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Somalia, Water Scarcity

Somalia: Only Water in Your Hands Can Soothe Your Thirst

Food is the cornerstone of human society, functioning as the basis of civilization. Humans went from living as nomadic hunter-gatherers to settling down in permanent settlements due to the discovery of agriculture, revolutionizing how we live and how we eat. As a result, the way we live and the way we consume food are inextricably linked. In addition to receiving the energy necessary to function on a day-to-day basis, people find identity and community in what they choose to eat: some choose to follow vegetarian or vegan diets, while others eschew certain foods due to their religion, while others still partake in their culture through the foods they eat. Food has always played such an important part in human society that it is difficult to imagine life without our favorite and/or cultural foods, let alone living without food at all. However, due to unfortunate circumstances regarding food production (such as environmental issues, food-borne illness, and regional conflicts, among others), millions of people worldwide are suffering from food insecurity, with approximately 815 million people worldwide suffering from chronic malnutrition (Food and Agricultural Organization of The United Nations, p. ii). This lack of food to eat is caused by many issues, one of which is water scarcity. Water scarcity leads to drought, starvation, and famine among other issues.

A nexus of issues-political, economic, environmental- has led to chronic water scarcity in the Horn of Africa, the brunt of which is felt by the citizens of Somalia, recovering from a civil war and adjusting to the prevalence of drought and famine caused by a marked increase in the occurrence of water scarcity throughout the nation. Considerable domestic and international efforts are necessary in order to prevent further deaths and nutritional deficiencies caused by a lack of water for daily use and for agricultural purposes. Somali farmers must learn new agricultural techniques and technologies to apply to their land, ones that make use of available water and would then reduce the effects of water scarcity.

Somalia is a country located in the Horn of Africa, bordered by Kenya, Djibouti, and Ethiopia through land. The Gulf of Aden and Indian Ocean border Somalia, giving it the longest coastline in Africa. Historically, Somalia was a crossroads of trade, connecting many different cultures and products. The influence of these various cultures is shown in different aspects of Somali culture, from languages spoken, to clothes worn, to food eaten. Somali culture mixes influences from Southeastern Asia, the Middle East, and the Mediterranean, in addition to other regions of Africa.

A typical Somali family has about six members, and is headed up by a male family member (UNFPA p. ix). About 60% of Somalis live in rural areas, whether in small settlements or as nomads. Among the remaining 40 percent is a split between Somali citizens living as internally displaced persons within the country and the urbanite population of the country (Trading Economics). Children usually either attend school, or help their parents with their jobs and daily chores. Urban children are more likely to be educated and to attend school, while rural children are more likely to tend to their family's livestock or crops.

The typical Somali diet consists of lots of meat, whether beef, goat, or camel. This is due to the fact that many Somalis live in rural areas and tend to pastoral animals. Meat is usually paired with a carbohydrate of some sorts, such as rice or bread. Due to Somalia's location near the Gulf of Aden and the Indian Ocean, many coastal areas incorporate seafood into their diets. The southern parts of Somalia have many rivers, such as the Juba and Shabelle Rivers. These two rivers are perennial, meaning that they flow year-round and that their riverbeds are fertile for most of the year as well. Due to this, farming is much more prevalent in this area. Additionally, many farmers in the Lower and Middle Shabelle regions produce fruit harvests, including crops like rice, corn, mangoes, and grapefruits (Abukar p.3). Southern farms also produce sugarcane, as well bananas, a staple in Somali culture and cuisine. The more arid northern and central regions tend to have more pastoralists than farmers, due to the perpetually changing weather patterns and flat and grassy plains. Many rural Somalis living in this area have large herds, consisting of camels, sheep, cows and goats. Due to the prevalence of agricultural activity throughout Somalia, access to fresh food is not an issue as it might be in other countries. As a whole, Somalis consume much more locally-produced food than manufactured products.

Despite Somalia's resources and prime location for trade, one issue prevents the production of enough food for the entire population: water scarcity. Water scarcity has a negative impact on the economic growth of a country that can only be counteracted by positive economic growth (Barbier p. 14). In countries like Somalia, the rate of economic growth may not necessarily be high enough to defuse the impacts of water scarcity on the economy. A lack of water leads to a lack of food, which leads to starvation and death, which leads to a lessened, impoverished population that cannot find enough to eat, let alone compete in the global market. Somalia also depends heavily on agriculture and livestock as a part of its GDP, so water is sorely needed (Maystadt p. 1160). In Somalia, where there are two rainy seasons and two dry seasons, if water is not efficiently stored or used, there may not be an opportunity to use it when it is needed.

As such, farmers residing on irrigated farms and plantations have a distinct advantage over farmers on rain-fed land. Irrigation systems allow for usage of water in farming regardless of rainfall levels in local areas, whereas farmers without irrigation cannot produce crops if the amount of rainfall is not enough. Irrigation does not lead to more water production, but it does ensure that any water acquired is used efficiently. The efficient use of water in water-scarce areas is of the utmost importance. As a result of Somalia's civil war, many people did not acquire or retain the knowledge needed to maintain an irrigated farm, and much of the land was ruined for

farming. Additionally, looters destroyed the property of rival groups during the civil war, further reducing the amount of land viable to farm (Webersik p. 87).

The scarcity of water combined with political conflict has led to famine in Somalia countless times. In the devastating 2011 drought, nearly 260,000 people perished from hunger, among half of them being young children (BBC). This was in the midst of a particularly dry time in the Horn of Africa, and nearly 13 million people could have possibly died. In addition to poor weather conditions, the political situation in the area was tense, and made aid relief nearly impossible to provide. In the aftermath of the famine, members of the UN regretted that there had not been a swift enough reaction from the media or from the rest of the world (BBC). It is of the utmost importance for there to be change in order to assure that a tragedy of the same scale does not occur in the future.

Water scarcity can occur for a variety of reasons, not all of which are controllable by individual human beings. However, we can do our best to deal with the circumstances we must face. An excellent way for farmers to cope with a lack of rainfall during the rainy season is to create irrigation systems and wells that use groundwater when there is not any surface water available to use. These irrigation systems would provide water for countless farms, especially those in the particularly fertile lands in the South, which are used to produce fruits and vegetables, as well as for the nomadic population's livestock to graze on in other regions. An irrigation system in just one sector of the country could have beneficial results throughout the rest of the nation by showing the effectiveness of irrigation, as well as aiding other farmers with constructing their own wells or irrigation systems.

Of course, it is difficult and costly for the Somali government to just decide to create irrigation ditches all over the country. This is where the United Nations and other international agencies can step in to give help. By setting aside a budget for preventing natural disasters such as famine, these organizations can help provide local farmers and engineers with the knowledge to reduce water scarcity and the ability to educate their communities and create more jobs.

While institutions like the United Nations and NGOs can aid with initial efforts to address water scarcity and food security, relying on them for long-term aid is not sustainable financially or structurally for any party involved. Therefore, it is important for the Somali government to develop programs that work to address water scarcity on a long-term basis by way of programs that provide Somalis with the tools and knowledge they need to combat these issues. In any society, knowledge is the key to success. The theory of social constructivism asserts that the way human beings examine the world around them is impacted by the people around them, and that knowledge is formed by society as a whole, with each member of a society contributing to the beliefs and information consumed by the whole (Fox). Following that theory, it is logical to conclude that providing multiple Somalis with information and education about combating water scarcity would lead to the wider distribution of this knowledge, creating a society that is well-informed about this issue.

The foundation for a grassroots educational program of this sort can be produced from a Somali literacy initiative in the 1970s. The Somali Literacy Campaign of 1974-75, part of the

Rural Development Campaign, was designed to ensure that all Somalis could read, write and communicate in their native tongue, in order to unify Somalis and make Somali a language usable not only for basic conversation, but for trade, science, culture, education, and more (Osman). The program recruited tens of thousands of literate Somalis to mobilize into the countryside and the bush in order to teach isolated, rural populations the skills they needed to function as a part of a unified nation. Within the two years of the campaign, the national literacy rate in Somalia went from less than five percent to more than sixty percent (Osman).

The principles that made the Somali Literacy Campaign a success can be carefully studied, then applied to the battle against the effects of water scarcity in Somalia. The first step in educating the Somali community comes in educating the people who will become teachers for the population as a whole. This means selecting people who are knowledgeable in environmental issues- such as professors, scientists, and environmentalists- and teaching them about water scarcity and combating its effects. The next phase would consist of mobilizing these newly-educated “teachers” and informing the public about what they have learned. In essence, the societal construction of knowledge would help Somalis learn more about the threat posed by water scarcity and what they can do to help alleviate its impact. Doing so gives the general public more understanding of the ecological events around them, while also providing them tools to address this issue.

Another important step in combating water scarcity in Somalia is to diversify the economy. Currently, Somalia’s economy is heavily skewed towards agricultural pursuits and purposes. When environmental issues such as droughts or floods occur, not only are everyday Somali citizens negatively impacted, but the national economy is hurt by these problems. Economic diversification ensures that, while water scarcity may have a negative impact on individual citizens, the economy will not be totally destroyed.

An area that may aid in diversifying Somalia’s economy is the telecommunications industry. With the collapse of state institutions in the aftermath of the civil war, many Somalis declined to store their money in traditional banks or to even use physical money at all. Like many African countries that largely skipped the PC wave and went straight to phones, Somalia’s communications do use computers, but the majority of communications take place via mobile phone. Somali telecommunication companies like Dahabshiil or Hormud provide Somali citizens with mobile banking, instant financial transfers, and global money exchange, all on their phones while using digital currency. Further development of the telecommunications industry would further link Somalia with surrounding countries, whether in Africa, the Middle East, or Asia, thereby further facilitating trade and other forms of cultural exchange, while also ensuring that Somalia’s economy is not solely dependent on agriculture and agricultural products.

As Somalia becomes more interconnected with the world around it in various ways, the international community is playing a larger role than ever in aiding Somalia. This past summer, as Somalia faced yet another extremely dry season and the risk of a famine, a group of social media personalities, celebrities, and everyday people came together to create the “Love Army for Somalia”. Through this project, the Love Army sent airplanes full of food, and helped set up water supplies in Somalia (NPR). Additionally, the numerous members of the Somali diaspora created fundraisers for the drought, and sent this money to Somalia in the form of equipment or

cash. This sort of approach is beneficial for Somalia because it lets local populations receive education about a subject like water supplies, and then pass that knowledge on and be self-sufficient as a community.

While water scarcity is an issue that affects many different parts of the world, it is still important to tailor strategies for fixing it, ones specific to each country or region affected. In the case of Somalia, water scarcity is a very big issue, one that threatens the lives of many of its citizens, as well as their livelihoods. Thus, it is important that Somalis learn to adapt to this threat in an effort to eradicate it. This is difficult to accomplish, but with considerable effort from both the domestic and international community, water scarcity in Somalia can be solved with different technological applications, as well as sincere work from the public and the government to fight the effects of water scarcity on a nationwide scale. As stated in a traditional Somali proverb, only the water in your hands can soothe your thirst, so ultimately it is up to Somalia to gradually ensure that its citizens have the resources needed to help them work towards solving the issue of water scarcity and eventually have their vital ability to soothe their own thirst.

Works Cited

Abukar, M. (2004). Horticultural Study in Lower and Middle Shabelle Regions of Somalia The Case of Expansion of Fruit and Vegetable Production and Marketing in Greater Mogadishu . *Famine Early Warning System Network*, 2, ii-25. Retrieved March 03, 2018, from http://pdf.usaid.gov/pdf_docs/Pnadh990.pdf

Barbier, E. B. (2004). Water and Economic Growth. *Economic Record*, 80(248), 1-16. doi:10.1111/j.1475-4932.2004.00121.x

(2013, May 02). BBC. *Somalia famine "killed 260,000 people"*. Retrieved March 06, 2018, from <http://www.bbc.com/news/world-africa-22380352>

(2017). Food and Agricultural Organization of the United Nations. *The State of Food Security and Nutrition in the World 2017*. Retrieved March 01, 2018, from <http://www.fao.org/3/a-17695e.pdf>

Fox, R. (2001). Constructivism Examined. *Oxford Review of Education*, 27 (1), 23-35

Jacewicz, N. (2017, March 22). NPR. *Social Media Star Has A 'Crazy Idea' To Help Somalia*. Retrieved March 07, 2018, from <https://www.npr.org/sections/goatsandsoda/2017/03/22/521097218/social-media-star-has-a-crazy-idea-to-help-somalia>

Kanji, L. (2016). Famine or Feast Climate Change and the Future of Food Production. *Harvard International Review*, 37(3), 55-58.

Maystadt, J., & Ecker, O. (2014). Extreme Weather and Civil War: Does Drought Fuel Conflict in Somalia through Livestock Price Shocks?. *American Journal Of Agricultural Economics*, 96(4), 1157-1182

Osman, M. (2012). *Reading for Development: The Somali Rural Literacy Campaign of 1975*. (Electronic Thesis or Dissertation). Retrieved from <https://etd.ohiolink.edu/>

(2016). TRADING ECONOMICS | 20 million INDICATORS FROM 196 COUNTRIES. *Rural population (% of total population) in Somalia*. Retrieved March 02, 2018, from <http://tradingeconomics.com/somalia/rural-population-percent-of-total-population-wb-data.html>

(2016). UNFPA PESS Volume 2. *UNFPA Data For A Better Tomorrow*, 2, 1-46. Retrieved , from <http://analyticalreports.org/population.html>

Webersik, C. (2005). Fighting for the Plenty: The Banana Trade in Southern Somalia. *Oxford Development Studies*, 33(1), 81-97. doi:10.1080/13600810500099683

X. C. Cao, R. Shu, X. P. Guo, W. G. Wang. (2018) Scarce water resources and priority irrigation schemes from agronomic crops. *Mitigation and Adaptation Strategies for Global Change* 28.