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GLOBAL HEALTH IN ACTION NEWSLETTER
MERCER UNIVERSITY

MACON WAVES

The Truths about the Health Impacts of
Our Changing Environment

**Where in the
world were you
this summer?**

page 6



WHAT'S INSIDE?

3 OPIOIDS IN OUR SEWERS

5 STUDY ABROAD OPPORTUNITIES

8 5 WAYS TO REUSE THAT

9 MACON DRAINS AND HURRICAINES

11 WALL-E

12 ARUBA - WHAT ARE THEY GETTING RIGHT?

15 THE BEST WATER IN AMERICA

16 A HIGH SCHOOLER'S TAKE ON PLASTIC WASTE

Editorial

Fall 2019

No matter your background or political beliefs, there are concrete reasons why you should care about the environment around you. For starters, the health of your family and friends is directly impacted by the types of toxins and catastrophes to which they are exposed.

"Macon Waves" is all about how we we, as humans, feel the impact of the global environmental crises. We look at ways that we can improve and also what we are doing right.

In this edition, discover the truth about water quality in Macon, Georgia. Dive into the real impacts of hurricanes, and how our national public health crisis is affecting environmental health. Hear from a local high schooler regarding plastic waste at school. Learn about how the opioid epidemic leaves toxic traces in our environmental systems.

The GHIA team posits that in order to understand the local climate, the entire university should be consistently exposed to Macon's attitudes and behaviors toward the most fundamental aspect of life -- health. Local is Global.

Enjoy these timely and relevant pieces!

Moriah Roycroft, Chief Editor

GLOBAL HEALTH NEWS

A COMMENTARY ON REAL, PRESSING HEALTH ISSUES

OPIOIDS IN OUR SEWERS



BY MORIAH ROYCROFT

Feces and drug disposal are not hot topics around the American dinner table. You may not know, though, that your waste tells scientists and public health officers about the details of your lifestyle including drug addictions, nutritional habits, and even the type of job that you have. The sludge is more politely termed "wastewater," and is filtered at federally-regulated facilities like the one on Rocky Creek in Macon. Here, it is also collected to be analyzed for drug content, toxic waste, and chemicals. In fact, sewage may just be the next most important source of information for public health. Suddenly, the highly glamorized world of drugs is brought to a screeching halt as we learn about the external costs beyond harming the individual making the choice to ingest them.

Here in Georgia, we face the burden of a family of pain-relieving drugs called opioids. Statistically, we all know (at least) one person that struggles with opioid addiction. **In 2017, there were over 11,000 confirmed opioid overdose deaths in Georgia alone.**



Rocky Creek Wastewater Treatment Facility
Macon, GA

Whether their addiction began with a prescription pain-killer from a doctor, as a party drug, or as a weight-loss tactic, opioids have become a staple for many in US. In fact, the government has declared the state of affairs a public health crisis. But it's not just the immediate affects of th drug or the addiction that we should be concerned about. Synthetic opioids, such as fentanyl and carfentanil, can be up to 10,000 times as strong as morphine. In the wrong conditions, these drugs are capable of killing a person in a matter of minutes.

Synthetic opioids are most largely abused type of drug in Middle Georgia. But, they have only been in existence since the 70s, and were not largely used in this region until the late 90s. We really do not know that much about how they will impact our environment in the future.

As opioid use continues to proliferate, the drugs enter more people's bodies, where they break down into metabolites—often other opioids—that end up in wastewater. Scientists have detected opioids downstream of wastewater treatment plants and are concerned about the potent drugs' possible effects on organisms who live in those waters.

Wastewater facilities in the US are regulated nationally by the Environmental Protection Agency's National Pollutant Discharge Elimination System, which **does not require them to test for opioids or other pharmaceuticals** in their discharge. Opioid use does not just touch those currently living. This issue will continue to affect the very fabric of society.

Whether or not those metabolites post any threat to the general public is still up for debate.

We just don't know how opioid usage and paraphernalia disposal will affect our environment in the long-run yet.

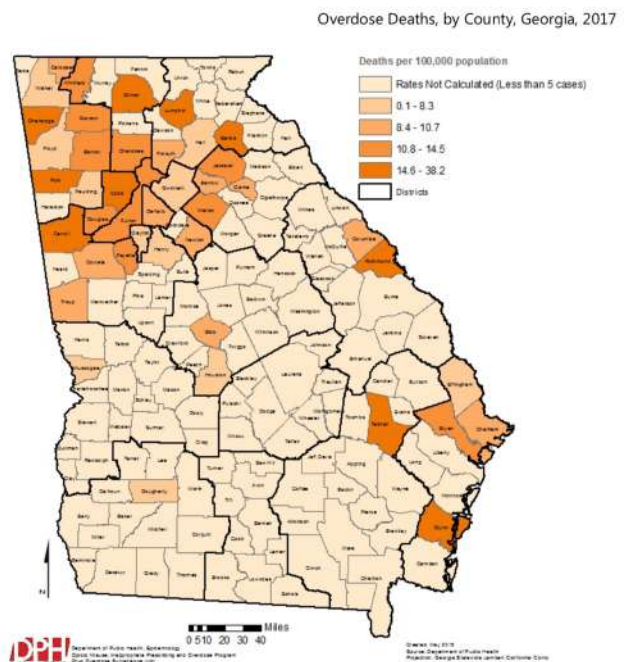
A huge environmental health concern is the safe disposal of drugs and drug paraphernalia, including syringes used for injection. The Drug Enforcement Administration recommends that patients dispose of unused prescription opioids by bringing them to DEA-registered collection sites or a DEA take-back event, or using mail-back programs. As of April 2019, 70 percent of the U.S. population lived less than 5 miles from permanent collection sites, which are often located at pharmacies.

If collection sites, take-back events, or mail-back programs, for both the drugs themselves and the paraphernalia, are not feasible, FDA recommends quickly and permanently removing the most dangerous prescription opioids, such as hydrocodone and fentanyl, from the home by flushing them down the toilet. If you're supposed to get rid of them ASAP, then imagine what damage they can do inside your house. Everything that gets flushed down the toilet does not just disappear. It's found in wastewater, which is eventually treated or released into freshwater systems. And in nearby systems, it is being found that the **concentrations are increasing**, although they are still not as yet deemed dangerous.

Because the opioid epidemic is just now beginning, we have to be prepared to deal with the ramifications.

** There are four DEA controlled substance public disposal locations within 5 miles of Mercer University, including one at Consultant's Pharmacy on 655 North Avenue.
<https://apps2.deadiversion.usdoj.gov/pubdispsearch/spring/main?execution=e1s2>

ANY OPIOID-INVOLVED OVERDOSES





STUDY ABROAD

IGS TRIPS 2019-2020

Spring Break 2020:

Havanna, Cuba

Did you know that Cuba was the first nation to eliminate maternal-child transmission of HIV? This program offers a unique opportunity to study the Cuban healthcare system. Have fun in the sun March 1-7, 2020.

Dr. Amy Nichols-Belo
nichols-belo_a@mercer.edu

Dubai, UAE

Spend 10 days in the United Arab Emirates! Explore the rich culture and history of this region. Dr. Houry is taking students February 28 - March 8, 2020.

Dr. Eimad Houry
houry_e@mercer.edu

Summer 2020:

Mwanza, Tanzania

Partner with Hakizetu, a women's rights organization, and learn about advocating for women across the world. Earn 6 credit hours in the IGS and WGS!

Application Deadline: November 15th, 2019

Contact Dr. Amy Nichols-Belo

Cape Town, South Africa

Serve South African students by holding mock United Nations conferences and learn about the importance of activism while enjoying the natural beauty of Cape Town.

Summer-long Internships in health, education, and business are also available.

Contact Dr. Eimad Houry for more info!

Tblisi, Georgia

Stay in Batoumi in western Georgia, where you'll partner our local students to collect/document stories of the Muslims and Christians there in relation to religion, health, and culture. The trip will run in early June of 2020.

Dr. Jacob Kendall
kendall_j@mercer.edu

Where in the WORLD

Was the IGS
department
this Summer?

Cape Town, South Africa



NISHI PATEL, Senior
Global Health Studies and Spanish

This summer, I did the South Africa Internship Program spending 2 and a half months in Cape Town. My internship was at a community health center in the township of Khayelitsha. At the clinic, I shadowed doctors and nurses and also helped take vital signs and fill out charts. I learned so much about the healthcare system of South Africa and the specific health issues faced by the people there. On the weekends, we explored Cape Town and the surrounding cities. And in my free time I loved going hiking and eating all the amazing food Cape Town has to offer!

Israel

"I was selected for the Faculty Fellowship in Israel and travelled to Israel for an all-expenses-paid academic trip with 26 other professors from across the country this summer. The Program seeks to link scholars from diverse disciplines with their Israeli counterparts for the purpose of initiating exchanges and collaborations. We visited many universities, religious sites and geographic landmarks. One of the places in Israel that left a strong impression on me was the Negev desert. Its size and imposing dunes is a site to behold. More surprising to me was what Israel does in the desert. Food is grown in the desert and many communities reside in the desert. The Negev covers 60% of the country, yet about 40% of the country's vegetables and field crops are produced in the desert. The Negev is home to most of Israel's agricultural research and development centers and farms. Traveling through the desert especially in the Arava valley, you will see date and grape orchards, lots of greenhouses, sun flower farms and vegetable farms."



Dr. Obidoa, Associate Professor IGS
Masada-Negev desert

Hannover, Germany



"This summer, I worked at the Institute of Technical Chemistry at Leibniz Universität with the DAAD RISE program. With the help of my co-workers, I designed and optimized a sCD25 gold nanoparticle lateral flow assay for determining renal rejection in transplant patients. In fact, my model is set to head to clinical trials soon! The DAAD RISE program is a neat way to network with scientists from across the globe, learn lab skills, and travel while still earning a stipend. I met a bunch of new friends and visited six different European countries!"

MORIAH ROYCROFT, Senior
Global Health Studies and Global Development Studies

Ulaanbaatar, Mongolia

"Through Mercer on Mission, I was able to travel to Mongolia with 15 other students. We were led by Dr. Jonathan Addleton, a former U.S. Ambassador to Mongolia, and Bryant Harden, a Mercer graduate and former Peace Corps Mongolia Volunteer. Our service project was an enrichment program at a kindergarten where we worked in the areas of English, science, art, and music with students of various ages. In our free time, we explored the capital city, Ulaanbaatar, and traveled to other cities. Because of our leadership's connections, we were also able to have awesome experiences like visiting the U.S. Embassy!"



ALYSSA FORTNER, Senior
International Affairs and Global Development Studies

Madre de Dios, Peru



CAMERON DAWKINS, Senior
Global Health Studies

"I attended Mercer on Mission to Madre de Dios, Peru. The economy in this region is heavily supported by gold mining, which exposes citizens in the business to elemental and airborne mercury. As gold mining has created tension between the government and miners, our mission was to document a candid oral history of the people in the region. Our project is titled "Historias Orales de Madre de Dios." I learned that people's options for work are not always as free and varied as we assume in America. Sometimes, health is directly dictated by work conditions that are out of workers' hands. In order to create a more equitable world, safe jobs are integral to that pursuit."

Seville, Spain



SARAI DANIELS, Junior
Global Development Studies and Spanish

"This summer, I studied abroad in Seville, Spain with 20 other Mercer students who, like me, were interested in the culture and language of Spain. I took 2 classes: Spanish culture and Spanish business. We toured many cathedrals and other tourist destination and saw cultural events, like a flamenco show (my favorite). My speaking partner showed me authentic restaurants, helped me with Spanish speaking skills and took me to many fun destinations, including "las setas." Going on this trip let me make lasting memories, learn conversational Spanish, and learn about the culture of Spain on a much more personal level. I would recommend this trip to everyone!"

Atlanta, Georgia

"This summer I researched at PerkinElmer Genomics, a genetics laboratory and testing company. I focused on two projects. For the first, I analyzed patient samples to write a manuscript for the new proposed methodology, Next Generation Sequencing, to diagnose Duchenne Muscular Dystrophy in young patients. For the second, I conducted a case study for a family in India. We found that they were the first family to have a particular pathogenic mutation in the CRB2 gene, which caused multiple failed pregnancies due to kidney failure and brain swelling in the fetuses. Being able to help this family find out the reasons why they were having trouble was eye-opening, and I'm thankful for the opportunity to learn more about the human genome and watch geneticists serve their patients."



VIDYA GANAPATHY, Junior
Global Health Studies

Algeria



DAVID STOKES, Senior
International Affairs and Religion

"This summer I travelled to Algeria to document the ongoing popular demonstrations during the so-called "Revolution of Smiles" against the government. They began in February 2019 against the intentions of Abdelaziz Bouteflika to run for a fifth term as president of Algeria, and they continued after his resignation in April 2019 to protest against the makhzen(the shadowy, elite establishment) which continued to govern the country. There were mass demonstrates every day in the capital city, Algiers, while I was there in late May, and my pictures and films were used by the Hirak Movement and other human rights activist groups in Algeria to raise awareness about their struggle."

Dominican Republic



MSS cohort and professors after their arrival

This June and July, the Mercer Service Scholars (MSS) 2021 cohort traveled to the Dominican Republic. Every year, a MSS cohort is awarded a Mercer on Mission experience that provides first hand experience with the assessment of a community issue within the global context. The 2021 cohort spent three weeks in the San Pedro de Macoris, DR, to get hands-on experience with sustainable development work. The first week we built an aquaponics farm and helped teachers with professional development skills at Liceo Juan Pablo Duarte, a local high school. The second week we shadowed the work of an epidemiology class at Universidad Central del Este (UCE), the local university. During our third and final week, we managed a greenhouse and spent time with children in a local orphanage.



Street view of San Pedro de Macoris



MSS cohort building aquaponics system

CHECK OUT HOW
YOU CAN GO ABROAD
ON PAGE 5

THE BEST WATER IN AMERICA



BY SHREYA KANUKUNTA

Macon's tap water is some of the cleanest and safest water you can drink in the United States. In 2009, Macon's drinking water was declared the "best tasting drinking water in North America" by the American Water Works Association. This year, the Macon Water Authority (MWA) is celebrating its 10th anniversary of being named the best-tasting drinking water in the country.

The 2019 MWA Water Quality Report is a testament to their success. In 2018, the MWA had no violations of drinking water quality standards and met or exceeded all regulatory requirements for water quality and safety. The superior quality of Macon's water can be tasted and felt. "I think the water in Macon is comparatively better than in my hometown Columbus, Georgia. I can tell the tap is better based on the condition of my skin and hair when I'm here versus at home," said Mercer Student Danielle Countryman.

DID YOU KNOW TAP WATER IS MORE REGULATED THAN BOTTLED WATER?

The Environmental Protection Agency (EPA) regulates MWA's tap water, whereas bottled water is regulated by the Food and Drug Administration. Tap water undergoes more testing than bottled water. The MWA tests its water quality 10 times more than the EPA's requirements.

TAP



VS.

BOTTLED



must meet water quality standards

inexpensive

required to provide water source

negatively impacts the environment

3 THINGS YOU CAN DO TO PROTECT THE WATER QUALITY WE ALL ENJOY

1 Do not pour fats, oils, and grease down the drain. Doing so will clog up your pipes and even damage your local sewer line.

2 Do not flush "un-flushable" items, such as paper towels, cotton pads, cat litter, feminine hygiene products, and even "flushable" wipes, down the toilet.

3 Use environmentally friendly, biodegradable, household cleaners and detergents, instead of toxic chemical based ones.

So what exactly goes into making Macon's water some of the "best tasting drinking water" in America? It all starts at the source. The raw water the MWA uses for drinking water production is gathered from rainwater that flows into the Ocmulgee River and Javors Lucas Lake. Both bodies of water are ideal sources of drinking water due to their neutral pH. A neutral pH means that the water will not corrode pipes and leach harmful chemicals into the MWA's water supply. The raw water is then pumped into the Frank C. Amerson Jr. Water Treatment Plant in Jones County,

The plant's award-winning water quality lab conducts about 8,500 tests a month for potential contaminants including viruses and bacteria, pesticides, metals, synthetic chemicals, and radioactive particles. Lime, phosphate, chlorine, chlorine dioxide, and fluoride, chemicals that are safe for human consumption with known health benefits, are added to raw water during the treatment process to kill disease-causing bacteria known as microbes. If these microbes were left untreated, anyone drinking the water will most definitely contract water-borne diseases such as cholera, diarrhea, typhoid, and dysentery. The end result of this extensive process is 36.9 million gallons of the highest quality drinking water that gets pumped across Macon-Bibb County through 1,664 miles of pipe.

Us residents of Macon-Bibb county are fortunate to have some of the best water, sanitation, and hygiene infrastructure in the United States. Currently, the MWA is investing 40 million dollars into a project to renew and rehabilitate assets at the Rocky Creek and Lower Poplar Water Reclamation Facilities. It is safe to say the MWA is putting our tax dollars to good use and giving back to the community by improving the production and delivery of high quality water for the residents of Macon.

Sources:

<https://s3.amazonaws.com/maconwater.org/pdfs/MWA+2018+CCR-Water+Quality+Report.pdf>

<http://www.maconwater.org/news/MWA-Halfway-Through-Design-Build-Project>



MACON DRAINS AND HURRICANES

BY PARNEETA MOHAPATRA

In the past three years, three hurricanes have caused immense damage to the south. Much evidence has been presented showing that climate change has contributed greatly to more intense natural disasters. Warmer temperatures increase the concentration of water vapor in the atmosphere, which fuels storms causing them to be bigger and stronger. As the intensity of storms rise, the number of health issues increase. Although there is a lot of conversation around the causes of extreme weather events, there needs to be more awareness of the long-term public health issues that arise from intense storms.

Hurricanes cause a slew of short- and long-term public health effects. Right after a storm, there are often a huge number of injuries and fatalities that occur because of the heavy rainfall, strong winds, and intense flooding. The flood water often mixes with sewage, creating a greater risk for getting a disease because of contamination. People being crowded into evacuation centers and having to stay under house arrest can have adverse effects on health as well. Overcrowding creates unsafe environments and can cause different diseases to spread quickly. People unable to leave their homes do not have access to fresh food, and they often get sick because of consuming food or water that has not been stored correctly. If the situation is especially prolonged, then there are also chances for starvation or dehydration.



This is especially a problem in Macon-Bibb County. When Hurricane Michael hit South Georgia this time last year, Macon accumulated about 5 inches of rain and McDonough accumulated about 8 inches of rain. For reference, the average yearly rainfall in Macon is 46 inches, which means there is hardly one inch of rainfall per day on average. Having 5 inches of rainfall in a weekend probably greatly inhibited Macon-Bibb county's stormwater runoff systems, which were cited for violating more than forty federal stormwater rules last spring.

Sources:

https://earthobservatory.nasa.gov/features/RisingCost/rising_cost5.php
<https://mphdegree.arizona.edu/blog/the-impact-of-climate-change-on-hurricanes-and-how-it-affects-public-health/>
<https://www.macon.com/latest-news/article219854445.html>
<https://www.13wmaz.com/article/news/local/macons-stormwater-system-cited-by-environmental-protection-agency-for-40-violations/93-590510d0-56e9-4d29-95db-0f9d384cc4c1>

These violations included lack of places for stormwater runoff. If water does not have anywhere to go after a storm, it will sit there and accumulate pollutants and waste. Water-borne pollutants have extremely negative effects on health long-term. Additionally, standing water increases the number of disease-carrying mosquitoes in the area. This often causes a rise in infectious tropical diseases. In addition to that, there are also chances that power plants, such as the nuclear plants Hatch and Vogtle in Georgia, can become damaged and release toxins into the environment. These toxins can stay in the environment for many years, causing illness and death.

With the recent damage caused by Hurricane Dorian in the Bahamas and eastern United States it is time for health professionals to get involved in disaster prevention and relief efforts to make sure the public is safe. The health impacts of natural disasters are too big to ignore.



Damage from Hurricane Michael (<https://tinyurl.com/ya9r8bce>)



Hurricane Michael flooding in South Georgia (<https://tinyurl.com/y7l3apvq>)

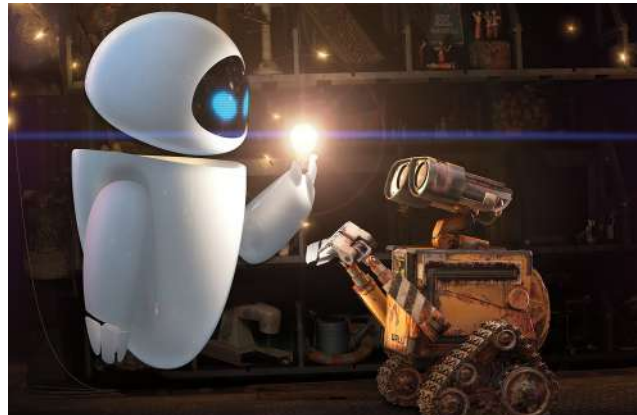
**IF YOU EVER NEED TO
PREPARE FOR A
DISASTER, THESE
RESOURCES FROM THE
U.S. FOOD AND DRUG
ADMINISTRATION
PROVIDE A GOOD
PLACE TO START:
[HTTPS://WWW.FDA.G
OV/NEWSEVENTS/PUB
LICHEALTHFOCUS/UC
M064572.HTM.](https://www.fda.gov/newsevents/publichealthfocus/ucm064572.htm)**

WALL-E a film review

SHREYA KANUKUNTA

Hailed by critics as the best environmental film of the last decade, Disney movie *WALL-E* tells the story of a trash compacting robot named WALL-E left to clean up an Earth covered with garbage after humans literally trashed the place. It only takes a few minutes into the film to realize that Wall-E is more than just a children's movie. The film takes place after the destruction of life on Earth, most likely from environmental degradation and climate change. Cities of trash mountains are all that is left on Earth after its human inhabitants evacuated to live in a spaceship owned by profit-driven company Buy n Large.

WALL-E spends his days compacting and scavenging trash until he meets EVE, an Extraterrestrial Vegetation Evaluator sent by the humans in space to find any sign of life on Earth and determine if the planet has become habitable again. One day, WALL-E discovers a plant growing in a pile of trash. The robots make the perilous journey to space with the plant, a symbol of redemption and rebirth, to show the humans Earth can be home again.



Beneath the cute robot romance, there is a strong message of environmentalism, a cautionary tale wrapped into a children's story of what will happen if humans continue their excessive consumption of cheap products, food, and natural resources. The humans who abandoned Earth now live in a spaceship, where their desire for consumption has turned them into unintelligent, fat blobs. They spend all their time sitting in self-driving chairs, eating, and having robot servants tend to their every demand. It is basically an exaggeration of the dangers of our current consumer-driven lifestyle.

Using stunning animated visual landscape and cute anthropomorphic characters, *WALL-E* beautifully showcases our planet's growing problem of pollution and waste. The message is clear: We make and use too much of everything, and if we continue this destructive habit, Earth will be overcome with pollution that threatens every life form on the planet. At the end of this film, you will be thinking, "what can I do to make sure this never happens?"



A Small Example of a **BIGGER PROBLEM**

A memoir of my study abroad trip to Aruba

BY JEN JONES

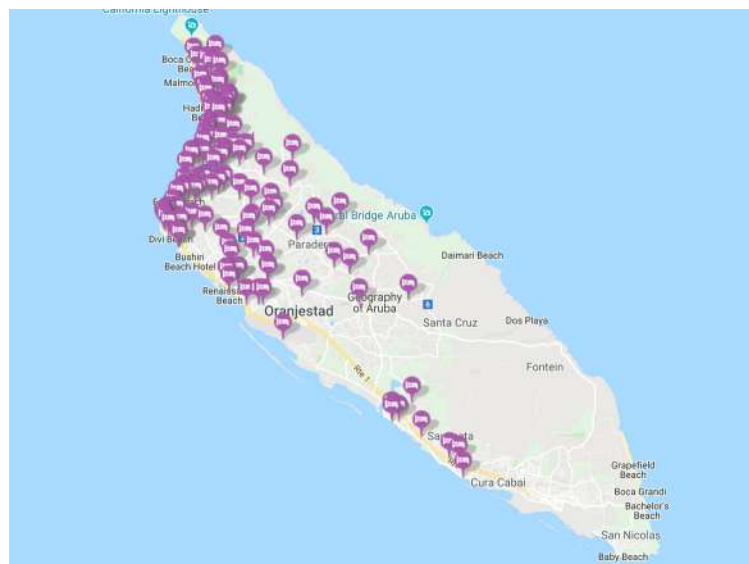
Through Mercer University's study abroad program the Global Health Department took students to Aruba to study climate change and its effects on barrier islands.

Before raveling to Aruba, it seemed evident that the island was leading the way in sustainability compared to the other islands in the Caribbean. However, after spending ten days on the island there seemed to be a larger problem at hand, waste and energy management.

The government passed a law that outlawed plastic bags on the island that came into effect on the first of January, 2017. This change came after the extensive trash builds upon the island. The plastic bag ban was the first of many policies to come into place to help clean up the island and improve the environment. During our meeting with the women at the Department of Economic Affairs, they discussed the seventeen Sustainable Development Goals introduced by the United Nations General Assembly in 2015 (2019).

Aruba has agreed to work with the United Nations towards meeting these goals, and while climate action is number thirteen on the list, four other items on the list relate to taking positive action towards the climate crisis.

As a small island, Aruba agreeing to work towards these SDG's does not seem like a huge impact on climate change. However, Aruba is making a difference by leading by example. If other countries see that a small island like Aruba is taking the climate crisis seriously, they are also likely to get on board and begin working towards a solution.



A map of the location of hotels in Aruba, according to visitaruba.com

One of the major issues on the island is the fact that everything is imported because there is very little that can be grown in Aruba's dry climate.

Not only does this mean that emissions from shipping boats are extensive, but the food quality on the island become abysmal. Jasmin found that "all of Aruba's top health concerns are linked to improper nutrition.

In fact, over the last 20 years, there has been an increase in fast-food restaurants on the island. In fact, most of the restaurants on the island that locals will eat are fast food.

The good news is Aruba seems to have some major policies that will be coming into effect that will help the environment immensely.

Starting in 2020, Aruba will outlaw all sunscreen that contains chemicals that damage marine life. Certain ingredients found in sunscreen are put there to scatter UV light and protect the skin from sunburn but are also known as carcinogens and environmental pollutants (Dunford, et al., 1997).

Aruba's number one industry is tourism. This increase in tourism has had multiple impacts on the island. While it does bring revenue, the environmental implications are extensive. I noticed that on the island tourists tend to drive around in dune buggies. When we talked to locals they said that these carts not only produce admissions but damage nesting grounds for turtles and bird species on the island. Tourists also tend to leave more trash behind than a local would. These issues among others are just some of the environmental reservation challenges Aruba faces.

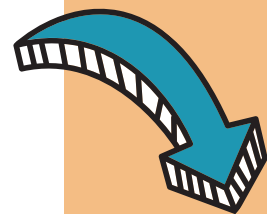
The government is also continuing the ban on plastic and will widen the ban to cover all one-use plastic. One-use plastic includes straws, cups and most food packaging that are only used once and then thrown away. This will not only positively impact the amount of trash blowing around on the island but also in the ocean around it.

One of the most prominent implementers of this policy is the Bucuti & Tara Beach Resort. Education, Reduce, Reuse, Recycle, and Stewardship are the five focuses of the resort. This means that everything in the hotel is eco friendly and they take on initiatives that benefit the environment and local people of Aruba. Some of these initiatives are little things like keeping the room at a higher temp during non-occupancy to making sure everything is biodegradable. This means that there will be less waste in the ocean as well as on the island.

While some of the policies on the island seem to lack incentive drive towards helping climate change, it is evident that they are making small steps to help the environment and eventually climate change. Unfortunately, small steps will not be enough. It is time for the government and the citizens of Aruba, and the rest of the world, to take climate change seriously. Policies are one of the main outlets to enact change in society.



TRIP PHOTOS





1. Oranjestad, Aruba seen from Fort Zoutman. This shows not only what the architecture looks like, but how clear the sky is there.
2. The Mercer Group traveled to the Windmill farm in Aruba. This farm is the only one on the island despite having extreme wind year-round due to government distrust and lack of funding.
3. Our group also got to meet with the head of tourism where we learned all about the scope of influence that tourism has on the island. Aruba's main industry is tourism and depends on it greatly.
4. We got to go to Aruba's college and learn about what it is like to grow up on the island with the increasing impacts of climate change.
5. This is what the beach looks like from the eco-friendly hotel, Bucuti & Tara

5 WAYS TO REUSE THAT

In the ever-growing problem of waste in the United States and the world, each and every person needs to take on step into reducing waste in the environment. Here are five ways to reuse things that people throw away every day.

by Jen Jones

1 PLASTIC BOTTLES

In the United States in 2014 it was estimated that 100.7 billion plastic beverage bottles were sold. Most of these bottles were not recycled and ended up in the ocean.

Next time instead of throwing away use any bottle to make a DIY Planter:

1. Cut the bottom third of the bottle
2. Use a lighttner to smooth the edges
3. Paint and decorate with your own style
4. Fill the container with soil and seeds!

Recycle the rest of the bottle and you just saved one more bottle from the ocean!

2 K-CUPS

K-cups are not biodegradable or recyclable yet most homes in America use them. In the year of 2018 the company sold around 9 billion K-cups and the company is continuing to grow. With the increase of this plastic, repurposing them is a great idea!

A K-Cup Minimalist Wreath:

1. Clean all used K-cups
2. Place each K-cup into another in a circular shape to the size you want
3. After the shape is complete, go back through and hot glue the cups together
4. Add any other decoration and a ribbon to hang!

3 SODA OR SOUP CANS

In 2012 the United States around 38.2 billion aluminum beverage cans ended up in landfills. The use of cans in everyday life is common and produces massive waste.

Can Bird Feeder:

1. Keep your favorite soda
2. Rinse off the inside and outside
3. Remove the top and bottom of can
4. Take a rope or ribbon and turn the can side ways so it would roll
5. Slip rope or ribbon through and hang
6. Add bird feed!



4 COFFEE FILTERS

Coffee filters and production affect the environment with the use of water and paper. So instead of throwing them away, use them again and try using the coffee grounds in a hair scrub!

Hair Scrub:

1. Take coffee grounds in a sealable bag
2. Take a good amount of your favorite conditioner and mix it with the coffee grounds.
3. You can also add honey, yogurt, or eggs to give more nutrients to your hair.
4. Add the mixture to your hair after shampoo and let sit for two minutes.
5. Rinse!

*It would be wise to put a used coffee filter to block the grounds from the drain and you can add them to your bottle planter!

SOURCES

[HTTPS://PLASTICOCEANS.ORG/THE-FACTS/](https://plasticoceans.org/the-facts/)

[HTTPS://WWW.THEATLANTIC.COM/TECHNOLOGY/ARCHIVE/2015/03/THE-ABOMINABLE-K-CUP-COFFEE-POD-ENVIRONMENT-PROBLEM/386501/](https://www.theatlantic.com/technology/archive/2015/03/the-abominable-k-cup-coffee-pod-environment-problem/386501/)

[HTTPS://GREENGROUNDSWELL.COM/ALUMINUM-BEVERAGE-CANS-ENVIRONMENTAL-IMPACT/2014/07/17/](https://greengroundswell.com/aluminum-beverage-cans-environmental-impact/2014/07/17/)

No Gum? No Coffee Cups?

Fighting Plastic Waste in Georgia's Schools



BY SEJAL PATEL

At my high school, there are so many supplies that contain plastic. Often, they are used irresponsibly and go to waste, which is sad when there are so many other alternatives.

Even though I am only a sophomore in high school, I have experienced many wasteful situations with plastic. I believe there are many simple lifestyle changes everyone could make to fight the overuse and waste of plastic items.

You may be asking the question, “Why should we really care about plastic waste?”

There are many reasons reducing the quantity of plastic in the world applies to everyone. Not only does taking control of plastic waste help to reduce the landmass of landfills, littering, and pollution, but it does the same for the ocean which can help decrease the annual average of 1 million sea animals that die every year from choking or accidental consumption of plastic. Keeping plastic out of landfills also decreases greenhouse gas emission, which is a substantial contributor to climate change. If you still aren't convinced yet, going plastic free saves you money! Buying plastic water bottles every day versus refilling the same metal one, which probably can hold more water anyways, can save you around \$3,000 a year.

Staff, students, and parents all are contributing to the problem of unnecessary plastic waste. Many things happen everyday, such as teachers accidentally throwing a plastic product in the trash rather than the recycling bin, or when students bring coffee in plastic cups.



Some other experiences I see in my school setting are students with plastic containers and storage products for their food at lunch, or even just purchasing the binders with the plastic cover on the front of it. Many items like this are either single-use or are rarely used.

With the exceptional amount of experience I have with plastic waste in my high school, I have seen some changes for the better. Some of these changes are seeing students bringing reusable water bottles instead of a plastic water bottles to school every day. Another way I see teachers trying to reduce plastic waste is through banning gum. Whether this be because they don't want gum under their desks or if they actually want to reduce plastic waste, it prevents students from using it. The sticky substance of gum is made of polyvinyl acetate, which is a form of plastic involved with glue/adhesives. Also, with the recent wave of publicity on plastic waste and climate change, I have noticed more students talking about it, whether it be with their friends or raising a question about it in my science class. I also see recycling bins in many of my teacher's classrooms, the only question is if they are being used correctly or not. These habits are all very helpful and should be continued, but there still needs to be many more set in place.

“

They would care about plastic waste if they knew how to help.

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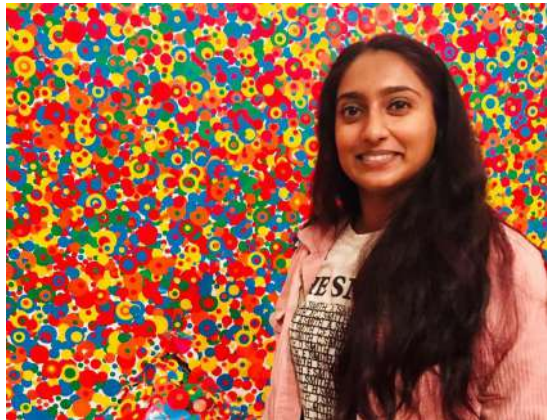
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