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Zambia, Foreign Aid

Zambia: The Combat of Food Insecurity

Zambia is a landlocked country located in the southern middle part of Africa. This tropical country has approximately 752,618 sq km of land, consisting of wide plateaus and mountains, and a tropical climate modified by altitude (CIA, 2020). 58% of the land has the capability of being cultivated; however, only 15% of it is. Zambia has a population of 18,241,494, and as of March 2020, 44% is urban, while 56% is rural. With a population of 18,241,494 as of March 2020, 44% is urban, while 56% is rural (Indicative, n.d.). Zambia was once a country with great wealth; it was considered the second wealthiest nation in Sub-Saharan Africa due to its immense trade of minerals, primarily copper. After the country sought independence from Rhodes' British South Africa Company (BSAC) in 1964, Zambia adopted a left-wing economic party. Zambia's political standpoint became a one-party participatory democracy under Kenneth Kaunda's presidency. After recognizing the potential dangers of having an economy run by trade, Zambia's government began shifting towards import substitution (ISI), meaning foreign imports are to be replaced with domestic production (Dale Mudenda, n.d.). This new policy allowed Zambia's economy to grow steadily, but soon to fail due to global export prices reduction. In the 1970s, the USSR flooded the market with copper causing the prices to drop immensely. Without a stable income source, Zambia's economy crashed, and the ISI policy became underfunded, causing a halt to all domestic productions and projects that were designed to achieve total independence. Now, Zambia is currently going through developmental struggles.

The politics of Zambia currently practices a presidential representative democratic republic; the President of Zambia is not only the head of state but is also the head of the government and leader of a multi-party system. Edgar Chagwa Lungu is the current president of Zambia. Lungu's presidency is often criticized for not stopping the depreciation of Kwacha, Zambia's currency. Depreciation is due to Zambia relying on 90% of its export earnings for economic stability, which has lost around 45% of its value on the global market. Now, Zambia is one of the most impoverished countries. With a population of 18.24 million, roughly 58% are impoverished (Worldbank, 2020).

Zambian's family size averages at about 5.2 persons and eats traditional meals such as Nshima, a thick porridge made of ground maize, and Delele, a simple dish that incorporates traditional vegetables (Moen, John). Local stores or family farms supply food, and their staple crops are maize and cassava. Citizen's income is around K5,281 per person per month or K63,372 a year, which is equivalent to 306.57USD and 3,678.80USD a year. Families have access to free primary education, but middle and secondary schooling costs money, causing many poorer children to drop out once primary schooling is over. Many other students go on to work after middle education since it is perceived as being a decent amount of education (Scholaro, 2020). There is access to water and sanitation, but sanitation is minimal. Universal healthcare is also a thing in Zambia, but there private and public. The public is poorly developed, meaning people often have to wait for doctors and is behind private priority wise. Over 70% of the population is poor, 58% are extremely poor and food insecure. 40% of Zambian children are stunted (ReliefWeb, 2019). Food insecurity is due to the poor and lack of production and marketing policies in development, thus causing erosion in assets due to prolonged poverty and losing yield due to insects, diseases, and climate change. (Drinah Banda, n.d.).

Zambia's agriculture is not making significant contributions to poverty reduction and overall economic growth. The ag sector rate is 1.8%, while population growth is 2.9%; the current population growth is not sustainable compared to the amount of food being produced. Agriculture industries, which

mainly consist of private farmers, lack access to resources and productive assets such as proper storage methods and mechanized farming (Kalinda, 2003). Having access to such assets will increase production since it lowers the risk of insects and diseases through pesticides and having farming equipment that will allow crops to grow with minimal water.

Zambia has been battling insects and pests that are threatening staple food crops since the early 2000s. The government liberalized maize marketing due to a maize shortage. As a result, this allowed citizens with no agricultural backgrounds to plant and trade maize. Many of the citizens who resorted to planting maize had little knowledge of procedures and regulations that would prevent the spread of pests and diseases. This caused an infestation of Larger Grain Borer (FAO, 1997). A simple solution to stop the spread of LGB is improving storage methods. Creating brick bins that are plastered in cement will prevent cross infestation from the field. Traditional storage practices on the cob to shelled maize will prevent the borers from consuming the crops. Biological methods, such as pesticides, will also drastically reduce LGB infestations. Armyworms are another insect that continues to destroy crops. 98% of farms are affected and lose around 30% of crops equaling about 2.7 billion Kwacha or 160 million USD. (FAO, n.d.). These infestations spread of diseases such as Cassava Mosaic, a virus of single-stranded DNA, and Brown Streak, circular single-stranded DNA. Removing pests and de-weeding will prevent diseases. Many farmers either do not have the resources to get pesticides or lack knowledge of controlling pesticides. Creating acts that educate farmers on proper storage methods along with pesticides will increase food production.

Changes in Zambia's climate is causing food shortages. Western Lusaka and eastern/central provinces saw the lowest rainfall since 1981, while southern regions suffer from waterlogging. Crops are not able to achieve the amount of water needed to maintain and produce the best yield. These provinces rely on rainfed crop production for food and income, and any deviation from standard patterns undermines food insecurities. Southern regions received too much rainfall, causing flash floods, which dropped maize production by 24%. Thus, leaving thousands of families with little money. The drought is also affecting average citizens by creating a shortage of clean drinking water. Without proper funding towards development, Zambia has been stripped from independence once again. The country now relies on foreign assistance.

Foreign aid is the "international transfer of capital, goods, or services" from a country or organization, with the sole purpose of benefiting the recipient country. The United States Foreign Aid was first introduced by President Hoover during World War I; he sent food along with agricultural supplies to Europe. Foreign aid was then ingrained into foreign policy after World War II. To this day, foreign aid provides assistance to hundreds of countries and aims to improve economic conditions and relief. The United States provides around USD 500 million annually. The U.S. assists in the fight against HIV/AIDS, providing health and education opportunities, provides clean water and sanitation projects, overall improving the quality of life. In 2018, Zambia had received over 273 million of dollars of foreign aid. \$4.9 million was given to the Agriculture Department (USAID, 2020). However, the efforts of increasing agriculture in Zambia are improving at an unsustainable rate. Instead of providing money, the U.S. should assist in other ways. The assistance should be used to achieve efficient mechanized equipment, education on pesticides and diseases, and help prevent crops from dying due to droughts.

Numerous organizations around the world help local communities with managing ecosystems, such as farms. Programs use the "farmer field school" approach to teach field-based education to farmers. During sessions, farmers learn how to grow healthy crops and pest management skills effectively. In 1995, Sri Lanka was introduced with almost 1000 field schools, provided by the Food and Agriculture Organization through the United Nations. It resulted in a 23% increase in yield within five years. Funding costs around USD 91,000 over the course of 5 years. (WHO, 2011). Gates Foundation, founded by Bill and Melinda Gates, is another organization that has worked to improve agricultural education in regions of sub-Saharan Africa and South Asia. They address challenges such as low productivity due to

environmental problems such as climate, low profitability, and flawed policies that inhibit cash flow and necessary resources for efficient crop yield. Foundation sends out an Agricultural Development team, similar to farmer field school staff, which provides business and livestock plans covering domestic demand and farmer education (GATES, n.d.). Programs like farm-field schools or the gates foundation can be funded and provided by the United States Foreign Aid. With the USD 4.9 million in aid for Zambia, the near 100,000 funding costs is doable.

There are known methods that enable crop growth during droughts or waterlogging. For droughts, knowing proper water and land management can make cultivation possible. Drip irrigation systems slowly drip water directly on the roots. They are designed to maximize the minimum use of water and eliminates water waste. Some land methods can include using leftover crop residue known as conversation tillage to increase soil moisture, reducing water from sliding off plants (USLM, 2019). During seasons with high rainfalls, changing farming methods can divert water flow. Methods such as shallow surface drainage on raised beds, a technique where crop beds are above soil level, or mole drains in areas that work with clay soils, provides drainage, reducing salinity in the root level. It is important to have a low salinity level since it decreases plant growth and lowers water quality resulting in lower crop yields. Using more tolerant crops such as wheat and barley varieties is an option as well (NRCS, n.d.). Providing local communities in Zambia with strategies and methods based on their climate can reduce the number of destroyed crops.

Being direct pinpoints the problem in Zambia and combats it directly. Putting funding into specific ideas, such as agricultural education, would help citizens develop skills and strategies to use in the future. This method has been proven to work in Sri Lanka and regions in sub-Saharan Africa and South Asia, where crop yield has increased. The only downside to this solution is time and the number of resources. The United States Agency for International Development would have to establish a team consisting of experts in the Agriculture field and translators. It will also take time to see a change in crop yield and creating field farm schools. However, at the end, providing strategies, skills, and agricultural methods despite the amount of time and resources it would take, will result in more yield of crops. It would allow independence for not only citizens but the government as well. Since crops would no longer be scarce, the supply and demand would be neutral, causing prices to drop, making it more affordable. Citizens will no longer starve, and the economy will flourish due to finally contributing to capital income.

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