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Eritrea, Factor 2: Water Scarcity

Eritrea is a small country in eastern Africa that is inhabited by people of nine nationalities, or tribes that consist of the Afar, Bilen, Hidarb, Kunama, Nara, Rahaida, Saho, Tigre, Tigrinya. Each tribe has something unique that none of the other tribes possess (“Eritrea-People”). Afar, also known as the Dankils, occupy the Southern Red Sea on the Dahlak Islands and are about 5% of the population (“Eritrea-Ministry of Information”). Bilen are usually in Keren and tend not to leave their general area and are about 3% of the population (“Eritrea-Ministry of Information”). Hidarb, also known as T’badwe, live in the western part of Barka and are about 4% of the population (“Eritrea-Ministry of Information”). Kunamas fill the region of Barentu and are about 3% of the population (“Eritrea-Ministry of Information”). Nara and Rashaida are the two smallest tribes; Nara is 2% of the population while Rashaida is only 1% (“Eritrea-Ministry of Information”). The Nara tribe lives in Baria while Rashaida are commonly in the northern red sea coast (“Eritrea-Ministry of Information”). Tigrinya and Tigre are the two largest tribes; Tigrinya is 50% and Tigre 27% of the population of Eritrea (“Eritrea-Ministry of Information”). The Tigrinya tribe lives in the highlands of Maakel, while the Tigre tribe lives on the western lowlands across the northern mountains to the coastal plains (“Eritrea-Ministry of Information”). Almost all nine tribes are Muslim except for Tigrinya; their religion is Christianity making the whole country of Eritrea half Muslim and half Christian (“Eritrea-Ministry of Information”).

The Italians first colonized a part of Eritrea in 1869 when they purchased the land of Assab (“Eritrea-Ministry of Information”). Italy continued to expand and occupied Beilul by January 1885 (“Eritrea-Ministry of Information”). Although Italy had expanded, it was not satisfied until it could take over the whole country of Eritrea. That is exactly what they did after the battle in Akordat in 1893 (“Eritrea-Ministry of Information”). The Italians did not face any opposition from the Eritrean people, which made it easy for the Italians to occupy the whole country (“Last and Markakis”). The main reasons the Eritreans did not oppose the Italians, was because the whole country of Eritrea was facing many invasions and atrocities from the Egyptians and hoped the Italians would be able to restore peace and stability in the area (“Last and Markakis”). In addition, there had been a drought that resulted in a migration of people of the region to move to neighbor countries (“Last and Markakis”). This caused a lack of unity and strength among the people to oppose the Italians (“Last and Markakis”). The few Eritreans that remained behind and tried to oppose to the Italians were imprisoned or killed (“Last and Markakis”). Once Italy had Eritrea under power, their next goal was to take over Ethiopia (“History of Eritrea”). Although Italy did invade Ethiopia they never gained control of any land in Ethiopia and were later kicked out by the British in 1941 (“History of Eritrea”). Eritrea was then under British administration (“History of Eritrea”). In 1946, a union party formed claiming Eritrea had always been under Ethiopian domain and the two countries formed a union (“Conflict between Ethiopia and Eritrea”). Eritrea’s Islamic population were opposed to the union because Ethiopia’s main religion was Christianity, so the Muslims suffered discrimination in many places they went (“Conflict between Ethiopia and Eritrea”). The Muslims were not happy with how they were being treated, so in 1947 they formed the Muslim League to campaign for Eritrea’s independence (“Conflict between Ethiopia and Eritrea”). Eritrea’s independence was far from achieving, but the political movements and guerrilla groups being formed were helping fight back (“Conflict between Ethiopia and Eritrea”). 30 years of war and conflict continued as Eritrea attempted to gain independence, joined by Ethiopian guerilla forces that were also fighting against the harsh dictatorship

("Eritrea's Referendum on Independence"). In an April 1993 internationally monitored referendum, 98.5% of the registered voters voted, of that high number 99.8% voted for independence ("Eritrea's Referendum on Independence"). That same year Eritrea gained independence from Ethiopia ("Eritrea's Referendum on Independence").

The average Eritrean family has seven children in addition to the mother and father ("Eritrean Culture Profile"). The most common meal in the rural areas is an Injera, a pancake like bread eaten together with a sauce called tsebhi or wat ("Eritrean Culture Profile"). The sauce may be of a hot and spicy meat variety, or vegetable based ("Eritrean Culture Profile"). Some Eritreans cannot afford a meat-based diet so they eat a shiro chickpea porridge made in different ways with the injera ("Eritrean Culture Profile"). On the other hand, in the urban part of Eritrea, there is a strong influence on Italian cuisine, and most restaurants serve pasta ("Eritrean Culture Profile"). Eritrea has a 5-3-4 formal education structure ("Eritrea"). Primary school has an official entry age of seven and is made up of five grades ("Eritrea"). Secondary school is divided into two cycles: lower secondary consists of grades six to eight, and upper secondary consists of grades 9-12 ("Eritrea"). Basic education comprises of primary and lower secondary education. Primary education is also known as "elementary education", lower secondary education as "middle school" and upper secondary as "secondary school" ("Eritrea").

Health care in Eritrea is difficult because there are not many medical facilities. Many important health challenges remain because an estimated 40% of the population are underweight for their age ("Eritrea Overview"). Also less than half (46%) of the population has safe drinking water and only 13% have adequate sanitation ("Eritrea Overview"). One of the most important things in Eritrea is agriculture. Over two-thirds of Eritreans work in agriculture ("The World's 10 hungriest countries"). The crops of Eritrea are sorghum, millet, barley and wheat ("The World's 10 hungriest countries"). Farm size can range depending on where they live and the position they hold in their community. Farmers face many challenges that include war, drought, and deforestation. All this makes it difficult to get results from the land they farm ("Eritrea"). About 70-80% of the population has become dependent on food-aid because the crops struggle to develop, due to land conditions ("Eritrea").

As part of going to one of the most diverse schools in Des Moines, Iowa, I'm friends with students from many cultural backgrounds. One student I met lived in Eritrea from the time he was three until he was ten. In the interview, he discussed many things I did not know about Eritrea, and that I did not find in my research. When I asked him about availability of water and food on a daily basis, he said family's in Eritrea obtain water the same way we do in America through faucets, but the difference is that access is limited and they are restricted to getting water between two to three in the morning. After those hours, there was no water available. The reason for such an odd time to get water was because everyone had a different schedule to get water. He also said that everything was very limited; even if a family had more than enough money, his family of four was only allowed four loafs of bread per day. This is the reality of what is still happening in the capital, which is better than life in the villages.

Although Basam struggled with basic necessities of life like food and water, other parts of his upbringing were similar to an average boy his age. He attended school at 7:30 am and would get out of school at around 2:30 pm. After school he enjoyed playing soccer since at this time he was too young to work. He is Muslim and said Christianity dominated the capital. Finally, when I asked about the appearance of the city, he said there were still some Italian influences around, even after all this time.

Water scarcity is a serious problem in Eritrea that has generated significant migration to other areas in search of a water source. Crops cannot grow properly if they do not receive enough water. This means that many families will not be getting enough food this year because many families depend on their crops

to feed themselves. This is a very severe situation because it is estimated that 65% of the population is undernourished as a result of poor harvests. Water scarcity continues to be a big problem today, children walk great distances to hand-dug wells to get water; a journey of two to three hours.

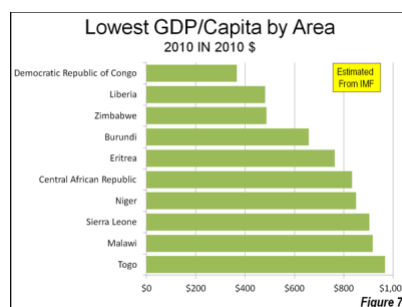
An organization named International Committee of the Red Cross(ICRC) helps by installing solar water supply systems. The ICRC is a humanitarian based committee founded by Henry Dunant in February 17, 1863 with the sole purpose to help victims with conflicts. For example, in 1998 ICRC focused on helping the victims of the Eritrean-Ethiopian war with food and water necessities. The water situation improved significantly with the help of ICRC (“Eritrea: A Solar Powered Well Brings Water and Relief”). ICRC has installed around 80 solar water supply systems, constructed ponds for livestock, and distributed foot-pumps for small-scale irrigation projects (“Eritrea: A Solar Powered Well Brings Water and Relief”). This project and organization have helped so much, they wish to continue to help until every Eritrean has safe and clean drinking water.

Women’s input in agricultural production is vital, but only men conduct certain tasks, plowing and sowing. When women are young girls, they start helping out by doing simple tasks like fetching water and firewood. Which at that age is about all they can do. Once they are older some households depend on the women to bring in the majority of the production. In some households there are no males to help a woman so what happens then? The women are responsible to bring in all the crop production to feed her family and sell it to also earn money. It just depends on the household type because it can vary from home to home.

The environment of Eritrea also suffers from deforestation and soil erosion. Between 1990 and 2000, Eritrea lost an average of 4,500 hectares of forest, per year (“Eritrea”). The average of annual deforestation rate between those years was 0.28%, but increased by 0.6% between 2000 and 2005 (“Eritrea”). There are also 704 known species of amphibians, birds, mammals and reptiles that are endanger of not having a home due to deforestation. Not only is deforestation a problem to Eritrea’s environment but also civil warfare. Civilians bombarded the city and forest with explosive shells, deploy chemical poisons and left landmines and garbage.

As a result of the war, it became very dangerous to farm in most parts of the country because there were landmines everywhere (“Water Treatment Solution”). Between 1977 and 1994, more than half of the estimated two million mines planted in Eritrea were removed. This was with the help of the U.S. government assistance from the Department of Defense Humanitarian Demining Program. The goal was to resettle areas for refugees, to have farming land available, and infrastructure.

Poverty also affects the issue I’m currently focused on. For instance, the war that Eritrea had with Ethiopia resulted in a lot of debt towards Eritrea mostly from the weaponry used and buildings destroyed. (“Water Treatment Solution”). Poverty plays a big role in the country because poverty is one of the main reason 20% of Africa’s children’s won’t reach the age of six (“Abaana- A Charity for the Children of Africa”). It is quite sad that because of money you grow up lacking the very basics in life like food, clean water, medicine and shelter (“Abaana- A Charity for the Children of Africa”). The table below illustrates how the average Eritrean lived with an average of 700-800 dollars for the entire year. They were the 5th lowest GDP/Capita by area in 2010.



As technology advances so do ways to access clean water. I propose a large-scale solar powered desalination plant. This plant works by a process through which ocean water is pumped to a treatment facility where the salt is extracted through a process of reverse osmosis to make the water fit for domestic use (“Ten Solution to California’s Drought”). A plant this big will provide enough safe water for approximately 300,000 people (“Ten Solution to California’s Drought”). In the county of San Diego there is currently one under construction for the cost of 1 billion dollars (“Ten Solution to California’s Drought”). However, a company named WaterFX has developed the solar power version of this that would not only be greener, but also cheaper (“Ten Solution to California’s Drought”).

In addition, a pipeline could also be a potential solution to Eritrea’s water issues. The only problem is that the water would have to be imported from a southern country in Africa. This is because the southern countries in Africa are the ones that usually have the floods and the northern countries the droughts (“Africa-Disaster Statistics”). The closest country that has current floods that would be able to send water through a pipeline to Eritrea would be Zambia. The only problem is that Zambia is around 2,118 miles away from Eritrea and the cost per mile to build a pipeline is around 6.57 million dollars (“Pardon Our Interruption”). In total, the cost would be around 13.9 billion dollars. This price is extremely high and I would not recommend building the pipeline. The money for the desalination plant could be funded in many ways including donations, private company investments or government help.

Another way to reduce the cost is to put the solar power plant on the border of Sudan, Eritrea and the coast of the Red Sea, both countries would now have to pay half the cost making it less expensive, and it would benefit both Eritrea’s and Sudan’s citizens. An alternative option is tourism; Eritrea has some of the most beautiful coral reef on its coast. The first step to make tourism go big in this country would be to let the world know about Eritrea. Begin by letting everyone know where it is located and what this developing country has to offer. Through media and technology, it’s possible to spread the word around the world and give a glimpse of the marine life there. Once people start going to Eritrea more and more they can start expanding on the tourism in the country while at the same time the people visiting will see what citizens in certain countries in Africa have to go through on the daily basis. To visit a country for vacation and seeing what the reality truly is will inspire some people to join us against unhumanitarian lifestyles in Eritrea. Hopefully one day the whole world will have access to safe drinking water. Eritrea is just a small stepping-stone to achieve that goal.

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