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Belize, Water Sanitation

Belize: Island Water Sanitation

Belize hosts over 450 islands on the Central American Caribbean coast. These islands are called the "Cayes" and are a popular tourist destination due to the beautiful water, sand, and marine life. Tourists bring in over half a million visitors annually, supplying over 370 million dollars in 2021, showing how essential an average person's vacation can be to a poverty-stricken area. While the beaches and water are beautiful, water sanitation is a pressing issue that must be acknowledged and combatted immediately. Though officials have worked to solve this issue, the Belize water predicament is growing and detrimental to residents and visitors. Belize must take action to improve not only its economy but also its health.

As of 2024, Belize was home to 414,841 people, including the mainland and all 450 islands. Ambergris Caye, the most popular of the islands, is 25 miles long and is home to 14,000 people. Around 53.6% of the population lives in a rural setting. The average family size is four people per household, and you can find them eating authentic red beans, rice, tamales, and Mexican chicken during their meals. The island jobs are limited, but the average take-home salary is $1300. Living on the island includes walking substantially to most places, even hospitals. There are roughly ten hospitals, but it will be a plane ride and thousands of dollars in bills in case of a severe emergency. While all these are real concerns to those who inhabit the island, there is no question why Ambergris Caye is such a destination with a yearly average temperature of 80.1 degrees! Being that close to the equator brings a tropical paradise but also solidifies the importance of hydration by dependable and clean water sources.

Despite the efforts to provide safe water to Ambergris Caye, those efforts have yet to cover treated water; the efforts are falling short. It must be perfected to ensure secure, sustainable drinking water for residents and travelers. This is a global challenge that we all must take action toward. Over one million people around the world die from unsafe water. Over two billion people across the globe do not have access to clean, safe water. According to the OECD, by 2050, millions will still be without access to clean water. If we are aware of this issue and know it is detrimental, why is more action not taking place? While many struggle, those in a rural setting struggle to find clean drinking water. Only 28% of rural areas have access to clean water, which is a sickening statistic, knowing that humans require at least eight ounces daily to stay alive. In many nations, 70% of sewage is thrown into rivers, lakes, and ponds, contaminating freshwater. Not only is this polluting our environment, but it takes away water resources.

Ambergris Caye water is sourced from seawater reverse osmosis process. The water is collected from the lagoon and filtered through many steps, and the leftovers are pumped back into the lagoon. The water is injected with chlorine to settle the pH, which can cause health issues. Short-term visitors experience sickness, but the long-term effects could be chlorine poisoning or kidney stones due to mineral buildup. In 2021, a family took a vacation to Ambergris Caye; this is their statement on the water:

The water is treated, but the smell is awful. It has high minerals and chlorine. You feel cleaner in the ocean than taking a shower. Tap water leaves a "gritty" feeling on your skin. Due to the disgusting smell, we have even used bottled water even to brush our teeth. Across from our hotel, the water workers are pulling handfuls of seaweed from the water plant (Crowell).

If a visitor or resident gets sick from the water, getting to the nearest major hospital could cost a life and thousands of dollars.

Ambergris Caye's initiative to help the water sanitation challenge is expanding water services. As of January 2024, the renovation would supply the island with 600,000 gallons of water daily. This step is crucial in the battle against water sanitation and scarcity and in access to clean water, which is essential to the public's health. Until renovations are complete, which will take quite a while, many islanders still have to rely on healthy water, which can cause disease and illness.

In Kenya, their water purification is inspired by an ancient Roman technique- a sand wall. It is referred to as a "Sand Dam," which traps the water when it is high, which can then be tapped out when the river goes down. The sand does not allow the water to evaporate, protects the water from mosquitoes' diseases, and acts as a giant filter. A strength of this water filtration system is that it is made with environmental substances rather than thousands of dollars in equipment. This solution is a shallow-cost solution that the country can implement everywhere. The African Sand Dam Foundation helps build dams for countries struggling with water security. With the help of the Belizean government, this could easily be made possible. This sanitation idea could help Belizians who rely on rain and well water, especially those on smaller islands.

Another possible solution to the water sanitation battle is volunteering as an agriculturalist. This can involve a host of things, whether donating to a water sanitation charity or organizing communities to clean up bodies of water. Engaging our community members will increase awareness of the issue and benefit water quality and our ecosystems. Every individual's contribution to this battle brings a meaningful impact on others and their standard of living. Even though many have a heart to help, others have good intentions to serve but struggle with commitments and time issues. Addressing this water challenge could call for travels far from home, diminishing volunteers. This can cause low volunteer numbers and make the workload difficult and heavy.

In my chosen country of Belize, these water solutions could change the islanders' lives. When finished, the upgrade will benefit the people, ensuring no water shortage and clean tap water. Moreover, "The Sand Dam," a technique that can suit any place with tweaking, could be an excellent natural filtration system to alleviate the seaweed surplus in the lagoons. Furthermore, Ambergris Caye is beautiful and would be even better without litter. Establishing a community clean-up group would benefit the water and the island's sustainability. All the present solutions could benefit Ambergris Caye because anything is worth the chance for clean water.

With Ambergris Caye already implementing a new system, adding the community clean-up establishment and the upgraded water system would bring a new, advanced era to Ambergris Caye! This clean-up team could include local island leaders who want to make a difference in their community. It would need little to no funding, with the first primary investment being personal protective equipment (PPE) to ensure the volunteer's safety. With the help of local businesses, fundraising, and other organizations, it is feasible to secure the necessary protection. If the community members bring enough light, the government could recognize the issues and grant funding to better the water issues even more. Community lead service and hope for change prompt government officials to open their eyes to the impending battle and help better their country. If the organization grew enough and gained recognition, Americans and change seekers could create a clean-up week and ask for worldwide volunteers. This would open the eyes of many and help those in extreme need. This project is easily sustainable when the organization is very organized with future clean-up dates and ensures it is well advertised.

In the embrace of Belize's Caribbean coast lies the enchanting island of Ambergris Caye, where azure waters meet sunny shores and vibrant marine life thrives beneath the surface. Yet, amid the paradisiacal beauty that attracts travelers from far and wide, a pressing concern casts a shadow over this idyllic enclave: water sanitation. Despite ongoing efforts to address these issues, including implementing new water systems and innovative ideas, significant hurdles still need to be overcome to achieve water security for all residents and visitors. Yet, among these challenges, there is cause for hope and optimism. The resilience and resourcefulness of the Ambergris Caye water supply is working hard to improve water sanitation issues. These hard workers demonstrate a commitment to environmental stewardship and serve as catalysts for positive change and collective action.

Moreover, collaboration and partnership between local businesses, government officials, and international organizations offer hope for the future. By working together, gathering advice, and providing resources, we can overcome barriers and work towards a brighter, more sustainable future for Ambergris Caye and its people. Every individual has a role to play in this journey towards water security and water availability. Whether advocating for policy changes, participating in community clean-up efforts, or simply being mindful of water usage and conservation, each action contributes to the collective effort to improve our precious natural resources.

Together, we can make a difference. With determination and dedication to the cause of water sanitation. For our motivation is our collective efforts that lie in the promise of a brighter tomorrow—a tomorrow where the waters of Ambergris Caye run clear and pure, a testament to the community and global love and care for the well-being of all around.

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