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Zimbabwe: Scientific Advancements Improve Living Conditions in Zimbabwe

There are 12,084,000 people living in Zimbabwe (Encyclopedia). Approximately 78% of Zimbabwe's population are living in absolute poverty. Three out of four are living homeless, hungry, and scared. In addition to poverty and malnourishment, Zimbabweans have suffered from: HIV/AIDS and cholera epidemics, severe inflation, political and governmental issues, high unemployment rates, and multiple near- collapses of the health care system. In the past twenty years, not only adults obtained the effects of HIV/AIDS, but children and adolescents did as well. Since many Zimbabweans are too poor to afford medical help as well as proper food for their diets, they lack the sufficient supply of important macronutrients including protein, carbohydrates, and fat, and micronutrients such as: iron, Vitamins A, C, and B, and phosphorus. These nutrients are vital to one's health in surviving the harsh living conditions in Zimbabwe (Simmersbach). Childbirth is also made more difficult because of the lack of good health services. Newborns are vulnerable to diseases on the account of their undeveloped immune systems. When the mother has insufficient nutrient intake, so will the infant. This causes the infant to become malnourished at a young, fragile age (Hussain and Herens). With the severity these situations being so drastic, the United Nations consider this a "complex emergency," as well as a "humanitarian crisis." From internal and external conflicts, Zimbabwean authority may begin to collapse. When emergencies occur such as evacuations, displacements, living in or near a war area, weather devastations, and home invasions, most are forced to leave their home and flee. Those who do not return to their homes may not receive aid as quickly because of their sudden change of location. Moving so quickly causes a loss of a majority of their possessions, and takes many months to years rebuilding their life. Losing support as well as a home will cause some to rely dependently on international protection and help (Hussain and Herens). These difficulties affect everyone and everything in Zimbabwe. From infancy to late adulthood, Zimbabweans are faced with inevitable tragedies and struggles.

From day to day, the father of the house works to provide income for his family, while the mother tends to the household and community duties. In difficult conflict times such as war, drought, or recession, the father will become involved within the conflict either voluntarily or obligatorily. When such events occur, the wife is obligated to carry out her husband's duties during the time of his absence. Under the unfortunate circumstance the father will not return to his family, the wife will have to provide for the children. Neglecting the children may be a possible outcome because the mother has so many responsibilities. In times of necessity, some women turn to prostitution of themselves or their children to provide income. In the worst situations, some women sell or abandon their children (Hussain and Herens).

Running the risk of becoming abandoned by their parents to create income, the children will obtain responsibilities to help their family. They will participate in hunting for wild foods or animals, help clean, and take care of the younger children. Some will get jobs, if possible, to help increase the income within the household (UN forced). Depression is common at an early age because of neglecting parents, stress of the surrounding environment, and unneeded adult-like responsibilities. Children become sick and malnourished because of the stress and depression. Household tension, lack of health care services, unsanitary water, crop destruction, and the loss of a loved one takes a toll on the children (Hussain and Herens). Within the past ten years, 2 million children died due to malnutrition and disease. When a child is malnourished at young age they may face deficiencies in physical, motor, and cognitive abilities as they grow older. For a young child to be independent and survive without guidance on their own is difficult. Instability and loss of support can weaken a child's confidence and self-ambition.

The most widespread nutritional deficiency is the lack of iron. An estimated 2 million people are affected in Zimbabwe, and is the cause of 20% of deaths to mothers in labor. Another micronutrient that lacks intake is Vitamin A. When the body lacks Vitamin A, it increases the vulnerability to infection and death, causing the immune system to weaken. Having a strong immune system is important due to the unsanitary environment. When children's diets do not consist of Vitamin A they run the risk of becoming blind. Yearly, 500,000 children are affected. A possible solution to this issue is basic: produce more natural foods in Zimbabwe. Unfortunately, those sources are not available, so more efficient methods need to be taken into consideration to provide food and other basic resources. An efficient solution to growing vegetation during the dry season, would include hydrogels. Hydrogels, specifically TerraCottem, are polymers that are extremely absorbent to any type of precipitation (Science Illustrated).

Climate and weather are catalysts for even greater devastation. Particular tragedies such as hurricanes or floods may be a reason why so many Zimbabweans are struggling. A recent flood in December 2011, caused the Zambezi River to overflow. Many homes were washed away, the surrounding wheat fields perished, and many were killed (Banda). Because Zimbabwe's climate and weather have such an effect on the land, it makes it very difficult for agricultural businesses. Zimbabwe is within the tropical region, temperatures and the amount of rainfall will vary depending on the time of season. May through September is concluded to being the dry season, with a short interval of cooler temperatures, and a longer interval of hot temperatures. The months of November through April are when the most precipitation falls. During the month of January, Zimbabwe is affected by the Intertropical Convergence Zone. This is when either a serious drought can occur with below average precipitation, or above average precipitation causing flooding.

Zimbabweans who reside in rural areas are dependent on the surrounding vegetation for medicine and fuel. For poverty-stricken Zimbabweans, such as subsistence farmers, it is difficult to afford alternative fuels and modern medicine (Mavi and Shava). Fortunately, Zimbabwe's rainy season helps the growth of many abundant plants and trees. The second most bountiful vegetation on the plains of Zimbabwe after grasses is brachystegia (African tropical timber tree). Common trees found in Zimbabwe are: msasa, munondo, paperback thorn, Nyanga flattop acacia, Rhodesian teak, mohobohobo, baobabs, thorn trees, and mopane trees (Zimbabwe Plants). Generally found in the Zambezi and Limpopo valleys are baobabs, thorn trees, and mopane (Zimbabwe Vegetation). Other than woodlands and forest areas, Zimbabwe also obtains grasslands and savannas. The most abundant area of vegetation is located near the eastern border by Mozambique, and the largest savanna area is located north east of Bulawayo (Zimbabwe Plants). Other than using the surrounding vegetation for fuel and medicine, many of the locals have superstitions and religious beliefs pertaining to certain plants or trees. Very specific guidelines are to be followed when collecting bark, roots, branches, and seeds for medicinal purposes.

HIV/AIDS was one of the most widespread diseases in Zimbabwe. The first case was reported in 1985, and rapidly increased. By the end of the 1980's, about 10% of Zimbabwe's adult population was affected, and continued rising into the 1990's. Between 1995 and 1997, HIV/AIDS peaked at 36% of the adult population in Zimbabwe. Afterwards, it began to decrease slowly. In 2003, 25% were affected, 15% in 2007, then 14% in 2010 (HIV/AIDS). Zimbabwe was within the top ten countries for the pervasiveness of the disease. Since HIV/AIDS affected so many, it decreased the longevity of the overall life expectancy in Zimbabwe from 52 to 37 years of age for both men and women, intensified poverty in communities, decreased the population size of Zimbabwe, weakened structures of institutions, and many national governmental systems were undermined. There were three steps that the Zimbabwean government and international organizations took to help significantly decrease the epidemic. The first step was to heavily pinpoint and reinforce services and facilities for prevention, care, and treatment. The second step was to create a program which will expand to the national scale for evidence research. The third step was to evolve organizational and technical size of support associations, therefore being able to scale and hold up programs (USAIDS).

In 2008, approximately 85,000 people were affected and 4,000 Zimbabweans died due to a cholera epidemic. When the first case of cholera was reported in a suburb, Chitungwiza, Zimbabwe, it was also said that there were 'large pools of raw sewage.' In another town, some residents had their water turned off for more than a year by the National Water Authority. They had turned the taps off in fear of water contamination because they ran out of purifying chemicals. A public announcement stated for everyone to boil their water before usage (Zimbabwe Faces). Recently, the water sanitation has improved, but not significantly. Some women have to walk numerous miles each day for purified water. Devoting so much time into finding water means they cannot help to generate a steady income. The water they often find is unknowingly, unsafe to consume, causing illness and severe diarrhea. About 18% of Zimbabwe does not have access to a clean water source. It is very difficult to provide a whole town with clean water with the shortage of chemicals for water treatment, vandalism, and low revenue (Mutseyekwa).

Multiple organizations and associations have attempted to aid Zimbabwe. Unfortunately, Zimbabwe's difficulties are too great to be fully resolved. Over the past decade, issues have decreased in small amounts, but more work is yet to be completed. As the United Nations stated Zimbabwe as a "complex emergency," this entails that all of the problems are closely linked together, making it difficult to help aid even the minor issues (Nyaira). Some cannot begin to be solved because they coincide with the government and international affairs. There are both small and large ways to help because Zimbabweans are in need of many basic supplies. These would include, food, water, first aid/ medical equipment, and assistance and materials to build shelters. The larger, more complex humanitarian aid would consist of ways to irrigate the land for healthier soils to create nutrients for more abundant plants, as well as water purification systems (Christian Aid).

At the Rio Earth Summit in 1992, the Zimbabwe Government signed and ratified the United Nations Framework Convention Climate Change (UNFCCC) to decrease greenhouse gases. This was difficult to carry through because of the poverty level and inadequate human, conventional, and pecuniary resources (UNFCCC). Although Zimbabwe creates a meager amount of greenhouse gases, concern has risen over the potential impacts that it could have on Zimbabwe's oscillating climate. Zimbabwe's water supply and food security are closely linked to the climate changes. With the inconsistent occurring weather, Zimbabwe is inevitable to droughts- which have increased in activity throughout the past twenty years. With the location that Zimbabwe is geographically placed, it is susceptible to shifting rainfall patterns and the availability for water sources. HIV/AIDS worsened vector borne diseases such as malaria during this period due to the sizable climate changes (Adaptation Learning). If greenhouse gases increase, climate changes will fluctuate at a greater magnitude, causing even worse devastation.

For the past 30 years, Zimbabwe has held a reputation of being a country of devastation. Rwanda and Mozambique are model countries to work towards because of their improvement and restoration after civil conflicts of their own. When Zimbabwe gained its independence from Great Britain about 30 years ago, it was a country thought to become a promising nation. However, the downfall of their country began once their president, Robert Mugabe, was elected (Zimbabwe). He ruled Zimbabwe to almost a dictatorship, and created hostile political environments. President Mugabe has been Zimbabwe's one and only president since independence. About 4 years ago, Morgan Tsvangirai, an opposition party leader, challenged President Mugabe. Many political rumors and protests broke out during the election, supporting Tsvangirai. Except in the end, Tsvangirai's political party was harassed, forcing Tsvangirai to withdraw and quit the election. Although, on February 13, 2009, the African Union pressured Zimbabwe to create a unified government. Therefore, Morgan Tsvangirai was elected as Prime Minister, while Robert Mugabe held the position of president (Farr).

Zimbabweans face starvation, poverty, homelessness, thirst, and many other problems. Wealth and poverty are grandfathered through generations. In some generations, it may improve, and acquire a steady

income, but other generations may be the complete opposite. Sickness and illnesses are passed down genetically as well- HIV/AIDS included (HIV/Aids). Overall, since difficulties have peaked, they are decreasing and becoming resolved slowly. It will take time and a lot of effort to help aid Zimbabweans to full recovery. Even if a few problems are resolved, there will still be aftermath to the issues.

Improving the country of Zimbabwe will primarily depend on how well President Mugabe and Prime Minister Tsvangirai collaborate. Zimbabwe has potential just like Rwanda and Mozambique to become a promising nation it once was predicted to be (Farr). Other than governmental, Zimbabwe has many other issues to be noticed and ceased. There is poverty, famine, thirst, homelessness, and disease affecting Zimbabweans everyday. There are organizations attempting to aid, such as the Zimbabwe Education Fund. Zimbabwe once obtained the highest literacy rate in developing countries in the world, and the best school systems in Africa. However, that was 25 years ago. Throughout the past decade, political and economic issues have led Zimbabwe's education system to near a complete collapse. Because of this, it has developed into a national emergency that Zimbabwe needs to address. More recently, as of February 2009, almost 94% of rural schools shut down, and school absences increased from 18% to 20%. Zimbabwe Education Fund was founded to not only restore the once leading education system, but also to decrease the percentage of homeless and poverty stricken Zimbabweans (Zimbabwe Education Fund). Organizations, however, cannot begin to help without financial support or donations. Financial support can be fluctuating because not enough people outside of Africa are knowledgeable about the aid Zimbabwe is in need of. The one thing that could potentially make the largest difference is education. Educate the world on the daily sufferings and tragedies Zimbabweans have to face, and their struggles to survive. Teaching this in a small community could potentially grow and expand creating a wave of people willing to help. The more people that are knowledgeable about the situation, the better chance Zimbabwe has to grow and rebuild into a developed country.

Despite the multiple issues Zimbabwe still has to resolve, their progress from the past is impressive. From the promising nation it was said to be, to a near collapse of the health care and education systems, it is astonishing what they have overcome. With a lot more improvement to be made, we can never look down upon them because one day they may rise again, stronger than before. Our duty is to help guide them in to recovery, and teach others about their struggles. It is said that almost all issues in Zimbabwe are linked together somehow. When one of the issues is solved, it may lead to answers to another, then another. We need to find where the source is, and begin helping and working to achieve a restored Zimbabwe.

Works Cited

- Banda, Ignatius. Zimbabwe Not Prepared for Floods Amid Conflicting Weather Forecasts. 10 Jul. 2012. www.ipsnews.net/2012/02/zimbabwe-not-prepared-for-floods-amid-conflicting-weather-forecasts/.
- Boutrif, Ezzeddine. Establishing a food security and vulnerability information and mapping system. 18 Mar. 2012. <<http://www.fao.org/DOCREP/w5849T/w5849T09.HTM>>.
- Farr, Christy Diane. Struggles in Zimbabwe: A Brief History. 18 Mar. 2012 <<http://www.care2.com/causes/struggles-in-zimbabwe-a-brief-history.html>>.
- HIV/AIDS. 17 Mar. 2012. <http://www.usaid.gov/our_work/global_health/aids/Countries/africa/zimbabwe.html>.
- Hussain, Anwar and Marion Herens. Child nutrition and food security during armed conflicts. 17 Mar. 2012. <<http://www.fao.org/DOCREP/W5849TW5849T07.HTM>>.
- Mavi S. and Shava S.. Traditional Methods of Conserving Medicinal Plants. 7 Jul. 2012. www.bgci.org/worldwide/article/347/.
- Mutseyekwa, Tapuwa Loreen. In Zimbabwe, Improving Water Systems to Safeguard Children's Health. 24 Jul. 2012. www.unicef.org/inforbycountry/zimbabwe_61744.html.
- Nyaira, Sandra. Three Out of Four Zimbabweans Living in Poverty, Hungry; Many of Them AIDS Orphans. 17 Mar. 2012. <<http://www.voanews.com/zimbabwe/news/Zimbabwe-Poverty-Hunger-Widespread-12Apr10-90647654.html>>.
- Simmersbach, Dr. F.. Preventing micronutrient deficiencies: food abundance and diversity are fundamental. 16 Mar. 2012. <<http://www.fao.org/DOCREP/V1610T/v1610t03.htm#TopOfPage>>.
- UN forced to cut food aid to Zimbabwe's starving people. 18 Mar. 2012. <<http://www.independent.co.uk/news/world/africa/un-forced-to-cut-food-aid-to-zimbabwes-starving-people-1055683.html>>.
- Virmani, S.S.. Agroclimatology of the Vertisols and vertic soil areas of Africa. 18 Mar. 2012. <<http://www.fao.org/wairdocs/ILRI/x5493e04.html>>.
- Zimbabwe. 17 Mar. 2012. <<http://www.christianaid.org.uk/emergencies/currents/zimbabwe-crisis/index.aspx>>.
- Zimbabwe. 18 Mar. 2012. <<http://www.cliamte-zone.com/climate/zimbabwe/>>.
- "Zimbabwe." Encyclopedia Britannica. Encyclopedia Online. Encyclopedia Britannica Inc., 2012. Web. 17 Mar. 2012. <<http://www.britannica.com/EBchecked/topics/657149/Zimbabwe>>.
- Zimbabwe Faces Water and Cholera Crisis. 24 Jul. 2012. www.usatoday.com/news/world/2008-12-02-zimbabwe-cholera_N.htm.

Zimbabwe's Initial National Communication on Climate Change. 15 Mar. 2012. <<http://unfccc.int/resource/docs/natc/zimnc1/pdf>>.

Zimbabwe Plants. 24 Jul. 2012. www.overlandingafrica.com/zimbabwe/plants.

Zimbabwe Vegetation. 24 Jul. 2012. www.go2africa.com/zimbabwe/african-safari-guide/plants.