Onachi Okaro Orchard Farm High School St. Charles, MO Nigeria, Water and Sanitation

Nigeria: A Developed Nation That Still Needs Help

When you think of Nigeria what pops into your head? Is it the beautiful culture, the amazing food, or the talented artists? Or maybe it's the unique beading on their clothing, the strong rhythm of their drums, or the rich heritage that has trickled over to Americans. This is a false reality along with the beauty that this culture brings. They also endure suffering, heartache, and pain. One of the major issues in Nigeria is water sanitation, this issue affects Nigerians in three ways: the areas they live in, the different genders, and the population itself.

Every morning women wake up to walk miles and miles away to get water trying to avoid dangerous animals and strangers along the way, they also do this when they are pregnant. Water is key to food security. Crops and livestock need water to grow. Agriculture requires large quantities of water for irrigation and water of good quality for various production processes. Currently, they lack access to safe and clean sanitation. Nigeria should focus more on improving their water sanitation, to help with food security for their citizens.

The total population of Nigeria as of 2022 is 218.5 million people (World Bank), 53% of the 218 million Nigerians live in urban areas. That's projected to rise above 70% by 2050. Lagos, Nigeria's biggest city, already has over 15.9 million people. Their natural resources are natural gas, petroleum, tin, iron ore, coal, limestone, niobium, lead, zinc, and arable land (The World Factbook). The climate of Nigeria is mostly tropical. Nigeria has three distinct climatic zones, two seasons, and an average temperature ranging between 21 °C and 35 °C. Two major elements determine the temperature in Nigeria: the altitude of the sun and the atmosphere's transparency (World Bank Change Knowledge Portal).

Nigeria's government system is a federal republic, their current leader is Bola Ahmed Tinubu. Bola Tinubu is the 16th and current president of Nigeria, having assumed office on 29 May 2023. Nigeria faces increasing violence from Islamic terrorism, largely in the northeast, large-scale criminal banditry, secessionist violence in the southeast, and competition over land and resources nationwide (The World Factbook).

Most Nigerian households consist of a mother, father, and children, and many include grandparents, uncles, and aunts as well. Most houses are built by individuals, and, because banks do not normally lend money for home construction, most of these individuals must rely on their savings. A federal housing program provides funds for the construction of low-cost housing for low- and middle-income workers in the state capitals, local government headquarters, and other large towns (Encyclopædia Britannica). Food is an important part of Nigerian life. Seafood, beef, poultry, and goat are the primary sources of protein. With so many different cultures and regions, food can vary greatly. In the southern areas, a variety of soups containing a base of tomatoes, onions, red pepper, and palm oil are prepared with vegetables such as okra and meat or fish (Encyclopædia Britannica).

In Nigeria, the gross enrollment rate in primary education is 85% for both girls and boys combined. This decreases to 45% in lower secondary, with a student transition rate to secondary school of 60%. The primary net enrollment rate is 64% and the primary completion rate is 74% (Education Policy and Data Center). Education consists of six years of primary school education, which is free and compulsory beginning at age 5. Secondary education consists of two three-year cycles, the first cycle of which is free and compulsory. Nigeria has more than 400 universities and colleges widely dispersed throughout the country in an attempt to make higher education easily accessible (Encyclopædia Britannica).

Healthcare infrastructure in Nigeria is still underdeveloped and lacks modern medical facilities. The country's healthcare indicators are some of the worst in Africa. It has one of the fastest-growing populations globally with 5.5 live births per woman and a population growth rate of 3.2% annually. It is estimated to reach 400 million people by 2050, becoming the world's third most populous country. Medical professionals are in short supply, with only about 35,000 doctors despite needing 237,000, according to WHO figures, partially due to the massive migration of healthcare workers overseas. Nigeria loses at least \$2 billion every year to medical tourism, according to the Nigerian Medical Association (NMA). India accounts for more than half of this outflow (Nigeria-Healthcare).

Nigeria's water and sanitation crisis is severe. It's affecting millions in urban and rural areas, with flooding, poor management, scarcity, and limited access to sanitation facilities (Ihezie and Obaniyi). In the last 50 years, the human population has more than doubled. This rapid growth with its accompanying economic development and industrialization has transformed water ecosystems around the world and resulted in a massive loss of biodiversity (Water scarcity), as of 2020, approximately 2 billion people lack access to safely managed drinking water services, and an estimated 4.2 billion people lack access to safe sanitation facilities (Ihezie and Obaniyi). Their floods also worsen the existing water and sanitation crisis in this country. It also causes significant damage to property, and crops, resulting in economic losses and long-term negative impacts on livelihoods (Ihezie and Obaniyi). Clean water and sanitation along with economic losses are important to fix because without clean water and sanitation, people could lose their lives or either get sick.

Women bear the brunt of this crisis, as they are responsible for fetching water, cooking, and other household chores (Akinsemolu). Water and sanitation crises across the world affect women and girls more than men and boys, particularly since the responsibility to collect water in seven out of 10 households without individual water supply falls on the female family members (Kaveri). In almost all the countries surveyed for the report, men and boys spent less than 10 minutes per day fetching water for such households, compared to 53 minutes per day for women and girls (Kaveri). Women and girls not only face WASH-related infectious diseases, like diarrhea and acute respiratory infections, but they also face additional health risks because they are vulnerable to harassment, violence, and injury when they have to go outside the home to haul water or just to use the toilet (Kaveri). WASH is critical to eliminating violence against women and girls. Female safety and dignity must be paramount in WASH service design (Water and Gender).

Nigeria is an overpopulated country and for that, it causes too much damage(The World Factbook). Over 2 billion people live in water-stressed countries, which is expected to be exacerbated in some regions as a result of climate change and population growth (Drinking-Water), only 3% of the world's water is freshwater, and two-thirds of that is tucked away in frozen glaciers or otherwise unavailable for their use. Their population has now successfully harnessed many of the world's natural waterways by building dams, water wells, vast irrigation systems, and other structures that have allowed civilizations to grow and thrive. If humans continue to pump more carbon dioxide and other greenhouse gasses into the atmosphere, patterns of weather and water will change around the world, also the water systems will eventually be too stressed and cause rivers, lakes, and aquifers to dry up(Water scarcity). As known, contaminated water and poor sanitation can cause different types of diseases such as cholera, diarrhea, dysentery, hepatitis A, typhoid, and polio (Drinking-Water). Individuals are using water every day to cook, take showers, wash their hands, and face, etc., but this country is overpopulated which gives the citizens less amount of water sanitation.

Different companies are trying their hardest to find solutions for the issue, and they have figured out different ways to solve this situation. The Nigerian government and Civil Society Organizations have been taking steps to address this crisis. In 2000 they applied the national water supply and sanitation policy. They plan to invest \$1.60 trillion to provide water and sanitation to 90% of the population (Ihezie and Obaniyi). As of 2021, the government built about 2,300 Water Points and 6,546 hygiene facilities and sanitation compartments nationwide. Community efforts have also improved safe drinking water and sanitation. Several Nigerians have dug wells and built water tanks to provide clean water to their communities (5 ways to improve water quality and access to water).

As of right now, the main goal is that everyone in this country has safe and clean drinking water. At the moment, the best solution they could go through is improving sanitation facilities by providing toilets and latrines that flush into a sewer or safe enclosure. They need to find ways to promote good hygiene habits through education, and proper hand washing with soap and water and how it could reduce diarrhea cases by up to 35 percent. They should also promote low-cost solutions, such as chlorine tablets or plastic bottles that can be exposed to sunlight, to improve water quality, or maybe implement rainwater harvesting systems to collect and store rainwater for drinking or recharging underground aquifers. Build wells to extract groundwater from underground aquifers(5 ways to improve water quality and access to water). There are still a bunch of solutions an individual could come up with but if they start with these very few solutions and build up from that, then Nigeria would be once again a great country.

When all solutions have been implemented, water should become more available for different uses. The crops and livestock of Nigeria should be more stable and abundant. Along with the crops growing, women would now be able to get that precious liquid for their families without fear of getting sick or fear of being attacked or assaulted. It would also mean that all the money the government invests won't be wasted. If Nigerians do not continue to take action the people will suffer.

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