

Haley Ledford
Saint Edmond Catholic High School
Fort Dodge, IA
Nicaragua, Factor 9: Water and Sanitation

Nicaragua: The Big Problem of Water Quality and Sanitation

Nicaragua is a country in Central America that is home to 6.08 million people ("Central American and Caribbean: Nicaragua.") There are many active and inactive volcanoes across the country, as well as many lakes and biodiverse rainforests. This exotic country's capital is Managua, a city that is rich in history and culture ("Central American and Caribbean: Nicaragua."). Unfortunately, Nicaragua is the second poorest country in the Western Hemisphere (Morrison 6). Nicaraguans have a huge problem with water quality and sanitation- something that affects millions of them a year.

Before one can dive into the issues Nicaraguans face, it's important to look at different aspects of their lives and culture. Nicaragua is a very family oriented country. Families are large, with an average of 6 children per family. It's not uncommon for several generations of family members, as well as extended family, to live in one household. Cohabitation is also very common (Morrison 120).

The diet of the typical Nicaraguan family varies. People in the west and east have very different diets. In the western regions of Nicaragua, *gallo pinto* (*painted rooster*) is eaten every day in most homes. It's made up of rice and beans and is spiced with garlic and onions. In the eastern regions, "run down" is popular. It is a coconut stew comprised of many ingredients: coconut milk, onions, herbs, banana, yucca (a type of shrub), taro root, dasheen, breadfruit, yam, and a meat or fish. Fish is often used, because it is so plentiful on the Atlantic coast (Morrison 126; Armstrong). In the highlands and on the west coast, tortillas and tamales with meat or cheese and wrapped in banana leaves are basic foods. In good years, fruit and vegetables are plentiful in most areas, but they are not always affordable for the average Nicaraguan (Morrison 126).

After a revolution in the 1970s against a dictator, the new government built many schools. Cuban teachers were brought to Nicaragua to teach in these schools. That helped change the illiteracy rate from 50% to 13% (Morrison 121, 122). This set the groundwork for the education children in Nicaragua receive today. Education is free and required for children at the primary level, although it is not strictly enforced. 77% of children attend primary school but only 47% make it to the secondary level, which is not free. Many parents can't afford to pay the small fee or to buy the textbooks. In addition, private education is available to those who can afford it (Morrison 122).

Two of the biggest health problems Nicaraguans face is not having enough money to buy nutritional food and not having access to clean water (Morrison 122). People have to use the same source of water for drinking, washing clothes, and for a toilet. Some serious diseases caused by unclean water include typhoid and hepatitis. Yellow fever and tuberculosis are also common (WaterAid). Today, 90% of children are immunized against tuberculosis and 80% against diphtheria. For every 100,000 people, Nicaragua has just 82 doctors and 56 nurses. Also, the cost of drugs from a pharmacy is generally more than the average Nicaraguan can afford, and most people turn to using traditional remedies of herbs sold in markets (Morrison 124).

More than 70% of Nicaraguans live in cities and towns (Morrison 117; "Where We Work - Nicaragua."). The move from rural areas began in the 1970s when people tried to put a distance between themselves and the war. Many urban Nicaraguans are very poor. Unemployment is somewhat high (5.5%), but it has been lowering in the last few years ("Central American and Caribbean: Nicaragua."). Many people try to find ways to make money. For example, some Nicaraguans turn to being a street trader, some women

cook food and snacks at home to sell on the streets, and many children look for any kind of small jobs, such as cleaning cars or stores. As one can imagine, these jobs do not pay much. This causes a lot of crime, mainly theft and robberies, especially in bigger cities such as Managua and León (Morrison 119)

Food is obviously a necessity for anyone to live. Like many people around the world, Nicaraguans purchase most of their food from their local markets. Common foods found in the markets include corn, rice, beans, eggs, fish, meats, and a wide variety of fruits and vegetables (“Food”).

The typical family in Nicaragua is faced with many obstacles. Many urban Nicaraguans live in crowded shantytowns. The houses in shantytowns are often made out of wood and tin and don’t have running water or toilets. Other Nicaraguans live in more stable apartment buildings and homes that have toilets and running water, but it is not always clean water (Morrison 118).

Rural Nicaraguans are especially affected by poor water quality. There is a constant search for clean water to drink and to cook with, which takes a lot of time out of the day that could be used for farming, cooking, and getting an education. Many illnesses are transmitted through polluted water, which hurts productivity. Nicaraguan farmers are also experiencing one of the driest spells in 32 years. This has killed livestock, ruined crops and driven up the prices of staples. In 2015, the government advised rural Nicaraguans to begin eating iguanas, because of the shortage of food staples and livestock (Jackson).

As mentioned earlier, unemployment is high, but the rate has gotten much lower in recent years. Many Nicaraguans work for hours a day so that their families can survive. However, working is not exclusive to adults. Children, young and old, are also given the responsibility of getting a job to help support their families. The minimum wage in Nicaragua is 3,000 Cordobas a month, which is roughly \$106.31 (“Living with the Minimum Wage in Nicaragua”).

Out of the 6 million people living in Nicaragua, 2 million don’t have access to adequate nutrition (WaterAid). It is difficult for the average Nicaraguan to have a healthy diet, because fruits and vegetables cost much more than simple, starch-filled foods at the markets. This is because beans and rice are easier and cheaper to grow than fruits and vegetables, even in a drought (Jackson).

As stated before, water sanitation is a big problem for Nicaraguans. 800,000 people don’t have access to safe water and 215 children die each year of diarrhea caused by unsafe water and poor sanitation (WaterAid). Many parts of Nicaragua lack sanitation. For example, 55.1% of Nicaraguans in Managua have access to a sewer connection. This percentage is the greatest in rural communities. The eastern regions of Nicaragua have as little as .6% of the population with access to a sewer connection. A lack of adequate bathrooms allows illnesses to be spread more easily. These problems with sanitation cause 4.6 million cases of diseases and infections a year (Larsen).

Besides affecting Nicaraguans’ health, water sanitation also affects the economy. Health is one of the biggest economic factors affected by water sanitation. Getting sick calls for a visit to the doctor (if someone who’s sick has access to one), which is very costly. Poor sanitation also affects the revenue from tourism, which creates jobs and brings in money from taxes.

Nicaraguans make roughly \$772 per tourist that visits their country. Other Central American countries make hundreds, some thousands, more (Larsen). Improving sanitation would be much more appealing to those choosing where to go on vacation based on the quality of water and toilets. Better water quality and sanitation could bring in more tourists, which brings in a lot of money and jobs for Nicaraguans who are living in poverty.

Water sanitation has improved from 43% to 52% between 1990 and 2008. Although it was an improvement, it didn't reach the goal of 72% by 2015 ("CTI-Nicaragua: Water"; Larsen). Continuing improved water sanitation would affect Nicaraguans in many positive ways. For example, people would be healthier and their quality of life would be much better. Lessening diseases would save families money and would allow Nicaraguans to be more productive. A farmer would be healthy enough to farm more and a vender would be healthy enough to sell their goods to make a living.

It's estimated that \$95 million is lost each year in Nicaragua from poor water sanitation. Investments that make water sanitation a priority could help save money (Larsen). The most vulnerable individuals, such as the poor and children, need to be focused on, because they are the ones most affected by this major problem.

There are many ways to improve water quality and sanitation. Water could be filtered, boiled, bottled, and treated for drinking. The World Bank estimates that the average cost of filtered water would be \$87,000 a year. Boiled water would cost \$390,000 and bottled water would cost \$46,000. Water treated by a water treatment plant would cost \$49,000 and water treated by chlorine would cost \$67,000 a year (Larsen). Chlorine treatments are a safe and economical way to treat water when done correctly (WaterAid). Also, there are chlorine banks scattered across Nicaragua in an effort to better water quality. On the other hand, sanitation could be improved by cheap, yet dependable gadgets, such as a Tippy Tap. These could be placed near bathrooms for washing hands. Another economical gadget is a rolling water barrel to speed up the transportation of water.

Sanitation systems need more support, because water contaminated from human waste poses a big health risk to those around it. Also, water needs to be tested to show what areas are heavily affected and what is contaminating the water so that systems to improve water sanitation can be adjusted over time.

Organizations and the Nicaraguan government could get involved to provide support to sanitation systems and treating water with chlorine, because families cannot pay for those things individually. Although the government has strived to fix water and sanitation issues, their budget does not allow for a speedy result. As for now, funding for economical gadgets and treatments, as well as education on sanitation and its importance, would help improve the health of Nicaraguans.

Nicaraguans are tough and beautiful people, much like their country. Unfortunately, many of them live in poverty. Improving their water quality and sanitation would give them a better quality of life, lessen their chances of illnesses or death, help their economy, and lower their poverty rates. Lower poverty rates would allow more children to get an education and help lower crime rates. Access to sanitation systems and clean water is a right that every human has, and Nicaraguans would benefit from it in many ways.

Works Cited

- Armstrong, W. P. "Yucca & Yucca Moth." *Yucca & Yucca Moth*. 2000. Web. 14 Mar. 2016.
- "Central American and Caribbean: Nicaragua." *Central Intelligence Agency*. Central Intelligence Agency. Web. 18 Mar. 2016.
- "CTI - Nicaragua: Water." *CTI - Nicaragua: Water*. Web. 14 Mar. 2016.
- "Food." *Nicaragua Guide*. Web. 18 Mar. 2016.
- Jackson, Allison. "Facing Severe Drought, Nicaragua Urges Eating More Iguanas - NBC News." *NBC News*. Global Post, 8 Sept. 2014. Web. 14 Mar. 2016.
- Larsen, Bjorn. "Nicaragua: The Cost of Inadequate Sanitation." *Water and Sanitation Program(WSP)*. World Bank, Aug. 2013. Web. 15 Mar. 2016.
- "Living with the Minimum Wage in Nicaragua." *Tropical Daily RSS*. Web. 15 Mar. 2016.
- Morrison, Marion. *Nicaragua*. New York: Children's, 2002. Print.
- "Where We Work - Nicaragua." *WaterAid*. Web. 14 Mar. 2016.