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Bahamas, Water Pollution

The Challenge of Clean Water in the Bahamas

Introduction

What would you do if you went on vacation and had no clean water? The only clean water you had was bottled water, that you had to purchase. The Bahamas have a major water pollution problem. New Providence is the most populated island in the Bahamas and they use around eleven million gallons of groundwater a day. New Providences water loss is estimated at fifty-three percent. Rainwater is rarely used because it only supplies three percent of the water. The population in the Bahamas is currently 399,928. Their government is a parliamentary democracy.

The Bahamas major crops are okra, onions, and tomatoes. The crops that the Bahamas export are grapefruit, oranges, and cucumbers. The average farm size in the Bahamas is 140 sq km compared to the average farm size in the United States is 484 acres. Although most of the agriculture land in the Bahamas was ruined by Hurricane Andrew in 1992. The Bahamas are at a huge risk for natural disasters such as floods, hurricanes, and tropical storms. The most recent hurricane was Hurricane Irma. The hurricane hit on September eighth and ninth, 2018. It caused a lot of damage infrastructure on the southern islands. Agriculture does not have an impact in New Providence because the water demand for irrigation is negligible. Agriculture doesn't have an impact because of the humid temperatures and because of the Bahamas having a huge water pollution problem.

Temperature

The Bahamas are warmed and cooled by the trade winds, but the temperatures can vary from seventy and eighty degrees, but the temperatures vary from each island. At night the temperature cools down five to seven degrees. Summer temperatures can range from eighty to ninety degrees. The Bahamas do not have an offseason. The Bahamas are a group of seven hundred islands and cays.

Families

The typical family size is 3.5 and the typical family diet is consists of seafood such as fish, shellfish, crab, sea snail, lobster, and conch. Other foods they eat are tropical fruits, rice peas, potatoes, and pork. The most famous food that gets ordered in the Bahamas by tourist is the fried conch. Families buy their groceries at markets such as Potters Cay, Montagu Beach Fish Market, and Solomon's Fresh Market. The biggest market in the Bahamas is the Nassau Straw Market, though there are many markets that sell food, crafts, and souvenirs.

Some types of jobs in the Bahamas are accountants, teachers, and police officers. The average salary for a teacher in the Bahamas is \$31,000.00. The average salary for an accountant is \$48,000.00, and the average salary for a police officer is \$24,000.00. The average household income is \$38,512.00. The unemployment rate is 13.7%. Families have access to toilets, electricity, telephones, roads, and local

markets. Major barriers that families face are the cost of fruits and vegetables, which went up 120% over the last five years, and not knowing how to cook. The percentage of cost for fruits and vegetables rose so much was because of the demand for clean water. The residents of the Bahamas have access to healthcare; there are a number of hospitals on the islands that offer private healthcare. Children begin going to school at the age of five. After six years they then move onto a secondary education. The secondary education will last for five more years. All public education is free and available to children of any age. As you can see the importance of clean water is very important, with the population and the income of families.

Water Basics

The Bahamas have been unable to meet the water demands of its population since the 1970s. The total water withdrawal was thirty one million in 2013. The Bahamas have no large bodies of freshwater from which to meet water needs. They rely on freshwater lenses. A freshwater lens is a convex shaped layer of fresh groundwater that floats above dense saltwater; however, in the Bahamas, these sources have become polluted because of septic tanks, soakaways, and pit latrines. Fresh water is very vulnerable and fresh surface water is nonexistent. As you can see the Bahamas faces a major water crisis.

There are no rivers or streams on any of the islands because of the low relief and because of the high permeability of limestone. Which means that it's not able to pass water through. The problem with polluted water in the Bahamas is especially concerning because of tourism. The current water is not up to standard for the four million visitors a year. Tourism needs a large quantity of water to supply that many people. The water pollution affects both rural and urban living. Though it affects rural and urban living, it doesn't affect men and women differently.

Tap water throughout the islands is safe to drink but bottled water is always the best option. The Bahamas is not known for any illnesses from drinking the tap water. Rainfall is the main source of water on many of the islands. The Bahamas are groundwater efficient which means there isn't enough water to be purified.

Businesses

The Bahamas Water and Sewerage Corporation is a government funded group that provides clean water and sanitation systems to the Bahamas. This business also helps collect sanitary sewage. Pure H₂O is another business located in the Bahamas that helps provide clean water. Pure H₂O is the leading seller in water treatment products in the Bahamas. They design and sell the highest quality reverse osmosis and water treatment solutions for homes and businesses. Though these are available to purchase, most families in the Bahamas cannot afford them. The cheapest filtration system they offer is \$109. Though \$109 might not seem like a lot but it is when you have a family and live in the Bahamas. Saying that means living in the Bahamas is a little more pricey compared to living in the United States because of the Bahamas being such a large tourist place their prices are more expensive. Even though a case of water that holds thirty two bottles cost \$3.75, it doesn't seem like much but it will add up buying a case every month. If they were to lower prices on the water filtration system, more families would be able to afford them, and families would be provided with clean drinking water they need.

Pollution Reduction at Home

There are many ways families could help reduce water pollution at home. Some easy steps that could help reduce water pollution includes washing only full loads of laundry, minimizing the use of pesticides and fertilizers, and not using the toilet as a wastebasket. To avoid pollution from septic tanks, people should not pour oil down sinks and avoid using harsh chemicals in the toilet. If septic tank companies paired with the Bahamas Water and Sewage Corporation, they could work together to stop the pollution coming from the septic tanks. Also if Pure H₂O would pair up with The Bahamas Water and Sewage Corporation they could help with getting a solution to supply clean water to everyone in the Bahamas for a cheap affordable cost. If many of the business and organizations in the Bahamas were to pair up together they could minimize and even eliminate the water pollution in the Bahamas.

There are many ways to purify water at home for an affordable cost, such as boiling water, filtration systems, distillation, and chlorination. Boiling water is the fastest and cheapest way. Filtration uses chemical and physical processes to purify the water. Distillation is a way to purify water with heat. It turns the water into a vapor, after cooling it turns into water that is clean and safe to drink. Chlorination is a powerful chemical that is used to treat water. It kills germs, parasites and other disease causing organisms. There are many different ways you can make water purification systems at home, such as an improvised charcoal filter. The supplies needed to make this is charcoal, sand, a piece of cloth, funnel, and a two-liter plastic bottle. To purify the water, you put the charcoal and sand in the cloth and then place this in the funnel which goes into the bottle. The polluted water can be poured into the funnel and the charcoal and sand act as a purifier, as the water streams through the setup. The water caught in the bottle will still be cloudy, but it can then be boiled to remove the other impurities. The total cost for that set up is \$10. The most expensive item was a four pound bag of charcoal. This is a very easy and very cheap filtration system for families to do at home.

Solutions

These solutions would help provide clean water to the people living in the Bahamas and the tourist that visit the Bahamas. The top solution I would recommend would be the water purifier that you can make at home. It only has a few easy steps that everyone could do at home. The businesses that could help manage and lead this project would be The Bahamas Water and Sewage Corporation, and Pure H₂O. This project would be funded by them donating the products to help supply clean water. Another way this project could be funded is by starting a Go Fund Me page, and sharing the news about the water pollution in the Bahamas. Once the nation heard about the water pollution in the Bahamas, they would be willing to donate, especially if they have traveled there or have friends or family living there. Many of us could also share the information on local news channels and make commercials that would be aired on television and the radio. Also another option would be to make flyers about the Bahamas having a water pollution problem and share them around heavy populated areas.

Not many people are aware that the Bahamas have a water pollution problem, if we could share the word, many people would be willing to donate. Some items that people could donate would be money, products for the DIY water filtration systems, water, and reusable water bottles. For an example Flint, Michigan had lead in their water in 2014, a famous basketball player named Monte Morris stepped in to help.

Monte grew up and lived in Flint, Michigan, that's where his basketball career started. Monte handed out cases of water at a meet in Flint, Michigan. If famous athletes would be willing to donate water and time like Monte did, we could supply enough clean water to the residents of the Bahamas for a very long time until we could solve the pollution problem. There are many famous athletes, actors, and singers that were born or live in the Bahamas for example; Andre Rodgers, Bill Gates, Eddy Murphy, Johnny Depp, Mariah Carey and Nick Cannon. Many of these celebrities could help this problem because it hits home. If local stores knew that athletes were pairing up to provide the Bahamas residents with clean water, then local stores might be willing to also help provide clean water. The government could fund grants for water filters, this would benefit many, such as tourist, business, residents and many more. Once the business Pure H2O hears about the athletes and local grocery stores teaming up to supply clean water to the Bahamas then Pure H2O might be willing to donate some water filters to local families in need.

Solutions with Businesses

There are many businesses and organizations that deal with providing clean water to places in need. They could even use this as a tax write off, it would also make their company look great and would attract more business. The one organization that really stood out to me is Pure Water For The World Organization. They establish safe water solutions that include essential tools and education. They provide water, sanitation and hygiene. Though the Bahamas are only in need of water I feel this would benefit many living there. This is a project that they could help with in many ways. So far this organization has helped in Haiti and Honduras. They partner with communities to develop customised solutions that meet the needs of the problems. Pure Water For The World also delivers educational workshops that focus on the prevention and elimination of waterborne illnesses in Central America and the Caribbean. I think this organization could really help the Bahamas out, because this organization has experience and the education to help.

Conclusion

In conclusion, there is a very cheap and effective way to make a DIY water filter at home, also many ways to reduce water pollution from home. All of the businesses and organizations could pitch in to help fix this water problem. If we were to contact all of these organizations and businesses we could put an end to the water pollution in the Bahamas. We could also supply a large amount of clean drinking water to many families in need by contacting celebrities to help, making commercials, newspaper articles, Go Fund Me pages, and many more. The Bahamas Water and Sewage Corporation, Pure H2O, and Pure Water For The World could make an excellent team if they paired up to put an end to the water pollution in the Bahamas. Even if all of the celebrities paired up together they could hold a water drive where people or businesses donate water and supplies to families in need. The nation needs to realize how big of a problem the Bahamas is facing, it's a very serious topic, especially for the Bahamas being such a huge tourist site.

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