

Painting A New Picture Of The Tanzanian Water Supply

The United Republic of Tanzania is located on the Eastern coast of Africa and borders of several neighboring countries, including Mozambique, Zambia, Kenya and Malawi, just to name a few. Dar es Salaam is the capital and most populous city in the country, as well as the home to most government operations. Tanzania became an official union in April of 1964, and is the result of the joining of Tanganyika and Zanzibar. A man by the name of Julius K Nyerere became chief minister of the government in 1960. Shortly after that at age 39, he was elected President when Tanganyika became a republic within the Commonwealth, only a year after independence. However, President Nyerere stepped down from office in 1985 and was replaced as President by Ali Hassan Mwinyi. (US Department of State: Bureau Of African Affairs, 2011).

Tanzania has a population in the mainland of 45 million people. This country has 45 percent of the population under the age of 15, and only 3 percent over 65, with an elderly support ratio of 17. ("World population data," 2010) Therefore this country has an impressive dependency ratio with so much of the population being working age and so little being over the age of 65. The population pyramid is somewhat typical for a sub Saharan African country with the largest portion of the population being under the age of 4 years. There are a lot of babies being born, but there is a large number of working age people to support them. (US Census Bureau, 2003) The birth rate of Tanzania is 42 with a total fertility rate of 5.6. ("World population data," 2010) People in the country have a life expectancy of 52.4 years, and mostly consist of Muslim and Christian groups. (US Department of State: Bureau Of African Affairs, 2011) The literacy rate is broken down by the US Department of State into two regions: the

mainland and Zanzibar. Females on the mainland have a literacy rate of 67.0% and 76.8% for Zanzibar, while males have a literacy rate of 79.9% on the mainland and 86.0% for Zanzibar. (US Department of State: Bureau Of African Affairs, 2011) The net migration rate is -1.48 migrant(s)/1,000 in the population. The refugees' country of origin is 352,640 from Burundi and 127,973 from Democratic Republic of the Congo. (Nation Master, 2011)

Tanzania has a republic type government with the constitution being formed in 1982. Tanzania's election process is similar to that of Canadian government, where "president and Parliament members are elected by direct popular vote for 5-year terms. [...] The president appoints a prime minister who serves as the government's leader in Parliament." (US Department of State: Bureau Of African Affairs, 2011) The current political leaders are Jakaya Kikwete as president, Mohamed Gharib Bilal as Vice President, and Mizengo Kayanza Peter Pinda as Prime Minister. (US Department of State: Bureau Of African Affairs, 2011). What's interesting about Tanzanian government is that Under the Union Agreement, Zanzibar has widespread self-government within the country. It has its own President, legislature and bureaucracy, which are called The Revolutionary Government of Zanzibar. (US Department of State: Bureau Of African Affairs, 2011)

Tanzania has a current GDP of \$23.3 billion and a GDP per capita of \$552. Eighty percent of the workforce sector is in agriculture, and the remaining twenty percent is in industry, commerce and government. Agriculture accounts for 26.6% of GDP. Industry/manufacturing accounts for 22.6% of GDP and includes textiles, agro-processing, light manufacturing, construction, steel, aluminum, paints, cement, cooking oil, beer, mineral water and soft drinks. Some of their natural resources include hydroelectric potential, coal, iron, gemstones, gold, natural gas, nickel, diamonds, crude oil potential, forest products, wildlife, and fisheries. (US

Department of State: Bureau Of African Affairs, 2011) According to the 2000/01 Integrated Labour Force Survey, 87.1 percent or 15,521,229 of the economically active population were employed and 2,306,348 or 12.9 percent were unemployed. (Integrated Labour Force Survey, 2001) As of 2001, 58% of the population was living on less than \$1 a day, and 90% of the population was living on \$2 a day. (EarthTrends, 2001)

The most prevalent diseases in Tanzania are Tuberculosis and HIV AIDS. According to the World Health Organization Global Tuberculosis report in 2009, there were 120,191 new cases of TB with the incidence rate being 297 per 100,000 and “the HIV/AIDS epidemic is associated with a 60 percent increase in active TB in Tanzania.” (USAID, 2009) 10% of infants are born with low birth weight, the under five mortality rate was 108 in 2009, the crude death rate in 2009 was 41, and the maternal mortality ratio in 2008 was 790 per 100,000 births. (Unicef, 2010) According to Uwazi, a public action group, “over the past decade over 600,000 children aged below 5 years are estimated to have died as a result of malnutrition in Tanzania. This year another 43,000 children will die prematurely because they are malnourished.” (Uwazi, 2010) In 2008, only 24% of the population was using improved sanitation facilities, which is a large threat to the health of the country. (Unicef, 2010) The FAO reports that the prevalence of undernourishment in the total population is 34%, or 13.9 million people. (Food and Agriculture Association of the United States, 2011)

Some of the country’s most profitable crops include coffee, cotton, tobacco, cloves, sisal, cashew nuts, maize, livestock, sugar cane, paddy, and wheat. (US Department of State: Bureau Of African Affairs, 2011) The FAO reports that Tanzania’s per capita calorie availability is 2032, and most of their calories are from vegetable products and cereals. In 2002, the total water withdrawal per capita was 144.7 m³. (Food and Agriculture Association of the United Nations,

2011) All Africa reports that “Fifty-two districts in 15 regions are facing a severe shortage of food, [...] Mr. Pinda said 1,062,516 people needed 38,843 tons of food aid in the last quarter of this year.” (Msangya, 2011) As for portable water, a representative from WaterAid says that “Weak infrastructure means that 2/3 of the rural population have no safe water to drink.” (WaterAid, 2010) According to the Energy4Everyone Foundation, 98% of rural Tanzanians don’t have access to the electricity grid. (Energy4Everyone, 2010) The Sun Strides Foundation reports that only 39% of the urban population has access to electricity. (Sun Strides Foundation, 2007) Tanzania’s main source for energy consumption comes from fossil fuels and coal products. (EarthTrends, 2003) The main renewable source of energy in urban and rural areas is woody biomass and its estimated consumption per capita is 1m³ or about 183 kgoe. (Helio International, 2006)

The problem that is most worthy of addressing in this country is the access to clean water and public education about why water sanitation prevents disease. This problem is extremely significant because water is the source for drinking, cleaning, cooking and growing food. If there is not adequate care taken to make water safe, the inhabitants of Tanzania are going to become more disease ridden in the future. Water born diseases and illnesses account for over half of the general diseases in the country. Furthermore, most of these diseases occur where people are using contaminated water or do not have convenient access to water close to their home. (The United Republic of Tanzania National Website, 2002) The problem in this country is not the lack of water existing; it’s the available access to it. Tanzania is home to the second deepest lake in the world, lake Tanganyika, and is home to 5,439,000 hectares of lakes and swamps. (The United Republic of Tanzania National Website, 2002) This issue has been brought to the attention of government officials before, and in 1991, a water sector policy was put in place that strived for

“achieving equitable access to and adequate sustainable supply of clean safe water both in rural and urban areas [...] within a distance of 400 meters from people’s home.” (The United Republic of Tanzania National Website, 2002) However the problems of water sanitation still exist. There are several documentaries on the internet showing young children drinking milky colored water from a hole in the ground while the narrator explains that the choice for these children is either die of thirst today, or die of disease tomorrow. One video claims that clean water allowed children to become more educated and adults make money for their family because the lack of disease in the water prevented sickness from wasting their time. One woman was able to open her own restaurant because she wasn’t being forced to walk miles for water each day. (WaterAid, 2010) There is a very high opportunity cost for families in Tanzania when they have to spend their time fetching water instead of working or going to school.

There are several stakeholders that can do something about this problem. The Tanzanian government has already put forth policies that aim to make clean water accessible, but it has not been as successful as hoped. WaterAid is an American organization whose main goal is to provide safe and clean water for the world. Caritas Australia has already contributed to the water availability in Tanzania, and strives to empower the world’s vulnerable communities by installing water pumps to access groundwater. (Caritas Australia, 2011) And the World Health Organization can become a huge contributor to helping Tanzania’s water situation. If these problems are not addressed in this country, water borne illnesses and diseases will continue to spread. Children will not be available to help with agriculture, adults will not be able to work in the city, the need for vaccinations and health care will rise dramatically, and the country will become even poorer.

This problem can be solved in a few different ways. These companies and organizations could send representatives to several cities and communities in Tanzania, and explain to them the importance of clean water. However, this could take months and will be extremely costly. What I propose is that these companies pool their resources to produce a universal instructive booklet that explains what water wells are, why you cannot drink water from a mud hole, and what types of things are in dirty water. This booklet will also explain how to boil water and what benefits that offers for their community. This book will be comprehensible to those that are literate, and will be equipped with detailed colorful illustrations for those who are not. The book will have both Swahili and English descriptions so that the entire population can understand.

This plan is different than any other because it really allows everyone in the community to become involved in water sanitation. If more people know about why it is important, there will be less disease spread, and the country as a whole will become more prosperous and healthy. Children will enjoy learning from the booklet because it will be interesting and fun to read. Obstacles include cost, shipping, and distributing capabilities. A representative would need to be sent to distribute the books, which could be costly. However, it is less costly than sending hundreds of people to the country, or funding millions of vaccinations for diseased children.

If my plan is administered and each family in a community receives a training booklet that contains information about why water sanitation is important and how to do it themselves, the economy will grow and disease will diminish. Children will be more educated and their families more prosperous. The standard of living will increase, and the future for a Tanzanian will grow brighter every day.

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