe has a rainy season between November and March, they are often subjected to droughts. Environmental problems include, but are not limited to deforestation, toxic waste, heavy metal pollution, soil erosion, and air pollution. Much of Zimbabwe's work force is involved in agriculture, but only about ten percent of their land is arable and less than one percent is permanent crops ("The World Factbook").

Family is the foundation of any society. The average Zimbabwean family has a mother, father, and two children. The traditional families may include the extended family and have five children or more. The wives have a role of being the caretaker of the family and doing whatever the husband says ("Zimbabweans"). It is quite common for a husband to have multiple wives seeing as Zimbabweans practice customary marriages ("Food & Daily Life"). Often, due to the HIV/AIDS epidemic, the head of house may fall ill or may even pass away. During these times, the oldest child will take the role of head of the house. Families also have dogs and cats, which are used for protection and pest control within family homes. Religion has also altered the way Zimbabwean families live. Seventy-five percent of the country practices either Christianity or Islam, but most present customs are a mix of African and European. Attire is usually western-styled and Zimbabweans rarely dress in traditional clothing, except for ceremonial and state occasions. The diets of Zimbabweans are quite simple. They have three meals a day, usually with sadza. Sadza is made from corn meal and is served with meat or vegetables. Adopted from Europeans, sugar, bread, and tea are also common in the diet of a Zimbabwean. Traditional foods include milk, wild fruits, rice, corn, cucumbers, peanuts, beans, and home-brewed beer ("Zimbabweans").

Health care in Zimbabwe is lacking. Looking for better salary and working conditions, trained medical professionals left Zimbabwe in need. Between the year 2000 and 2010, fewer than two doctors per ten thousand people were available ("Poverty & Healthcare"). Only about forty percent of Zimbabweans go to facilities with improved sanitation ("Country Profile"). It's very common for Zimbabweans to use traditional healers. Traditional healers use natural herbs and spices to heal ailments that may come about. They are also known for spiritual healing ("Poverty & Healthcare").

Zimbabweans begin education at age seven and lasts for seven years until they are fourteen. After they are done with primary school, they take exams and may have the opportunity to further their education with secondary school and then university education after that. Urban schools have generally been better than rural areas, although they are poorly staffed and equipped. Since 1987, it has been mandatory for students to attend school, but widespread school closure causes conflicts ("Education & Jobs"). Despite the new lack of attendance, literacy among Zimbabweans remains strong at eight-three point six percent between the ages of twenty-five and fifty-four ("The World Factbook").

Agriculture is sixty-six percent of the labor force in Zimbabwe, and as in most countries, agriculture is based around farms and farming ("The World Factbook").

Land ownership has been a reoccurring problem for Zimbabwe. Before they were fully independent from Britain, and still known as Rhodesia, the government passed the Land Apportionment Act which legalized the separation of land between blacks and whites. Forty-nine million acres was split between fifty thousand whites, and only twenty-nine million was split between a little over one million Africans, causing blacks to become cheap laborers for farmers raising cash crops. Because of the political and social discrimination, many felt it was necessary to regroup and fight for their land. The problem was solved when the governments of American and Britain took an amount of responsibility on by agreeing to assist financially. Trying to protect their people, Britain made a clause in the Constitution, a "willing seller, willing buyer agreement." This was in effect for ten years starting in 1980, stating the government could only acquire land for redistribution from those who were willing to sell. This policy didn't cause much change in the land reform because very few farmers were willing to sell, due to productive land and very successful cash crops (Mabaye).

In 1980, when Rhodesia gained independence from Britain and became Zimbabwe, the government made a commitment to resettle one hundred sixty-two thousand farmers by 1990 when the previous agreement of "willing seller, willing buyer expired." Unfortunately, they did not reach their goal due to lack of money for buying and developing land for resettlement. After that land reform policy failed, the government came up with another plan. In 1992, the Land Acquisition Act was passed. This policy allowed the government to take over land that was unproductive. By July 1997, they had only resettled less than half of the target one hundred sixty-two thousand families. About four thousand white farmers out of twelve million people still owned over half of Zimbabwe's land. Black families were still living in poor conditions of overcrowded lands with an average of three hectares per family (Mabaye).

Blacks began to invade farms and take over land owned by whites in 2000. Zimbabwean government allowed them to invade about one thousand farms. Of all the workers who lived and worked on these farms, half lost their jobs along with a place to live. During this time agriculture production dropped because the invaders had no ability to run a commercial farm, much less a large scale commercial farm. The government had no plans or programs to help these farmers because adequate financing and trained extensions were not available. When the invasions began, the Zimbabwe government started its "fast track" land resettlement program (Mabaye).

Now there are A1 farms, which are self-contained, small production farms, and A2 farms, which are commercial farms, slightly larger than A1 farms (Scoones). Despite the land reform, Zimbabwe can't afford to put their agricultural pursuits on hold since seventy percent of the country's income comes from the agricultural sector (Muziri). Corn, cotton, tobacco, wheat, coffee, sugarcane, and peanuts are just a few of the crops grown by farmers. Livestock raised includes sheep, goats, cattle, pigs, and chickens ("The World Factbook").

As any family in the world, Zimbabwean families have many barriers facing them. Most families that live in rural areas have poor living conditions. They don't having running water. To get fresh water, they must get it themselves and boil it. The roads in Zimbabwe are not well paved and only get worse during the rainy season. This causes problems for public transportation methods, which some areas don't have the pleasure of knowing. Zimbabwe has a handful of diseases that affect them every day. These include malaria, bilharzia, tetanus, cholera, polio, typhoid, and HIV/AIDS ("Zimbabweans"). Presently, the HIV/AIDS epidemic is causing the most harm. On the farm, it's causing productivity to fall. An estimated seven million agricultural workers are affected with AIDS, and by 2020, up to twenty-six percent of the agricultural work force will fall victim to AIDS. Families are losing money paying for the costs of having

HIV or AIDS. These include, but are not limited to, healthcare, funeral costs, recruitment/replacement of staff loss, loss of skilled labor, and frequent absence of workers (Muziri).

Sustainable agricultural is extremely important in a country that intends on being successful. Currently, Zimbabwe struggles heavily with sustaining their agriculture and using farming methods that will support their environment. As mentioned earlier, Zimbabwe faces deforestation, air pollution, soil erosion, heavy metal pollution, and toxic waste, all which may be prevented if the proper measures are taken ("The World Factbook"). The new land reform has also caused turmoil among farmers (Scoones). Because of the new land reform fields, water sources, and barns that were before owned by one farmer, are being shared between different farmers. Old tobacco barns that used to be used frequently are so unused that they are being turned into classrooms, and large equipment has been going unused as well seeing as it's too big for the smaller farms that have been divided (Muziri). Though it doesn't seem like such a big deal, all of these problems affect more than just Zimbabwe's agricultural sector. Improving each one of these problems will benefit Zimbabwe in more ways than one. Harvesting fewer trees will clearly help with deforestation, but also the air pollution. Soil erosion is the top most layer of the soil being eroded away which makes it difficult for crops to grow and always strips nutrients from the soil. If we take steps to stop soil erosion, we can hope for better, more nutrient crops. Heavy metal pollution and toxic waste are effects from the poor mining practices that have taken place over the years ("The World Factbook). By improving these practices, not only will it improve Zimbabwean's water and air quality, but the soil quality as well. During the last week of January through mid-February, excessive rains also wash away the top soil which is already dry due to the reoccurring droughts before the rainy season ("Zimbabwe: Food Security Outlook Update", "The World Factbook).

Zimbabwe is approximately forty percent forested. These forests contain four hundred ninety-two million metric tons of carbon in biomass and house one thousand, one hundred-three species of amphibians, reptiles, birds and mammals, along with four thousand, four hundred-forty species of vascular plants. Because of deforestation, Zimbabwe forests have lost at least twenty-one percent of forest coverage between 1990 and 2005, and hardly any primary forests remain intact ("Zimbabwe Forest Information and Data"). There are many ways to prevent deforestation. One of these ways is to recycle. Recycling is reusing paper and plastic materials so there's no need to harvest more trees. Reforestation is also a great way to prevent deforestation. Reforestation includes replanting trees and taking care of them. If every able citizen had a responsibility to plant at least one tree a year, it would make a significant difference ("How to Prevent Deforestation").

Erosion is another large problem in Zimbabwe. Erosion is the detachment of subsoil and top soil during run off rain, or wind storms. High levels of silt in reservoirs are being found, including those of rural water dams. Because soil erosion is happening at a faster rate than soil reformation, it is becoming a bigger problem has each year goes on without action. Some experts estimate that in about fifteen years growing corn may not be possible because of shallow soil. The most nutrient layer of the soil is the top soil. Since its being eroded constantly, crops lack important nutrients ("Zimbabwe: Land-use in Dry Tropical Savannas"). It's almost impossible to end soil erosion entirely, but there are multiple ways to slow it down. Using erosion control landscaping products such as retaining walls, residue covers, mulch, and erosion control blankets can help reduce erosion ("Tips on Preventing Erosion"). A low cost way to reduce erosion is by using farming methods such as no-till and contour planting. No-till is avoiding tilling the ground between harvests, or tilling, but spreading the waste around the soil to act as a cover for loose soil. Contour planting crop rows horizontally with the hillside and the rows act as barriers to silt running down the hill.

In order to have agricultural sustainability, you must also have farmers whom are sustainable enough to do the work. Recently with the HIV/AIDS epidemic, this is becoming harder to achieve. Zimbabwe has

one of the highest rates of AIDS in Africa ("Zimbabwe Forest Information and Data"). As stated recently, the HIV/AIDS epidemic is causing low morale and low confidence in the future of farms among farmers. It is harder for farms to do meaningful and productive farming when they fall ill. Another problem the HIV/AIDS epidemic involves the extension system at universities. Loss of staff, either unskilled, or skilled, makes it hard for farmer's to get advice and continued education on their farming practices. Special and traditional practices are being abandoned because there is a lack of experienced staff to teach it. A way to counter act these problems is have more HIV and AIDS treatment and education. Up to eighteen percent of sexually active adults are infected with HIV in Zimbabwe. Treatment and education would prevent further spreading of the disease. Also having workshops with experienced farmers and educators for the lesser experienced would help pass on farming practices that have been successful (Muziri).

In conclusion, many things could be adjusted to help Zimbabwe's agricultural sustainability. Without these adjustments, Zimbabwe may struggle feeding its twelve million residents. Neighboring countries, or those who are financially stable, should help Zimbabwe develop a stronger healthcare system by sending medical professionals through internships. The education system of Zimbabweans also needs some work done. More educational programs should be available to families to choose to enroll their students in, instead of them having to quit school at such a young age due to widespread school closure. Because of the new land reform, large farm equipment has been abandoned and farmers often have conflicts about whose barn is whose, or whose water source is whose. A program should be developed to teach farmers how to use their large equipment productively on smaller farms. Seeing as HIV and AIDS are not the only diseases causing harm to Zimbabweans, there should be education and treatment for the diseases that cause the most harm to Zimbabweans work force. Steps to stop further erosion and deforestation should be taken to help crops grow more productively, and help reforestation. Farming practices such as no-till and contour farming should be implemented into the average farm. To help reforestation, every person should plant, at the very least, one tree per year to keep up with the deforestation. If each country and each person contribute one small amount then together we can help sustain agriculture.

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