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Somalia, Factor #5, Climate Volatility

 Somalian Hunger of Climate Barriers

 An area like no other, far off in the Horn of Africa, stands Somalia, a country needing operational hope. Citizens surviving on their own, trying to forage what they can to feed themselves. Families are torn apart as they can no longer support their loved ones. Livestock dying, crops diminishing, children becoming ill; the Somali society cannot continue with life much longer. Somalia has been battling with climate change since the 1960’s, creating life threatening impacts over multiple decades. Droughts are most common, leaving many hardships for the average Somalian family with children most affected by this on-going crisis. Most notably, the country’s child population has been decreasing from acute malnutrition due to the continual drought. Strong families build stronger communities which can build a strong nation. Somalia needs to pursue a way to get these families a better lifestyle.

Families around the world come in various shapes and sizes. According to the article titled, “A Somali Cultural Guide”, “Traditionally, Somalian families are very large, with households that include five to ten children. Somali parents are to provide for their children and raise them with care, safety, and protection until the child becomes independent ''(“Somali Cultural Guide”, n.d). However, this responsibility becomes very hard for most in Somalia. The diet for this society consists of meat, rice, and pasta. The harsh droughts cause food insecurity, leaving the whole nation hungry. This becomes a barrier for achieving a nutritious diet in Somalia's rural areas. The droughts destroy agricultural lands, creating severe dietary needs for many. Somali parents want their children to develop according to the stages of development such as the child’s age and mental status. Parents are naturally concerned about their children’s emotional, social, and cognitive development. Somalians struggle in their search for health care. The article further states, “In Somalia, every member of the family, whether immediate or extended, is used to provide support and financial assistance and often takes part in a child’s life” (“Somali Cultural Guide'', n.d). This demonstrates that finances can impact Somalian families and subsequently, the average family. Another hardship for these families can be education. Somalian children rarely benefit from education even when they have access to it. “More than three million children in Somalia are out of school. In many areas across the country, parents are not able to fund their children’s education” (UNICEF, n.d). Along with poverty, many are facing social norms, lack of teachers, long distance schooling, and safety concerns. According to the United Nations International Children's Emergency Fund (UNICEF), the poor quality of health, education, and diet systems results from the many decades of climate conflicts that have drastically impacted many aspects of the Somalian lifestyle. In addition to this is the struggle of maintaining successful agricultural lands for the needs of the country.

About three-fifths of Somalia's economy is based on agriculture practices, primarily in livestock raising and not crop farming. A typical Somalian farm must rely on the practices of irrigation. Farmers engage in rain-fed dry-land farming or in dry-land farming with irrigation from the waters of the Shebelle and Jubba rivers, or from collected rainfall. The *Nations Encyclopedia*says, “Corn, sorghum, beans, rice, vegetables, cotton, and sesame are grown by both of the described methods'' (''Agriculture-Somalia”, 2011). A Somalian farm is focused primarily on goats, sheep, camels, and cattle, which are market-oriented to benefit the country’s food production. An average farmer keeps a record of about five to ten acres of land. The land is then used for raising livestock or crops depending on the values and needs of the farmer. Both responsibilities are hard to keep up to date since the effects of climate change are so drastic.

Multiple droughts have slowed down food production, making it hard for a typical Somalian family to be able to put food on the table. *The Somalian Food Insecurity Crisis* explains it as, “The food crisis in Somalia is the result of rapid shifts from drought to flooding, as well as violence and conflict. Consecutive years of poor rains and harvests have decimated crops across Somalia, South Sudan, Ethiopia and Kenya” (Goodwin, 2023). Famine was last declared in Somalia close to six years ago, leaving more than 260,000 people dead. Over half were children. The average family is also suffering from poverty and thus not being able to put food on the table. Along with this comes the employment barriers that many in Somalia face. Due to entrenched social norms and certain expectations, many women and youth face barriers to participation in the economic sector. According to the Somalia Country Economic Memorandum, “In Somalia, due to limited formal wage employment opportunities more than two-thirds of the active labor force are self-employed” (“Improving Somalia’s Unemployment”, n.d). Most work in the agricultural business, which employs around 70% of the Somalian workforce includes livestock and crop farming. Another important form of employment is telecommunication and manufacturing. According to *Logistics Cluster*, “Somalia workers are categorized into four different sections and their pay will vary depending on these categories. A skilled worker will make the relevance to US $12.30, an unskilled worker will make US$6.15 and a semi-skilled worker about US $8, per day” (“Somalia Manual Labor Costs, n.d). The last barrier that a Somalian family may face is access to a food market. Food products are imported from Asia to be available in local markets around port towns. Imported food products may include maize, beans, sorghum and any type of sesame for oil production. If a family does not live near one of the local food markets, it is difficult for them to get their necessary food products. The explained barriers are what keep a family from living a successful life in Somalia. They all originated and exist due to climate volatility.

As previously mentioned before, Somalia has been battling with a hardship that has affected many aspects of operating a successful country for about 30 years. The food security factor that causes these hardships is climate volatility. Ever since the 1990’s, Somalia's drought rate has been increasing, making it harder for the country to operate. As stated by UNICEF, “Climate volatility in Somalia is characterized by recurrent droughts which lead to failed crops, loss of livestock and Somalia’s chronic food insecurity” (“Focus on the Climate'', 2023). The climate issue of drought is only declining today, and for years to come. An article providing statistics states that, “Climate change has upended lives and livelihoods across the region in the last two years. The United Nations has said 4.3 million people, a quarter of Somalia’s population, are at risk of “crisis-level hunger or worse” this year due to droughts”(Caato, n.d). Many Somali citizens are being drastically affected by this factor to the point where their own lives often depend on it. A resolution must be enacted to save many Somalian families and provide hope for the country’s future success.

Immediate action must be taken to help all affected Somalian families. Little can be done to prevent climate change, but different forms of mitigation can be enacted to alleviate Somalia’s food insecurity. First, irrigation systems must be evaluated and modernized to provide reliable service. As previously stated, Somalia uses two main rivers to supply farmers with irrigation waterways. However, this process has not been improving and has actually decreased the amount of land available to produce food for an average family. Therefore, creating more irrigation systems throughout the entire country will expand the water supply and help drought issues for most of the population. A way for this to be done is to add a way for all farmers to have an irrigation system. Building these systems on all farms will increase the availability of water to grow crops and ultimately increase food production. The average citizen would also be able to get water from these irrigation systems. The systems would act like power lines used across the United States. Power Lines are stretched from across the nation to get power to every single citizen, business and building. Therefore, having an irrigation system that stretches across Somalia will get water to every individual citizen. This solution will be very sufficient and beneficial to the country’s crop production; however it will increase financial rates for many. Funding for the irrigation systems will be difficult as the country is struggling financially. Each citizen would have to pay a certain fee depending on the project’s overall cost. This includes the cost of a filtration system. However, there are various options regarding irrigation systems for the country. For example, a Flood Furrow system might be the most cost effective because no technology is required. A Flood Furrow is one of the oldest water irrigation techniques used and consists of a dug-up trench that will allow water to flow through the crop field by the force of gravity. This then allows the plants to take in the water from the trenches or otherwise known as “Furrows.” This type of irrigation requires no training, just maintenance on the furrows to keep the water flowing. Again, the technique would have to use water for the trenches, therefore water lines will have to be put in on these crop growing grounds. A more modern water irrigation technique that is used is the “Drip and Spray Systems”. This system will have an increase in cost because it requires specific machinery that allows it to drip or spray water on crops. Technology can also be involved with this technique to regulate how often the crops are being watered. This type of irrigation also requires water lines and special training to operate the machinery. Installation of the system including the machinery will cost on average $1,000-$1,500 per acre of land. The drip and spray technique is used in various areas of the United States that do not get an overflow of precipitation, like Wyoming, Montana and Colorado. Lastly, in order for these systems to be put into effect, funding must be secured Much like the United States, Somali citizens would receive a water bill, charging them for their usage. However, the county would benefit from an increase in crop and animal production!

In addition to expanding Somalia’s water irrigation systems, another solution is to also increase the amount of food markets around the area. As previously stated, a major issue is that all Somali citizens do not easily access the available food markets. Installing additional food markets in rural areas will give some Somalian families an opportunity to get the products that they want and need to provide for their family. Funding would come from agriculture grants that would allow new and more irrigation systems to be built throughout the country. Also, money coming from exporting livestock such as sheep and goats can help produce a financial foundation for building more local food markets. The type of products that are sold at food markets is very significant. Most individuals think a  “Food Market” only sells food products. However, they can be much more than that. They will have all the necessities of an average home. For example, cleaning, health, food, hygiene, clothing and recreational products will be sold at these markets. In the United States, these “Food Markets” are called Walmart, or the Dollar General Store. The food markets will also need to be structurally stable. Individuals want to have a safe environment where they can get their groceries. Therefore, the building itself will need to be enclosed and have a layout that will not be confusing or unsafe for the customers. The markets will need employees to work the inventory by collecting money and helping customers get their products. The food markets will also provide employment options for many individuals. This will help those who struggle to find employment and cannot afford necessities like food to be able to have a healthy and happy family! Overall, the markets will provide citizens access to their basic living needs and assist in the country’s future success. Overall, the presented solutions will help Somali citizens to provide for their families and live a successful lifestyle by fighting through the climate volatility factor of drought in their own country.

To conclude, the country of Somalia is struggling with impacts of climate change. From this, many families in Somlai have hardships in living a successful and operational lifestyle. Climate change creates droughts leaving the entire country without water for long periods of time. Agriculturalists lose multiple crops, livestock, and money each year, forcing them to give up so much in their own lives. Families struggle to get food by having to make long distant journeys to get the necessary food to feed their loved ones. Mitigation is the only way to get Somalia back on track and provide its citizens with what they need. Improvements to existing water irrigation systems are needed, as well as the construction of new systems throughout the country. Farmers will benefit by being able to water crops and increase livestock production in the country. If food production increases, then more local food markets will have to be constructed. This will ensure that all Somalian families have access to necessary food products to live a healthy lifestyle. Climate change does not just change the environment for Somalia, it impacts the many lives that long for food and water.

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