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Pakistan, Factor 9: Water and Sanitation

Changing the Life of an Ordinary Citizen

In the United States, people take clean water and the clean environment for granted. They don't realize that across the globe there are people who are living in a toxic and polluted environment. They are drinking water that contains so many dangerous bacteria. Countries such as Pakistan struggle to keep their citizens above the poverty line. It is one of the many developing countries where the majority of the population doesn't have access to clean water and sanitation. Polluted environment is mostly caused by people throwing their trash on the streets. There are no regulation regarding the sewer system. People who drink contaminated water are at risk of having Typhoid, Dysentery, Cholera and Hepatitis A&E (Waterborne). Every year, approximately two hundred and fifty thousand kids under the age of five die due to water contamination. Four out five diseases in children are due to drinking dirty water (Hassan). A report from World Health Organization (WHO), states that sixty percent of infants' deaths are caused by water borne diseases. The maternal mortality ratio in Pakistan is hundred and seventy eight per every hundred thousand live births. It is one of the highest mortality rates in Asia. In the whole country, water contamination is the leading cause of many diseases (World). Living in a polluted environment can also cause different types of heart related problems (Environmental). Since water and health is an important part of life, it is necessary for Pakistan to make sure they're citizens are receiving clean water as well as taking simple measures like providing education on sanitation, clearing up trash, and installing water pumps to ensure a sanitary, non-toxic environment. There are many small solutions the government of Pakistan and other foreign organizations that can completely change the life of an ordinary citizen.

Currently, Pakistan's population is hundred and ninety-nine million people (The World Factbook). The average number of people in a family is about six to seven people. Since extended family living in the same house is common in Pakistan, there are about fifteen to twenty people residing together (DHS). Most likely they all are using contaminated water for bathing, cooking, and drinking. Unfortunately, they all share the different types of bacteria that thrives under sanitary conditions. Many people aren't aware of the negative impact the environment has on their health. Forty two percent of the population remains uneducated. In 2015, 6.7 million children were out of school. Out of the 6.7 million kids, approximately 3.7 million are females (Anwar). The citizens of Pakistan don't have the education to realize the negative impact on their health from using contaminated water and living in a polluted environment. According to an article from 2015, it states that sixty percent of the population is food insecure. Starvation is more common in women and younger children (Castro). Due to the food insecurity, the rate of mental disorders such as depression is increasing (WHO). An average citizens doesn't know when their next meal will be. The thought of not knowing when their next meal causes them to become depressed. Another factor that contributes to the increase of depression rate is the unemployment rate. In 2015, the unemployment rate was 7.7%. A lot of people don't have jobs, which also causes them to become depressed. The average monthly salary is two hundred and fifty five dollars. That means the average earning for a day is eight dollars and fifty cents (Average). Due to the low wage, more than majority of the population falls below the poverty line, therefore if they are sick they can't go to the hospital and get treatment. The lack of money causes the pregnant women to deliver their kids at home. According to WHO, Sixty-five percent of women in Pakistan deliver their kids at home. Low wage is also preventing kids from receiving education. The monthly wage isn't enough for the average citizen to fulfill the necessities such as food, clothing, health, and education.

In Pakistan, agriculture is an important part of the economy and the ordinary citizen. Forty two percent of the population practices agriculture (Government). The average farming land an average person has is 6.4 acres (Government). The majority of the crops grown are wheat, rice, corn etc. (Khan). Most of Pakistan's farms have irrigation systems but they are not efficient. Half of the water for the irrigation is lost in canals and watercourses (Improving). Due to the polluted environment, ineffective irrigation systems, and contaminated water, the farmers' crops don't grow as efficiently as it should (Khaskheli). Therefore, they can't get the maximized profit. The polluted environment is affecting the average family socially and financially. The families don't have enough crops to sell which lowers their income. If the water is clean and there is very less pollutions, the famers will be able to grow crops much efficiently which will increase their income and decrease their food insecurity. Another issue that needs to be resolved in order to improve agricultural productivity is to educate the farmers. Most people farm in Pakistan because they don't have any other source of income or education. In reality, the famers don't have the education to be the most efficient farmer.

There are numerous barriers that will impact on improving water and sanitation. One is the economic factor. The economy in Pakistan isn't stable enough to support the projects that will need to be done in order for water and sanitation to improve (Pakistan Index of Economic Freedom). For water and sanitation to improve for agriculture productivity, it will cost at least Rs. 18 billion (Khan). In dollars, that is about \$ 2.7 billion. It is estimated that Pakistan's economy will go down in the next couple of years. With a high unemployment rate, the government of Pakistan isn't financially stable enough to provide the funding to improve agricultural productivity. Another economic factor that will decrease food insecurity is to reduce the price of food. That is harder to do because there is a food price inflation going on right now. Currently, there is no shortage of food but due to the price of the food; the average citizen can't afford to buy it (Kugelman). This also causes a lot of food to go to waste. Another barrier that will impact on improving water and sanitation is education. Vast majority of the population doesn't have the education to realize the negative impact of throwing their trash in the streets. They don't realize how the sanitation affects the health. Language is another barrier for improving water and sanitation. There are over three hundred dialects and languages spoken in Pakistan (The Languages). These barriers will be hard to overcome but not impossible.

Dirty water and a polluted environment impacts an ordinary citizens in a tremendous way. Health is hugely impacted by dirty water. If the citizens of Pakistan drink dirty water, they are at huge risk of having life threatening diseases. Currently, sixty eight million citizens of Pakistan don't have access to sanitation. The streets are filled with trash. There are kids playing outside next to filthy garbage that is a threat to their health. Sixteen million people of Pakistan don't have access to clean water (Pakistan WaterAid). There are either one or two water sources in a village or a town. This water source can be a lake, canal, well, etc. (Hassan). Majority of the water sources in Pakistan are filled with filth. In the future, the amount of contaminated water will increase because off all the floods that are currently occurring in Pakistan. The benefits of improving water and sanitation will be increase in life expectancy, reduction in diseases, better environment for future generation, increase in food quality, increase in agricultural productivity and profits and decrease in pollution. By solving how to improve water and sanitation, it can completely change the life of an ordinary citizen.

There are variety of solutions a government could do to improve water and sanitation. The foundation of improving water and sanitation is to educate the Pakistani citizens about the effects of drinking dirty

water and living in a polluted environment. The education they will receive will be informal. There can be informative sessions held in villages or cities to educate locals about the effects of filthy water and living in a polluted environment. In order to improve sanitation, the government needs to regulate the sewer and the trash system. Regulating the sewer system will cause the pollution levels to go down. The result of pollution levels reducing will cause crops to stay healthy. Until the government passes a law, there are many short term solutions such as having the people of towns and villages clean up the city. By doing this, the villagers and everybody else can be involved in making a difference. The streets of Pakistan will be cleaner therefore, there will be less risk for the citizens of Pakistan to get life threatening health conditions. This will also make the citizens of Pakistan not want to litter. In order for agricultural productivity to improve, the farmers need to implant more efficient irrigating systems. One of the most efficient irrigation system is Driptech. Driptech is an international water technology company that is based in India. Recently, Driptech came up with a solution that is fifty percent cheaper compared to other irrigation systems. Driptech solutions are easier to install and are easier to take care of (Driptech). The Driptech equipment can be tested in Pakistan to ensure that the equipment is adaptable in Pakistan as well. Since the geography of Pakistan is different throughout, this testing can take in various parts of Pakistan. If the equipment shows improvement then farmers can invest in Driptech. This can be a win-win situation. Pakistan's farming improves and Driptech can be exposed to other businesses in Pakistan. Since Pakistan and India are neighboring countries, the equipment will cost less compared to the equipment travelling from other counties. To improve water contamination, the government can plant Afridev hand pumps. Afridev hand pumps are inexpensive to build and are easy to install. Even though Afridev hand pumps need more maintenance than an average pumps, they are easy to take care of (Water Hand Pumps). Currently, a lot women aren't educated or employed, they can be trained to take care of the Afridev hand pumps. Other foreign water organizations such as Water Aid, Water is Life, and United Nations Children's Emergency Fund (UNICEF), can be involved in installing the Afridev hand pump and helping young kids be healthier. By following these solutions, the government won't need a lot of funding. Currently, a lot women aren't educated or employed, they can be trained to take care of the Afridev hand pumps. Since women don't have the same rights as men, this plan will allow women to do more than just staying at home. Women will be able to do something for the community. Gradually, men will start to realize that women are as equal as them. Women empowerment will begin to rise. If these solutions are followed, it can be really good for future generations. As a country, Pakistan will change for the better.

Even today, the majority of the population in Pakistan is living in a polluted environment. They are using contaminated water for everyday life. Imagine all the bacteria and diseases that are entering their bodies. Since an average family's income is low, they won't be able to pay for treatment to improve their health. An average citizen of Pakistan is living below the poverty line with no access to clean water. The vast majority of the population doesn't have sufficient education or access to clean water and sanitary issues. The farmers of Pakistan are making less profit on their crops because they don't have the education to know the difference in variety of the seeds or the different farming techniques to accommodate their polluted environment. By installing Driptech, the farmers can improve their crops. This can allow them to sell their crops which will increase their income. If the income goes up of the farmers, they can send their kids to school. This will allow education to spread throughout the community. The unemployment rates in Pakistan are high. There is food insecurity in Pakistan because food price inflation is going on. Most of Pakistan's diseases are associated with water contamination and the toxic environment. Having regulations on the sewer and trash system can create a non-toxic environment for the citizens of Pakistan. Installing Afridev hand pumps can help reduce the amount of contaminated water. If water and sanitation improves, other issues such as women rights, education in younger generations, health, and agricultural productivity will also improve. The first step for all these changes to occur is to educate Pakistan's population.

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