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Somalia Africa, Food Insecurity

**Somalia devastating Food Crisis**

Food insecurity is a problem that affects the entire globe. Approximately 800 million people in Somalia go to sleep hungry. In Somalia roughly 6.5 million people are projected to face hunger. “In 2022, 43,000 people lost their lives due to the food crisis. Half of that number were children under the age of 5.” (Anna,C.,2023) Crises like Covid-19 and the largest drought that Somalia had seen in forty years is making this crisis life or death for many people in Somalia. Almost half of the children under five in Somalia are likely to suffer from acute malnutrition. The effects of acute malnutrition to young children are devastating; some of the effects are weakened immune systems, stunted growth, and irreversible damage to their cognitive development. Among the challenges presented to youth in Somalia, millions of Somali citizens have been forced to flee their homes in search of food and many have been forced to sell everything they have in order to be able to afford any food they can. The most affected are the poor and those in urban areas.

“Somalia is one of the poorest countries in the world. The average annual income for a person living in Somalia is about 600 USD. 7 of 10 Somalians live on less than $1.90 a day.” (Somalia, 2023) The living conditions in Somalia are not much better than the financial issues facing Somalia. “Only about 52% of people in Somalia have access to sanitary facilities and about 40.3% of people in rural regions of the country use open defecation due to the fact that many rural communities have no plumbing.” (Abdulkadir M.,2023) Along with all of these challenges, Somalia is facing the worst drought it has seen in forty years, after five failed rainy seasons. With people in Somalia having very little money, and what they do have having to be spent on food to survive, people are not able to access healthcare, about one fifth of the total population not having access to healthcare.

The average Somalian family is large, consisting anywhere of five to ten children. In a typical house the woman takes care of the house and the children. This includes making all of the meals, caring for the child's physical and mental health, as well as upkeep of the house. While the women are dominant in regard to household management, the men bring in the income for the house and family and are dominant in public. Meals for a family typically consist mostly of rice, pasta, and red meat. On average there is a low number of both vegetables and fruits being consumed by people in Somalia.

Families living in Somalia often live a nomadic lifestyle, relying on the environment and extended family along the way. Many Somalians also live as farmers, making up about three fifths of the Somali economy. However, most of these farmers don’t grow crops. Instead, they operate as livestock farmers that tend to different animals, such as goats, sheep, camel, and cattle. Most children in Somali families don’t receive an education. About 85% of all school age children in Somalia are not in school, as education can be hard to access for many families living in Somalia. “When children do go to school the average school life expectancy for girls is 1.48 years and for boys is 1.72 years.” (Polycarp, O.,2022)  The official religion for Somalia is Sunni Muslim (Islam), which is practiced by the majority of the population.

Food insecurity, a persistent issue for more than thirty years, is one of Somalia’s biggest challenges. Recent challenges are making it so much worse. The last five rainy seasons in Somalia have failed, causing the worst drought Somalia has seen in forty years. With no water it is almost impossible to get crops growing and it is difficult to keep and raise cattle, which is what most farmers in Somalia do. Things like Covid-19, locust swarms, climate change, the war going on between Russia and Ukraine, and conflict within the country are also major players affecting their food insecurity. When locust swarms came to Somalia, they devastated the much needed, vulnerable crops, destroying them even further and making it next to impossible to survive let alone thrive causing wide-spread crop-failure across the country. The growing global climate change has caused the temperatures in Somalia to rise and further impact the effects of the long running drought. Contributing to food insecurity in Somalia is the halting of grain imports due to the conflict going on between Russia and Ukraine. Approximately ninety percent of the grains imported to Somalia were from Russia and Ukraine. Three decades of internal conflict in Somalia have also impacted and reduced food production.

In Somalia there has been internal conflict between the government and non-state armed groups - and this infighting has affected citizen’s access to both food and aid. Humanitarian organizations trying to help people in need have trouble accessing territories that are controlled by non-state armed groups and when they do gain access they have a limited ability to help. Fear that these non-state armed groups will attack their aid deliveries or that they will face some sort of legal repercussion for helping people in these territories is another driving factor that hinders their ability to help. Implementing peace building strategies is the best way to help the people that need it most. A main peacebuilding strategy is to bring leaders of dividing groups together to try and hash issues out in a peaceful manner. At a meeting all sides would be able to talk about what challenges they are facing and possibly come to an agreement on a way to stop the violence. Connecting everyone involved with the conflict and allowing everyone to hear their side of things may be another way to come to an agreement of peace for all parties. If both sides could come to an agreement of peace, then there's hope for further deals that would allow aid to move to any part of the country where they are needed most without fear. Furthermore, if the farmers know that they will be able to use land without the threat of backlash or having to move then they may be more willing to accept and begin working on improved agricultural strategies. In doing this the benefits for the whole country both with food security and economic security would be outstanding. Stopping the violence in the country will improve the lives of all who live there, not only giving them peace of mind that they are safer but also that the country will be able to regrow and pull itself out of the food insecurity crisis faster.

Mercy USA has established and maintained over eight hundred wells in order to provide more people access to water. The U.N World Food program had been providing people in need with money in order to buy food and emergency malnutrition treatment to pregnant and nursing women as well as to children under five. The U.N World Food program also supports close to ninety thousand children with school meals. CARE, Cooperative for Assistance and Relief Everywhere, currently supports communities in need in Somalia with water, hygiene, and cash supports to help with urgent food needs. CARE also has been providing primary health services, feeding programs for infants and children, and treatment for those suffering from moderate and severe acute malnutrition. The IRC, International Rescue Committee, provides health, nutrition, water, and sanitation services. Action Against Hunger is helping people in Somalia by improving their access to clean water, vaccine campaigns for measles, cholera treatment centers, cash transfers, water trucking, and providing agricultural innovations like solar irrigation kits.

The Red Cross and the Red Crescent have been providing support to communities in Somalia that have been hit the hardest through food, water, immediate financial help, nutrition services, and health care basics. In rural farming communities the Red Cross and the Red crescent are providing farmers with tools, skills training, drought resistant seed, and building irrigation systems. Providing people not only with the things that they will need for the short term but also giving them a way to support themselves in the future is a great way to provide help so that the people in Somalia will eventually not need to rely on the assistance of all  these programs and hopefully have a better life in the long run.

One solution to this major problem is the use of drought resistant seeds. There has been much progress with this in countries like Namibia, Ethiopia, and Zimbabwe. More specifically crops like cowpea, sorghum, maize, and rice that have been specifically bred to grow more and better. One of the major benefits to using these kinds of seeds is a significant increase in crop yield. Planting forms of drought resistant maize variety leads to about 25% more crop yield in most environments that it is grown in. The enhanced seeds have shown fantastic progress in showing that they can help with food insecurity not only effectively but fast. “The enhanced cowpea varieties produce higher yields during a shorter growing period, explained Lydia Ndinelao Horn, researcher at the University of Namibia: They start flowering after 30 days and are fully mature after about two and a half months, while traditional varieties need 60 days just to start flowering.”’. ( IAEA, 2019) By not only making these crops drought resistant but also making them grow faster they will have a giant impact on helping pull Somalia out of food insecurity faster. The farmers that change their crops will have a much larger yield. This will not only be providing the markets with more food to buy, making it cheaper and more accessible, but also be bringing in more money for themselves. All of these benefits of drought resistant seeds are great though with the pros come cons. These drought resistant crops do drop seeds that could be used for the next growing season but will not be as good as the original, meaning that each year farmers will have to buy their seeds to keep up with the yields. Though this may sound really bad, the extra money from the greater yield and the money saved on fertilizer from using these seeds off put the cost of having to buy them each year. Though just simply converting to these drought resistant crops is not a magic fix for the major food insecurity that Somalia is facing, it is a large step in the right direction on the road to recovery.

Another solution that will have a major impact on the food insecurity in Somalia is improved irrigation. Improved irrigation is a great tool to help farmers during times of climate change and can act as an insurance in cases of drought. Some examples of improved irrigation are drip and micro irrigation. Drip irrigation, the most efficient of the types of irrigation, can use up to 30-50% less water than the traditional surface irrigation, which in times of drought where every drop of water counts is very helpful. With drip irrigation there is also less of a chance of soil erosion, water runoff, and root exposure since the water is slowly delivered directly or close to the plants root zone.  Allowing the farmers of Somalia to use less water during this terrible drought will allow them to be able to grow many more crops with more productivity and better-quality crops. Using drip irrigation will make the crops reliable in times of drought and uncertainty. New methods of irrigation also allow the farmers to make sure that the plants that they are growing are getting access to the exact amount of water they need without adding too much or too little. It also allows farmers to easily keep up with a consistent and correct schedule for the plants to ensure their wellbeing. In California they are already seeing improvements in water usage when using smart irrigation. “California’s [Statewide Water Efficiency and Enhancement Program](https://www.cdfa.ca.gov/oefi/sweep/) (SWEEP) provides funding to upgrade irrigation systems, and according to the California Department of Food and Agriculture (CDFA) which oversees the program, SWEEP projects annually save 117,000-acre feet of water to date.”(California Department of Food and Agriculture.,2021.)

One more solution is implementing climate-resistant agricultural practices. This will be crucial in preparing farmers for whatever climate change throws at them. Examples of agricultural practices that would be beneficial to teach Somalian farmers would be integrated pest management (IPM), soil conservation, and sustainable pasture management. Integrated pest management, IPM, is a great way to limit the risks to the environment while also ensuring the best results for both the farmer and the crop. A great example of IPM are beneficial predators, these predators can be a range of insects or animals that keep unwanted and damaging pests away from your crops while also often improving your crops. This is just one example of IPM but there are many other strategies that can help keep pests away while also keeping the environmental impact to a minimum. Soil conservation is another great example of a climate-resilient practice that can help farmers and their crops. Just like IPM there are many ways that farmers can do this from cover cropping to crop rotation. Soil conservation practices are very important especially in a drought, it has been proven to help the soil capture more water and improve quality and quantity of a crop's yield in the long term. Sustainable pasture practices like rotational grazing, fencing, and water management can also ensure that they and their livestock have the best outcome and the best chances for a sustainable future. Teaching Somali farmers sustainable ways of farming will vastly improve their chances against an ever changing climate and insure that them and their farm will succeed even in the midst of a drought and other challenges yet to come. Connecting farmers to each other, veterinarian resources, and to better weather information is another great way to make them climate-resistant. Many farmer families go back generations and have a wealth of knowledge about the land and area they farm on, so connecting farmers and allowing them to share this knowledge easily with one another is a simple yet effective way to ensure that both the crops and the farmers succeed from techniques that have long been proven to be effective. Helping farmers have improved access to veterinary care will insure their livestock does well securing not only their job but also the resources that their livestock brings, especially since most farmers in Somalia are livestock farmers. Farmers being able to access good and reliable weather reports will allow them to plan ahead to know what strategies they should be using or knowing what they should prepare for.

A final solution to this vast problem is probably the most important and possibly the hardest to implement. As seen already, the education system in Somalia is severely lacking and most people have never had a formal education and even if they did, it was likely for less than two years. Bringing people in to  educate the farmers of Somalia on both their crops and sustainable agricultural practices hopefully implemented is the true foundation to helping Somalia and its people rise above the food insecurity crisis. Without actually educating the farmers in the processes of the drought resistant seeds or how the new irrigation functions, there is a high chance that things will start to go wrong. The long-term goal for Somalia is that their people will be able to be food secure without the aid from other countries and people. Simply handing over the tools to success is not enough if the people being handed them don’t know how to use them. This is why educating the farmers on the tools, technologies, and practices they are being given is crucial to success. Teaching a farmer things and skills like cover cropping will ensure that their soil stays healthy even through drought and teaching them to use drought resistant seeds and improved irrigation technologies will ensure that they are prepared even in the midst of the worst drought seen in forty years. Cover cropping is just one of the many practices that can be taught to farmers to not only improve their success but the country's success. When the farmers do better so will the rest of the country through the availability of more food and less hunger.

Somalia is facing food insecurity at a crisis level and desperately needs the aid of others to ensure their survival. With over six million people within the country projected to face hunger, there is no time to waste in making and implementing effective solutions. With Somalia facing the worst drought in forty years, solutions catered directly to both immediate support and long-term solutions to withstanding the drought are necessary. With many other organizations providing Somalia with the lifesaving medical aid, they need financial support enabling both enough food to stay alive and new focus on the farms to solve this crisis. Through the use of drought resistant seeds, improved irrigation, and the educational support of experienced farmers there is hope yet that Somalia will be able to pull themselves out of this food insecurity and one day be able to run completely on their own.

Abdulkadir Mohamed Published 23. Dec 2020. (n.d.). *How boreholes are transforming lives in rural Somalia*. NRC. https://www.nrc.no/perspectives/2020/how-boreholes-are-transforming-lives-in-rural-somalia/

Anna, C. (2023, December 6). *Report: 43,000 estimated dead in Somalia drought last year*. AP News.<https://apnews.com/article/somalia-drought-deaths-hunger-9e78f99c101a290304a28a37dadfef0b>.

California Department of Food and Agriculture. (2021.). *State Water Efficiency & Enhancement Program*. CDFA. https://www.cdfa.ca.gov/oefi/sweep/

IAEA. (2019, March 13). *Drought-tolerant crops to contribute to food security in Namibia*. IAEA. <https://www.iaea.org/newscenter/news/drought-tolerant-crops-to-contribute-to-food-security-in-namibia#:~:text=The%20enhanced%20cowpea%20varieties%20produce,days%20just%20to%20start%20flowering.%E2%80%9D>

Polycarp Omondi Otieno, (2022). *Somalian education sector shows sign of progress despite low enrolment rates, spending*. International Institute for Educational Planning. <https://dakar.iiep.unesco.org/en/news/somalian-education-sector-shows-sign-progress-despite-low-enrolment-rates-spending>.

*Somalia*. World Food Program USA. (2023, May 29). <https://www.wfpusa.org/countries/somalia/>.