Water Contamination in Afghanistan

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Outline

I. Introduction
   A. Water contamination in Afghanistan has been an environmental problem for years.
   B. Many water purification companies have been trying for decades to find a way to have a healthier water supply for Afghan locals and deployed soldiers.
   C. Contamination of the water supply can be very harmful to a person's health.
   D. Afghanistan should construct a dam that keeps water purified and suitable for drinking.

II. Body
   A. Main source of water contamination
      1. Bacteria found in water
      2. Health issues they cause
   B. Problems
      1. Need for sanitation facilities
      2. Bacteria
      3. Death, disease, or illness
   C. Solution—Reconstructions of Selma Dam
      1. Lower number of children and soldiers affected
      2. Provide a safer environment
      3. The source of the main water supply should not be a place for practice of open defecation or pollution.

B. Conclusion
   A. Water contamination is an issue that has been discussed for years; it is dangerous and primarily results in death or illness.
   B. Drinking contaminated water is very harmful to humans. Many bacteria live inside the water we drink, causing serious health problems. This is an issue that should be addressed immediately by adding a dam with a hydroelectric plant and a proper place for defecation.

Many people know about the wars in Afghanistan, yet very few know about the severe water crisis. The many wars in the country throughout the years have played a significant role on the harsh water condition; it's not the only cause of the crisis. Water contamination has been a problem in Afghanistan for many years. One of the main causes of the contamination is due to the poor supply of sanitation facilities. Twenty percent of the population use the main water supply for defecation. Polluting the water can be very dangerous to not only the Taliban, but also to the soldiers of the United States Army. Government officials and the US House of Senate should be working towards coming up with a solution to this problem. They need to understand that disposing of waste and feces into a water supply creates bacteria that can be harmful to a person's health. This is an issue that should be addressed immediately by adding a dam with a hydroelectric plant and a proper place for defecation.

Afghanistan's infrastructure has been damaged badly due to years of wars. "From 1992-1996 fighting between different mujahidin groups led to indiscriminate shelling of Kabul and other cities which destroyed most of the water infrastructure, including pump stations used to get fresh water" ("Afghanistan Water Crisis," 2016). A septic tank is one of the alternative solutions that some Afghanies use to dispose of waste; however, it also leaks and contaminates the ground water as well. Afghans primarily use the rivers for drinking, to defecate or dispose of waste. This causes many life-threatening problems. One of the main problems is bacteria in the water. There are several different bacteria found in water that can cause illness and sometimes death. Cryptosporisium is a bacterium that can be found in water. It is known for producing crippling diarrhea. Another sickening bacterium is E. coli. Even though it can be

found in all water supplies, some have levels that are higher than normal and can make people very ill ("Afghanistan Water Crisis," 2016).

There will always be various types of bacteria in the water regardless of how many times the water is filtered. "All water has bacteria and protozoans to some extent, most of them completely harmless" (Handley, 2013). Even though some bacteria are mentioned as harmless, others like *Anabaena circinalis* can be very deadly. Anabaena is a production of neurotoxins that can produce saxitoxins. Saxitoxins have been known to cause respiratory arrest, which is very life threatening and on many occasions, results in death. "In Afghanistan, 25% of deaths among children under the age of 5 are directly attributed to contaminated water and bad sanitation. These deaths are by and large caused by diarrhea, which is the leading cause of illness in children under 5 years" ("Afghanistan Water Crisis," 2016). The water supply as a whole in Afghanistan is limited. Without the adequate water supply, they can't treat the wastewater. The best solution is for government officials from both the US and Afghanistan is to find a way to construct a dam specifically for the purification of the water supply in Afghanistan.

Due to the lack of reservoirs, canals, and infrastructure, only about thirty percent of water coming from mountains in Afghanistan stays in the country. Since the fighting in Afghanistan seems to continue, little has changed to fix this problem. Investors are skeptical about investing a large amount of money into the project in fear of the workers or the projects being attacked. "One exception to this is India, who historically has close ties to Afghanistan. India is currently spending $200 million on the Selma Dam Project that was badly damaged in

earlier wars, including adding a hydroelectric plant" ("Afghanistan Water Crisis," 2016). When the reconstruction is completed, it will produce forty-two megawatts of power and provide irrigation for over 75,000 hectares of farmland. "The atmosphere and the water in their various phases and locations are absolutely essential parts of the environment that need some discussion, as do the soils and vegetation to a certain extent" (Shroder, 2012). Considering that most of Afghanistan's soils are damaged, it is important to keep the soils near the main water supply clean.

Bacteria can also be air borne, causing pollution and contamination not only to the surrounding water supplies and also to the air they breathe. Establishing sanitation locations in Afghanistan where needed could also eliminate a lot of the illness. In Kandahar, Afghanistan, all wastes are submitted to a pond that is constantly being burned and stirred. This is unsanitary and very harmful to troops stationed there. Breathing in the harmful fumes can cause dangerous upper respiratory infections. This alone is a reason more investments should be put into global water treatments. "The consumption of contaminated drinking water leads to various health hazards. Thus, this increase in the contamination of water leads to the increase in demand for water treatment products, which in turn leads to the growth of the Global Water Treatment Products market" ("Global water treatment products market 2012-2016 report"). Afghanistan badly needs water treatment in various areas. Water treatment products all over Afghan should have a major growth. Since the beginning of the twentieth century, water treatment techniques have kept this water contamination issue partially under

control (Deininger, 2011). The only problem that might rise is not many Taliban are intuitive enough to create such a project.

The main source of water supply for Afghanistan should not be a place of practice for defecation or pollution. In some areas, many of the Taliban do not know that their water supply is actually coming from that location. This is why it is important that a dam in constructed so that there are a purified water supply and a cleaner atmosphere for Afghans and soldiers deployed to their country. "In July 2003, a rapid investigation of the quality of water sources (including testing for arsenic using field kits) was begun as a multiphase project, sponsored jointly by UNICEF and DACAAR, a nongovernmental organization" (Murcott, 2012, pp. 85-87). As a soldier who has been deployed to Afghanistan, I know the importance of this matter. In June of 2010, I was in Kandahar, Afghanistan, for a tour of ten months. During that time, the water could not be drunk. The water could not even be used for brushing our teeth. We were supplied with bottled water that sat outside in 113°F weather. When temperature reaches that high, the plastic bottles begin to release particles inside the water, contaminating it. I was also exposed to the airborne bacteria coming from the pond used for feces throughout the base. Many soldiers were ill during the ten-month tour. Since the environment at the time was considered hazardous, military officials made documentation of the living conditions just in case it caused long-term issues to our health in the future.

Water contamination is an issue that has been discussed for years; it is dangerous and primarily results in death or illness. Drinking contaminated water is very harmful for your overall health. Various bacteria live inside the water we drink, causing serious health problems.

This is an issue that should be addressed immediately by adding a dam with a hydroelectric plant and a proper place for defecation. Another issue that needs to be corrected is proper disposal of waste and defecation. Being that soldiers are in such condition makes the matter very important to everyone fighting in the war. The United States should work with Afghanistan's government on correcting these issues for the safety and well-being of the citizens of Afghanistan and also the soldiers and contractors of the United States of America.

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