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Honduras, Water Scarcity

Honduras: The Numerous Effects of Water Scarcity

When you wake up in the morning, your first concern is most likely not about your access to clean water. However, this is not the case in many other countries around the world. More specifically, it is not the case in Honduras. More than 20 percent of rural areas have little to no access to clean water. To put this in perspective, that is around 638,000 people in Honduras who don't have clean water access. As the access to clean water continues to become a struggle, it is up to surrounding countries to find a solution.

To fully understand the ongoing issues of clean water access, it is crucial first to understand life in Honduras. The population of Honduras is around 9.2 million people. The country is located in Central America by the Pacific Ocean. Honduras has a subtropical climate, which makes the country great for producing bananas. Another large commodity in Honduras includes coffee beans. Roughly 16 percent of the land is farmed to produce corn, sorghum, beans, and rice. However, there are many dry periods as well as hurricanes that significantly affect the crops being grown. An estimated 77 percent of the land is based in rural areas. Because of the unpredictable weather in an economy based mostly on agriculture, 60 percent of Honduras's people live in poverty. Nearly 20 percent are in extreme poverty and live off of \$1.30 a day. While the government sees the needs of its people, little progress has been made.

President Juan Orlando Hernandez, who has been president since 2014 and is on his second four-year term, leads Honduras. The government of Honduras is similar to that of the United States. There is a multi-party system, and the president is elected by popular vote. Honduras is divided into 18 departments, similar to states. Before Honduras became its own country, it was ruled by Spain. After gaining independence from Spain, Honduras became part of the First Mexican Empire. Shortly after, Honduras transitioned into the United Province of Central America. They have had presidential elections since 1838. Various wars have greatly affected the economy of Honduras, which, in turn, results in poverty for the people and affects government spending.

One of the areas most affected by lack of funding in Honduras includes roads. Only 18 percent of the roads in Honduras are paved. Honduras has about 9,600 miles of roads, with 1,942 miles

paved. To put that into perspective, Hawaii has about 9,781 miles of roads, with 9,523 of those miles paved. Since the economy is struggling, funding is cut from improving the necessary infrastructure. The primary issue with this is the quality of the roads in rural areas where a majority of the people live. Due to the subtropical climate and risk for hurricanes and torrential rains, roads are at high risk of being washed out. If roads were paved or made with bricked material, the risk would decrease. Since most roads in Honduras are dirt trails, they are unable to be used after heavy rains. This can leave people without water for days because they are unable to get to a water source. Increasing the quality of roads will lead to safer and more direct routes to access nearby water sources.

The typical family size in Honduras is four to six people. An everyday, typical meal consists of tortillas, beans, rice, and some form of meat. The main languages families speak include Spanish and English. It is often common to find the women at home taking care of the children and doing household jobs. The men are responsible for working and bringing home an income to provide for their families. Typical jobs include farming, manufacturing, and service-based careers. Household life varies from urban to rural areas as well as the structure of homes. Urban houses are commonly built out of concrete and consist of flooring. Rural homes are made with adobe or sugarcane stalks. There is no flooring in these homes other than the dirt in which the homes were built on.

Education is different across all of Honduras and is often not a major priority. In lower-income families, school is not a top priority. Primary schooling is free and required, but it is difficult for students from rural areas to access. Around 30 percent of students go to secondary school, and only eight percent attend a university. Mothers will take their children, especially daughters, out of school, to help provide for the family. When taking their children out of school, mothers take on the role of the teacher. However, the children will spend most of their day helping with household responsibilities, leaving no time for schooling. Since children are pulled from school at an early age, it affects what jobs are available to them in the future. With limited education comes limited job opportunities. There are currently about 1.2 million citizens unemployed in Honduras, and only 25,000 graduate from a university.

While lack of education is important, the largest problem the people of Honduras face is access to clean water. Improving access to clean water would increase the number of children receiving a proper education. Children would not need to be pulled from school, and education would become as important as clean water. Clean water is more of a priority than education because it is necessary not only to drink but also to cook and clean as well. Without clean water, families are unable to cook food safely and correctly. This leads to meals not being served or uncooked, unsafe meals with the potential for disease.

A typical day collecting water will start by waking up very early. The route to access clean water is around three miles for rural residents. Once they arrive at the nearest well, they fill up their

jugs and make the long hike back. However, this is not the end. The long walk will be completed two to four more times throughout the day. Depending on the number of family members, and the amount of water collected, this should last a couple of days. As for the number of wells located in Honduras, there are about 15,000 wells placed around the country. However, the issue lies beyond the access to water. It goes hand and hand with access to clean, sanitized water. It is hard to know if a well has been properly sanitized and if the water has been filtered.

Around 60 percent of the people who live in rural areas have access to only unsanitized water. Families must decide whether or not to trust the water quality. While the decision may seem simple to us, it is complicated. For many people in Honduras, the choice is between having no water and facing death or risking the unsanitized water with the possible chance of death or disease. One of the most common diseases transmitted through water is diarrhea. On average, each year, 1.8 million children will die from diarrhea in Honduras. A total of 69 percent of contracted cases lead to death because they do not have proper healthcare access. In Honduras, healthcare is related to income. Therefore, those with low incomes do not have access to reliable healthcare. Around 1.3 million go without access to healthcare each year. The ratio of doctors to people in rural areas is 1:510. The demand for doctors would not be so imminent if there were fewer waterborne diseases contracted.

While the need for improved access to clean water continues to grow, so does the number of possible solutions. There are many different organizations with the common goal of improving water quality and access to clean water. Some of those organizations include Living Water Project, Water 1st, and Water For People. Living Water Project is an organization that specializes in building wells. This organization has built around 626 wells and serves 25 countries. The wells are built in rural communities that lack access to clean water. Before leaving an area, the organizations take time to educate the people on how to take care of the wells. Water 1st goes into communities and works with the government, and the community, to bring running water into each household. Once they leave, they continue to monitor the safety efficiency of the water in the years after. Water For People goes into countries with clean water access issues and gets to know the people and their concerns. From there, they make a plan best suited for the community. They are then able to build wells and provide people with the knowledge and resources to test water safety. After they leave the area, they continue to monitor the wells' sustainability for the next couple of years or until the people have managed without their help. Each of these organizations is similar yet different, and play an essential part in the

solution.

The first step in tackling this massive problem is research. It is crucial to know Honduras along with its positives and negatives. A start in developing knowledge of the country begins with this paper. Conducting background research on the severity of the issue and the people's circumstances will allow for better solutions. I want to engage in even more in-depth research on different areas of Honduras to pinpoint which villages are in the most need of clean water. Around 77 percent of Honduras is rural, making it a challenge to know where there is the most need. One organization I will reach out to is the Living Water Project. They have done previous work in Honduras, making them familiar with the area and a great resource.

From here comes the challenging question of how to improve access to clean water. The answer is easier said than done. The people in the rural villages need more wells built in more accessible places, as well as ways to sanitize their water. When you look into the logistics of it all, wells can cost upwards of \$10,000 to build and take many hands to complete in a reasonable amount of time. It is also imperative to work with the local government and people to ensure that their needs are met, and any concerns are dealt with. They also need to be equipped with the knowledge of how to work and maintain the well once teams leave. These types of projects are important because they provide people with basic necessities. However, these projects take immense amounts of planning and communication. An average well is around 15 meters deep, includes a casing to prevent it from collapsing, and a pump to filter the water. Once a well is built, the work is not done. Organizations must teach the people of Honduras how to safely and properly maintain the well and pumps. Without proper education on the maintenance, the wells may not work effectively. With the right steps, it has been proven possible to get operations and organizations similar to this running.

My long-term goal is to form or partner with an organization that works to bring wells to Honduras. I will be working on completing this goal throughout my junior and senior year. As for short-term solutions, I want to set up local or statewide fundraisers. The money from those fundraisers would go to the Living Water Project that deals with the water crisis in Honduras. Working with them will build another connection that can help me reach my goal of improving clean water access in Honduras.

In the meantime, a short-term solution is clay pots. There are specifically designed clay pots that purify water. The pots consist of clay and materials such as tea leaves, coffee grounds, and corn husks. Dried clay is first mixed with cornhusks, before the tea leaves and coffee grounds get added. The contents are then mixed with warm water until a molding clay consistency is

reached. Once this consistency has been reached, the mixture can then be placed in a larger bucket, molded to shape, and compressed by a smaller bucket. The buckets are removed, and the pots sit for 48 hours to dry. Once the pots have been dried, they can safely filter water. I can hold a project with my FFA chapter, where we build these clay pots. The tricky part is how to transport the pots to Honduras. I will be working with my FFA advisor to find the best way to do this. Walks for Water are also great fundraising and awareness events. Hosting a local walk for water is one way to bring awareness to the issue and fundraise simultaneously. The money fundraised

will go to an organization or towards materials needed for clay pots. I want to work on planning a large-scale walk that reaches beyond my community.

Honduras faces many challenges and is the second poorest country in Central America. One out of every five people live in extreme poverty. Around 77 percent of the people live in rural areas with little to no access to clean water. The poor access to quality water affects the education, lifestyles, and overall health of Honduras's people. It is up to us to help stop the number of deaths related to this issue. Improving access to clean water will lead to more children attending school and fewer diseases being contracted. The problem can be overwhelming, but taking small steps to reach a greater goal will make a difference. Whether that comes from hosting a walk, making clay pots, or something as large scale as building a well, it all helps. The importance of this issue can go unnoticed, so it is our job to bring awareness. An inspiring quote from Mother Teresa preaches what happens when each person takes one small step, "I alone cannot change the world, but I can cast a stone across the water to create many ripples." Together we can bridge the gap of the water crisis.

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