

SOLUTION

Explanation of Problem: Sudan and South Sudan has limited water supply due to its dry and hot weather. Most non-flowing water supplies are unsafe. It contains too much bacteria and parasites that it cannot be drinkable. Also, during the dry season, most rivers except for the Nile dries up leaving people no choice but to drink unsafe water. Most importantly, the Nile River is not regularly maintained by the by the government and as Sudan shares most of its underground accessible water to nearby countries, by not maintaining an irrigation and purification system, it creates tension with nearby countries such as Egypt and Ethiopia (Barton).

According to the 2011 Census gathered in the CIA World Factbook, in terms of access to sanitation facilities, urban areas improved up to 15.8% of the population, rural areas are at 7.3%, which totals up to 8.9% of the whole population. Therefore, for the unimproved rates of sanitation facilities, it leaves 84.2% of the population for urban areas, 92.7% for rural areas, which totals to 91.1% of the population according to the 2011 census (The World Factbook). As a result, the risks of food and waterborne diseases are high as well as for water contact diseases, respiratory diseases, and animal contact disease which include rabies.

Intro to Solution & how it works: Our solution to the water crisis in both Sudan and South Sudan involves building a purifying irrigation system that will be operated by a manageable computer software. The water purifying irrigation system will reach different cities through underground pipe like structures that are designed to be built with purifying fibers among other agents that trap pathogens. Within the main capital cities of both countries of Sudan and South Sudan, managers of the water purification system will keep track of the water contamination levels in different cities and operate the computer software as needed. Every month a water evaluation report will be sent to the headquarters of the United Nations to keep track of the contamination levels as well as working on improving the technology further.

How system works and aids the solution: By creating a software to keep track of the water purifying and contamination process, it will aid the purifying pipeline system.

Target area: Main bases will be in Khartoum and Juba, the two capital cities of Sudan and South Sudan. Our target areas will include all of the remaining cities that don't have access to clean flowing water around their area. Abyei would be the main focus of this system since this city is in the border of the two countries.

Sketch of solution system:



How people will react: We are predicting that the people will be satisfied with our solution since they will now have access to clean and safe water even during the dry season.

Where this product stands: This system is a bigger model of a purifying system derived from the idea of "Lifestraws." "Lifestraws" purify water from any contaminated source and so the solution to our water crisis is going to be solved by a large purifying irrigation system that will have purifying fibers built inside the pipes to continuously purify flowing water. By creating this

Works Cited

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