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Ethiopia, Water Scarcity

Water Scarcity in Ethiopia

As Benjamin Franklin said, "When the well is dry, we'll know the worth of water." Water is the most valuable resource, essential for our survival. It is used for drinking, sanitation, agriculture, cooking, energy production, and many other aspects of life. Despite its many uses, it is taken for granted in developed countries, where there are no worries about accessing and preserving water. However, that is not the case in underdeveloped countries such as Ethiopia, where collecting water is a struggle and every drop counts. Water scarcity in Ethiopia is the cause of many other issues, including food insecurity, lack of education, and the spread of disease (Shore). Solving this problem will be crucial to ending the vicious cycle of poverty and famine in Ethiopia.

Ethiopia is one of the countries in the Horn of Africa, with a population of 120.3 million (Mehretu). It is landlocked between Kenya, Eritrea, Djibouti, Somalia, South Sudan, and Sudan, blocking its access to water (Mehretu). Eighty percent of Ethiopians live in rural areas, dependent on agriculture and crop production for their livelihood (The Facts). Sixty-seven percent of Ethiopians work in subsistence farming, rain-fed agriculture, or livestock production, producing enough food for their families and to sell at local markets (*Farm*). The farm plots are small, only 3-6 acres wide, and the crops produced include grains, corn, lentils, chickpeas, and many more (Mehretu). Due to this reliance on agriculture, water is necessary for food production, as it is used for irrigating crops and preserving livestock (The Facts). However, due to climate change, periods of drought and low rainfall are increasingly common in Ethiopia, depriving crops of water and drying out fields, leading to the death of livestock that graze on those fields (The Facts). As a result, farmers no longer have a means for income and food production, instead having to rely on imports of food and water, which are becoming increasingly expensive and beyond their means (The Water).

These droughts not only cause food insecurity but also are detrimental to the health of Ethiopians. Drought dries up sources of water, such as streams and lakes, and increasing temperatures allow more waterborne pathogens to grow in these shallow waters (Shore). Thus, more than half of the population does not have access to clean water, as the water they collect is often contaminated with feces and bacteria (Shore). Further exacerbating this issue is the lack of sanitation. Most of those living in Ethiopia cannot practice proper hygiene, as they do not have enough water for bathing, and only one in ten people have access to a toilet (Ethiopia). This causes the spread of waterborne illnesses, such as cholera and diarrhea, which cause the most deaths of children under five years old (Shore). These diseases are often unable to be treated, as hospitals in Ethiopia are concentrated in the major cities, such as the capital, Addis Ababa (Mehretu). Those in rural areas, most of the population, have no access to health care, thus making treatment of these waterborne illnesses very unlikely. Additionally, without water, crops cannot grow, and Ethiopians are

deprived of nutritious foods (UNICEF). This leads to increasing rates of malnutrition, especially in children whose mental and physical development is hindered by this lack of proper food (UNICEF).

Water scarcity in Ethiopia was a problem long before the droughts, however – a problem caused by events that took place back in colonial times. The Nile River is the longest river in the world, flowing through Ethiopia, Egypt, Sudan, South Sudan, Eritrea, Uganda, Kenya, Tanzania, Burundi, Rwanda, and the Democratic Republic of Congo (DRC) (Terefe). In the 1900s, colonial powers split up the Nile River, granting most of it to Egypt and Sudan, with Ethiopia owning only a small part of it, which they used for agriculture (The Organization). Arguments over control of the Nile prevent Ethiopians from using water from the river, not only for agriculture but also for energy production. Ethiopia has tried to improve the issue of water scarcity, not just for their own country but also for other countries in Africa. Recently, the Great Ethiopian Renaissance Dam has been under construction (Terefe). This dam would provide a significant source of hydroelectric power, not only for Ethiopia but also for the other countries in the Nile River Basin (Terefe). This would greatly improve living conditions and provide a source of electricity for those living in these countries, especially as 65% of the population in Ethiopia is not connected to the power grid (Terefe).

However, Egypt, which controls the largest part of the Nile River, is against the use of the dam (Terefe). This is because Egypt worries that the Great Ethiopian Renaissance Dam will impact the flow of the Nile River, thus proving detrimental to the water supply of Egypt and other countries downstream (Mbaku). In addition, Egypt feels that Ethiopia will not release enough water from the dam during a drought (Mbaku). On the other hand, Ethiopia believes that the dam will have no negative effect on Egypt, and instead will help all the countries that rely on the Nile River (Mbaku). Thus, tensions and political disagreements over the Nile River leave all the countries involved at a loss. The dam has almost been fully built, but until the countries in Africa, such as Egypt and Ethiopia, agree on how it should be used and how to deal with issues such as droughts, it will not be able to benefit the whole Nile River Basin. Working together would decrease water scarcity for all these countries, but unfortunately, they are unable to reach a consensus.

Even despite all these issues, Ethiopia was still making great progress. Increasing government involvement lowered malnutrition and poverty and improved life expectancy, health, and education (The Facts). There was economic growth and internal improvements with new infrastructure, such as roads (The Facts). However, this progress was impeded by the 2011 Horn of Africa Crisis, where extreme drought led to water scarcity and, as a result, famine (The Facts). On top of this, conflicts in and around Ethiopia significantly strain the water supply. Tigray is a region state in Ethiopia. At first, the Tigray People's Liberation Front (TPLF) was in power in Ethiopia but lost its control to the Prosperity Party (Terefe). As a result, the TPLF revolted against the government, and the Prosperity Party had to take military action (Terefe). On top of this conflict within Ethiopia, civil wars have been happening in surrounding countries, such as Somalia (Terefe). One of the tactics in these conflicts is to attack water supplies and infrastructure, leading to increased water scarcity and, as a result, decreased food production (UNICEF). In addition, 4.2 million Ethiopians were displaced from their homes because of these conflicts, losing their sources of food and income (UNICEF). Ethiopia's droughts and political instability have impeded progress, setting the country back. They have been unable to rebuild their country and overcome all these

challenges. This leaves Ethiopia with many problems within its borders, all connecting to a lack of water.

As a result of these hindrances to rebuilding the water supply in Ethiopia, families are suffering. A typical family in Ethiopia consists of approximately 5.26 people (Saleh). Droughts and water scarcity lead to a lack of income and food for families who depend on agriculture for all their needs (Shore). Their disconnectedness from local markets is worsening this, preventing them from selling the little food they can produce (UNICEF). Poor hygiene and lack of sanitation and health care cause health problems within families and lead to death (Shore). A lack of education also arises from water scarcity. Children, mainly girls, must travel far to collect water for their families, leaving them no time to go to school (Shore). While children in developed countries can go to school and spend time with friends, these children must sacrifice their education for the well-being of their families. Children should not have to worry about access to food and water or face the threat of malnutrition and waterborne disease, but alas, that is the reality for Ethiopian children. Not only is this lack of education detrimental to the children but also to the future of the country. Without an education, it is impossible to escape from the cycle of poverty and bring about change in society. The water scarcity is detrimental to the future of Ethiopia as it stops any attempts at progress.

To pave the way to a better future for Ethiopians, this problem needs to be solved, and luckily, many organizations are working towards this goal. WaterAid is helping bring clean water to poor villages in Ethiopia. In the village of 81-year-old Ferenji Amenji, for example, they had to use any water source they could find, which often led to illnesses as the water was usually contaminated (Ethiopia *WaterAid*). In response, WaterAid built a pipe that provided a clean water supply for the village, reducing illnesses and giving them easy access to water (Ethiopia *WaterAid*). Providing a source of uncontaminated water is necessary, but it is not the whole solution. To solve the problem in Ethiopia, more than just the water scarcity issue must be fixed. There need to be improvements in education, sources of income, hygiene, and nutrition. The solution must be sustainable, and the population of Ethiopia needs to learn how to overcome climate change, which reduces the water supply. Thus, in addition to providing sources of clean water to Ethiopians, WaterAid is also planning a campaign to improve sanitation, both through building new infrastructure such as toilets and through changing the hygiene practices of Ethiopians (Tsedu). There have been challenges with sanitation, as despite efforts to develop better methods, only 7.1% of the population has access to a proper toilet, and only 12% of health facilities, according to UNICEF, have improved their water supply (Tsedu). Thus, even with more clean water sources, Ethiopia will still face contamination and the spread of disease without implementing better hygiene. WaterAid will need about \$900 million throughout its five-year campaign, raised through partnerships, the government, and donors to combat this issue (Tsedu).

Mercy Corps is another organization that has been highly successful in combatting water scarcity. After solving short-term problems, such as water shortages, by bringing in supplies of water, it produces innovative, sustainable solutions. For example, in Goma, Mercy Corps taught women how to collect clean water, treat the water, wash dishes, and other practices to promote safety and the preservation of a clean water supply (Outsmarting). The women could then teach others in the community these practices, thus sustaining their source of clean water (Outsmarting). In Yemen, a solar-powered pump provided easy and long-term access to water (Outsmarting). In Puerto Rico,

Mercy Corps is improving access to energy and water with the help of Walmart, the Miami Foundation, and BlackRock (Outsmarting). In Jordan, farmers are being taught how to water their crops more efficiently (Outsmarting). After increasing the water supply, practices like these, which involve teaching communities how to better manage their water supply are necessary to sustain this water for future generations.

Mercy Corps can implement its methods in Ethiopia as well. Mercy Corps has been involved in helping Ethiopians find other means of income so that in the case of a drought, they are not solely dependent on agriculture (The Facts). Additionally, they have been teaching the people how to maintain proper hygiene and diets, instructing veterinarians on how to better treat animals that fall sick in droughts, and providing health care for malnutrition and waterborne illnesses in rural areas with the help of the Ethiopian government (The Facts). In addition, they have been tracking the amount of rainfall to determine when food shortages are most likely to happen so that Ethiopia can better prepare for these famines (The Facts). These are all long-term solutions which target all the issues connected with water scarcity. Over five years, Mercy Corps spent \$24 million to help 5.2 million people in Ethiopia (*Ethiopia Mercy*). Thus, to help the 22.8 million Ethiopians still facing food insecurity (Galal), it will take Mercy Corps around \$96 million. Mercy Corps can gain funding for these projects through donations from people worldwide and through the help of organizations like the Miami Foundation and other private partnerships. In addition, developed countries can contribute to the cause, like the US, which plans to send \$55 million more to Ethiopia to increase the water supply, teach farmers better agricultural processes, and provide supplies for farming (USAID).

However, Mercy Corps is not the only organization working towards improving water scarcity and food security in Ethiopia. Farm Africa is trying to implement agricultural practices that can be sustained even through climate change (*Farm Africa's Work*). This way, the farmers could still produce crops during droughts and drops in the water supply. Farm Africa plans to spend around \$60 million over five years to improve agricultural practices, increase farmers' access to markets, and decrease carbon emissions in Ethiopia to reduce poverty and food insecurity, and to allow for more sustainability (*Farm Africa Strategy*). In addition, UNICEF has improved its water, sanitation, and hygiene (WASH) programs to better provide quick aid to countries like Ethiopia in need of water and sanitation (*UNICEF Water*). It is also planning to use WASH to implement more sustainable solutions, such as the production of infrastructure that can work through climate change and improvements in water management (*UNICEF Water*). UNICEF's WASH program will require \$20-30 million annually, which they can raise from private donors (*UNICEF Ethiopia*). A combination of these efforts from all these different organizations will make a significant difference in providing Ethiopia with a long-term supply of clean water and sustainable food production. As all these organizations are focusing on implementing better, safer, and more sustainable practices for hygiene, nutrition, and agriculture, they are preventing Ethiopia from relying on NGOs by teaching Ethiopians how to sustain themselves. Thus, over a 5-year period, using around \$1.2 billion, organizations like WaterAid, Mercy Corps, Farm Africa, and UNICEF can create change in Ethiopia for the better.

The one issue these methods do not target is the political instability and tensions in Ethiopia. The final step in solving the issue of water scarcity would involve bringing peace to Ethiopia. One of the United Nations 17 Goals for Sustainable Development includes an end to violence. So, the UN

must make more progress in ending conflicts in Ethiopia, such as the fighting between the TPLF and Prosperity Party (Terefe). They can do this with the help of the Ethiopian government. Additionally, more movement must be made in Ethiopia to form negotiations with Egypt and Sudan over the Nile River to gain more access to the river as a source of water and energy (The Organization). This will be a challenge, but it is necessary.

Water scarcity in Ethiopia, caused by drought, conflict, and political instability, is the cause of problems in health, nutrition, food insecurity, and education. However, the work of organizations such as the Mercy Corps and UNICEF will be able to improve conditions in Ethiopia, one step at a time.

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