



ENVIRONMENTAL INJUSTICE




**Global Health in
Action Newsletter**

SPRING 2022

EDITORIAL

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With the rise in political discussion surrounding topics like climate change, carbon foot print, consumption lifestyle, and health disparities, it's important to understand a transcending theme that cuts across all these issues: environmental injustice.

Join the GHIA board as we explore environmental injustice here and around the world. In this edition, you will gain a better understanding of the definition of environmental injustice, learn about real world examples, and find out what you can do to help.

It is my hope that our work sparks conversations within the Macon community about how we can fight for people's voices to be heard and how we can reduce environmental impacts.

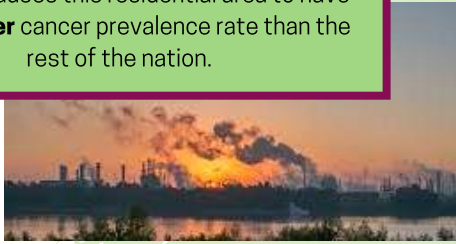
- Parneeta Mohapatra,
Chief Editor



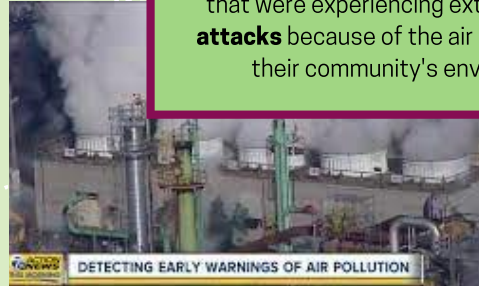
WHAT IS ENVIRONMENTAL INJUSTICE?

Tori Jackson

Cancer Alley is a 85 mile long stretch of industrial plants in **Louisiana** that constantly omit thousands of toxic fumes into the air of a **minority** community. This environmental injustice causes this residential area to have **44% higher** cancer prevalence rate than the rest of the nation.



Detroit has the **highest population** of black people compared to the other major cities, and the NAACP reported in 2017 that there were approximately **2,402** black children in Detroit that were experiencing extreme **asthma attacks** because of the air pollution within their community's environment.



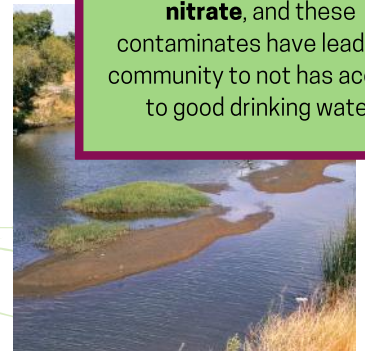
Within **North Dakota**, there is a **1,200 mile oil pipeline** running directly through the reserves of a **Native American tribe** called the Standing Rock Sioux. This pipeline dangerously effects the tribe because there are many incidents of oil pipelines **leaking or rupturing**.



In **Hartford Connecticut**, a Trash-to-Energy Incinerator is built along the riverside of the **Connecticut river**. Hartford is a **minority community**, and the toxic chemicals from the incinerator seep into the air and river effecting the community's **water and air**.



San Joaquin Valley in California has some of the **highest poverty rates** within the state, and this location is home to a large **Latino** population. However, for many years this region has dealt with groundwater contamination due to **pesticides, arsenic, and nitrate**, and these contaminates have lead the community to not has access to good drinking water



Environmental injustice is the **unequal** treatment of people within an **environment** regardless of their racial background, country of origin, socioeconomic status, and any **existing** environmental law or policy.

NATIVE AMERICANS AND ENVIRONMENTAL INJUSTICE: A MODERN DAY TRAIL OF TEARS

Aaliyah Deen Sesay



Environmental Injustice is centered around unequal distribution of environmental risks and outcomes. One specific demographic of people, Native Americans, have been consistently harmed through various methods of environmental injustice, which includes but is not limited to: housing allocation, unresponsiveness to complaints, lack of warning about environmental issues, and disproportionate siting of hazardous materials. Encroachment on Indigenous lands is a form of environmental injustice and results in negative health repercussions.

When it comes to warning people about environmental issues, it seems to be put on the backburner. Today, Indigenous people deal with the contamination of soil and water by waste from over 160,000 abandoned hard rock mines all across the Western USA. This negatively affects Native American populations living in close proximity to the mines, who suffer from being near heavy metals. The hazards of radiation - lung cancer and respiratory disease - have been known since the 1920s, but the US Atomic Energy Commission (AEC) didn't want to miss an opportunity to mine for uranium.

The AEC was reluctant to set standards in mines and prioritize miners' health, with the first safety standard for uranium mining set 23 years after it began in the Navajo Nation. Approximately 4000 Navajo men worked in the uranium mines and hundreds of them died, essentially wiping out a generation of Navajo men in some communities, leaving behind a legacy of psychological and environmental trauma.

What seemed like a problem of the distant future is hurtling towards us at an alarming rate: climate change. Climate change is the phenomenon in which unexpected changes to climate and weather arise due to the rise in global atmospheric temperature, and we often think about climate change through a macroscopic lens. Rarely do we stop to think about how specific populations are impacted by climate change.

Simpson discusses how “Indigenous peoples have always been able to adapt, and we’ve had a resilience. But the speed of this—our stories and our culture and our oral tradition doesn’t keep up, can’t keep up. . . . Colonial thought brought us climate change.”

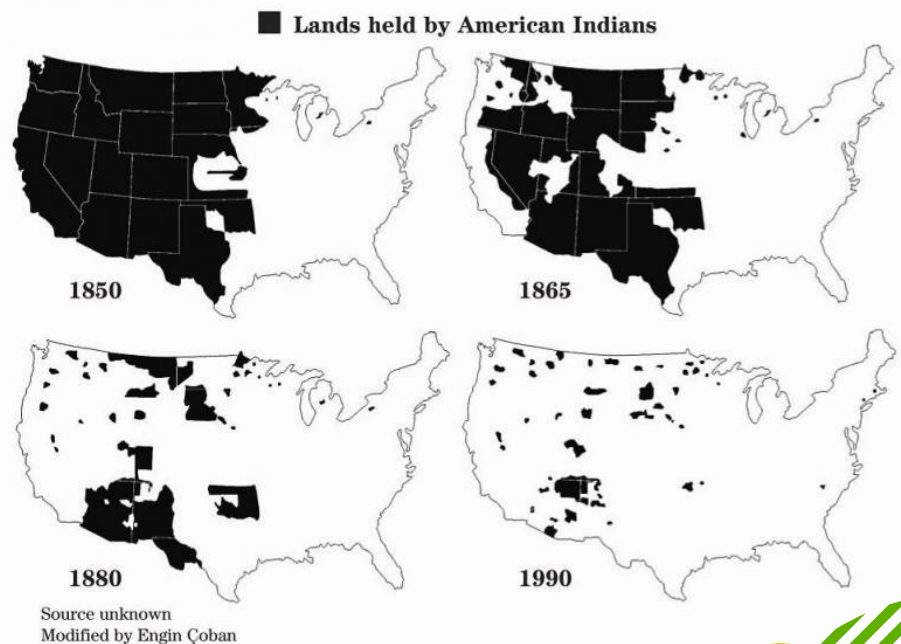
In terms of unresponsiveness to complaints, the Dakota Access Pipeline (DAPL) is a prime example. The construction of DAPL sparked conflict from the summer of 2014 to the winter of 2017. The pipeline connects the Bakken oil fields in North Dakota to refineries in central Illinois, and was completed in 2017 despite multiple protests. The protests came in the form of camps, in which food, shelter, medical supplies, sanitation services, political education, and outreach were provided for Indigenous activists and non-Indigenous allies from all over North America. The National Guard and other law enforcement officers forcibly evicted the protesters, the company and public officials claimed the pipeline was one of the safest ways to transport oil, and the pipeline was completed. However, to this day, there are still agencies fighting to prove the pipeline was prematurely approved and didn't recognize standards of environmental and tribal land protection.

Native Americans have endured mandatory housing allocation for many generations. It can be more accurately described as settler colonialism, which is a type of injustice driven by settlers' desire to erase Indigenous peoples' cultures, economies, and political organizations. The government mined, deforested, and industrialized the Great Lakes region, where a lot of Indigenous people used to live. Settlers ended up decimating the local ecosystem while unintentionally introducing new, invasive species. Industrialization completely transformed the ecologies of Anishinaabe Waki into a US settler ecology, all the while, the government did not regulate forms of pollution that negatively impacted the ecological dynamics that Indigenous sustenance is based on.

Society has continuously encroached on Indigenous lands and developed them to their hearts' content, without regulation or ensuring the safety of nearby people. For many Native Americans, traditional knowledge developed from millennia of living on certain lands has been rendered meaningless, as several tribes are evicted from their generational homes and confined to reservations, often with harsh, unproductive land. Most people believe the Trail of Tears ended in the 1850s, but one could argue it has continued into modern times.

“We cannot, however, simply change our diet. If we were to change suddenly and start eating store-bought foods more, then disease would increase and our rate of death would be higher, because it would be too rapid a change, too much of a shock to our systems.”

- Norma Kassi, speaking for her Gwich'in community in the Yukon territory



GEORGIA SAYS NO TO BRIGHTMARK PLASTIC RECYCLING PLANT

and why plastic-to-fuel plants are dangerous

By Parneeta Mohapatra

Wherever you walk, you can see signs saying “Reduce, Reuse, Recycle.” There are recycling bins next to almost every trash can, asking for plastics, aluminums, and paper. However, where does this recycling go? And what are the costs of recycling?

Macon faced these questions when Brightmark began planning to open its largest recycling plant here. Brightmark claimed that the economic growth from this plant would benefit incredibly, with over 100 new positions created, \$680M capital investment in Central Georgia, and the diversion of 400,000 tons of plastic waste each year from landfills and incinerators. However, on Monday, January 10th, Mayor Lester Miller publicly withdrew his support for Brightmark’s plastic recycling plant in Macon and encouraged the Macon-Bibb County Industrial Authority to do the same. Why did this happen?

Although recycling is important to decrease mass plastic pollution, plastic-to-fuel plants, like Brightmark’s, are dangerous. During the plastic melting and reconstruction process, these plants emit a huge number of dangerous chemicals, including hydrogen cyanide, benzene, formaldehyde, and dioxins. These toxins pollute the environment, and in turn, we are exposed to them on a daily basis. This pollution has not been worth it. “Chemical recycling” was critiqued by the Global Alliance for Incinerator Alternatives. They say that this method actually keeps single-use plastics in production, and that facilities have not been able to make reused plastic products commercially.

**IN A LETTER TO THE
MACON-BIBB COUNTY
INDUSTRIAL
AUTHORITY, MAYOR
MILLER WROTE THAT
IN LIGHT OF “THE
LONG-TERM SAFETY
CONCERNS OF THIS
UNPROVEN PROCESS,”
OPPOSING THE PLANT
WAS IN THE BEST
INTERESTS OF MACON-
BIBB RESIDENTS.**



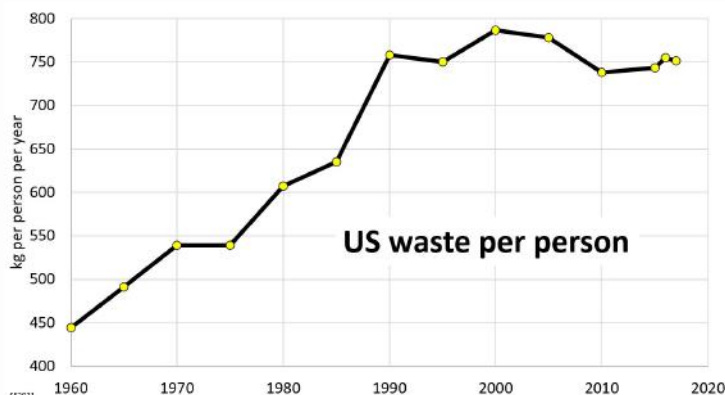
Brightmark was called out for deficiencies in their air permit application by the Southern Environmental Law Center (SELC). Brightmark does not adequately or credibly explain how it plans to reduce its high potential emissions to safe and legal levels. In fact their report is inconsistent and makes assumptions that aren't supported by research. In general, greenhouse gasses emitted by recycling are much greater than if waste was just reduced. Additionally, it often takes less energy to make brand new materials than to make materials from recycled pellets.

Brightmark's CEO is convinced that the project will be approved, ignoring the pleas of Maconites to stay out. Brightmark has been lobbying other county leaders despite Mayor Miller's disapproval. Residents have protested and lobbied against the approval of this project, citing many valid concerns. In an interview with WGXA news, residents state the following concerns:

- **"And I ask for this community if there's no market for this final product, how will this debt be repaid? No one wants a failed industrial plant in Macon."**
- **"It would pose a threat to the health of Macon residents and a threat to the county's environmental health."**
- **"I have concerns about trash from all over the southeast being brought into our area, and the increased pollution to our air and groundwater."**
- **"It's maybe the most inefficient, most expensive, and most complicated way to make and burn fossil fuel."**

In addition to these concerns, Brightmark's only other plastic recycling plant is located in Ashley, Indiana. This plant caught on fire in May of 2021. How can we be assured of the plant's safety when Brightmark hasn't shown us that their systems are reliable?

Although recycling plastics is a solution, better ways to reduce waste and keep the environment clean is to reduce consumption and reuse/repurpose materials. The United States produced 292.4 million tons of waste in 2018, with each person producing 4.9 pounds a day. This has increased drastically with mass consumerism. By reducing the amount of plastics, used, we can discourage the creation of plastic waste in the first place, and reduce the need for us to come up with ways to manage the waste later.



<https://environmental-geology-dev.pressbooks.tru.ca/chapter/the-waste-stream/>

Environmental injustice has been seen in many places across the country, but we don't understand what it means until we see it happen in our backyards. Macon-Bibb residents have voiced their concerns, Mayor Miller has taken away his support, and the SELC has called out Brightmark for inconsistencies. Let us hope that these voices are heard in the fight to keep Macon's environment healthy.

THE ENVIRONMENT'S EFFECTS ON YOU

Shaan Prasad

The environment has a significant impact on your health. Over **24%** of global deaths are attributed to the environment. It is important be aware of how the environment impacts your health.

MENTAL/STRESS DISORDERS

Weather events can impact your mental health. Disasters fueled by climate change can cause a number of mental illnesses to increase. Rising temperatures have implications in depressive disorders and suicide. The social environment also contributes to your mental stress.

CLIMATE CHANGE AND NATURAL DISASTERS

Natural Disasters from climate change have disastrous affects on health and society. More heavy rainfall can cause severe flooding and increases chances for increased upper-respiratory tract infections, dry conditions due to drought can contribute to wild fires and increased chances of cardiovascular and respiratory conditions, and extreme heat can increase risk of heat stroke and other cardiovascular, kidney, and respiratory illnesses.

CHEMICAL AND AIR POLLUTION

Different chemicals pollutants can adversely affect your health in various systems of the body, like the brain, lungs, gums, and certain glands. These can come from the water you drink, the air you breathe and everyday items you use. Some examples include Mercury, Perchlorate, and Bisphenol A.

THE BUILT ENVIRONMENT

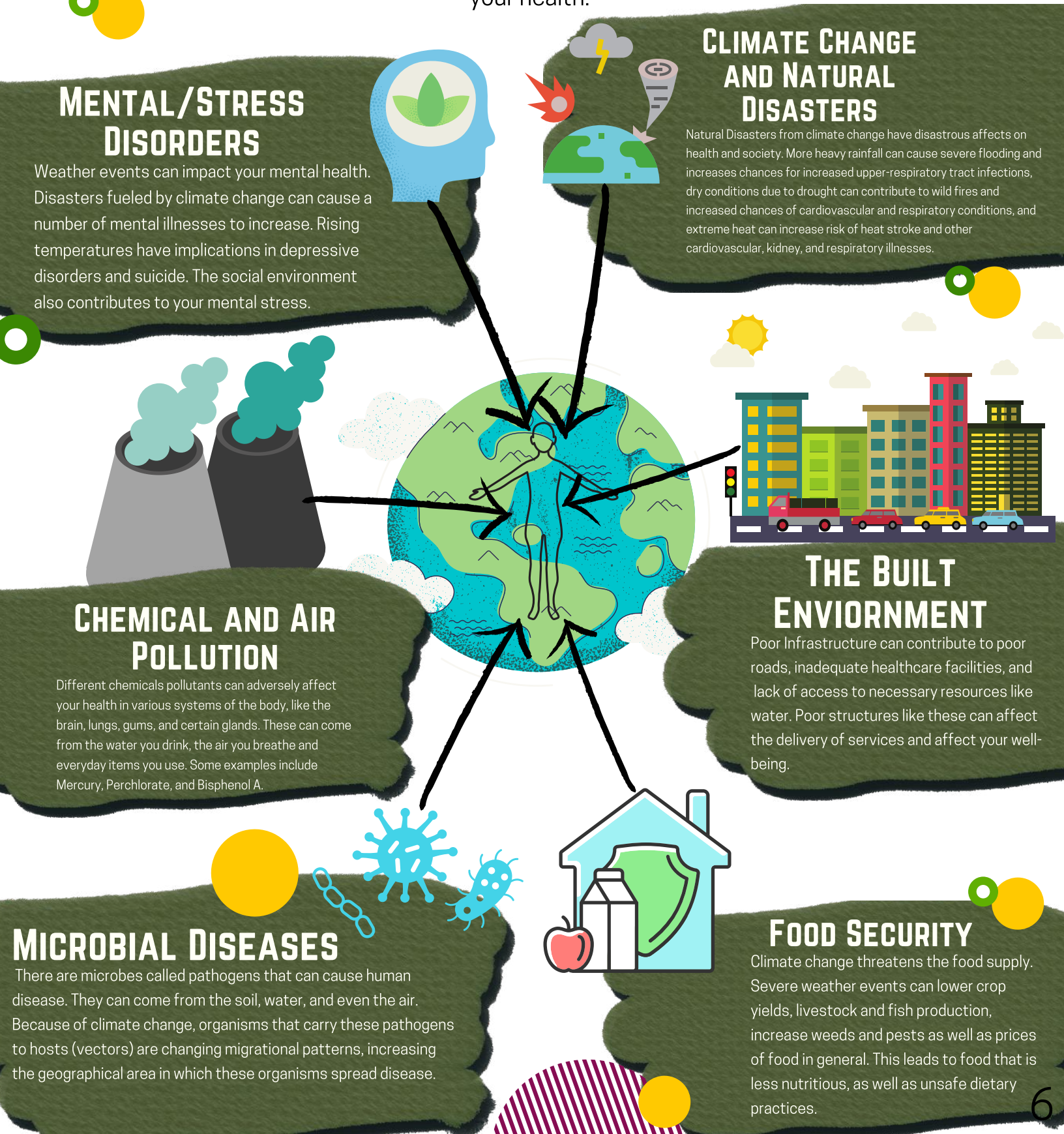
Poor Infrastructure can contribute to poor roads, inadequate healthcare facilities, and lack of access to necessary resources like water. Poor structures like these can affect the delivery of services and affect your well-being.

FOOD SECURITY

Climate change threatens the food supply. Severe weather events can lower crop yields, livestock and fish production, increase weeds and pests as well as prices of food in general. This leads to food that is less nutritious, as well as unsafe dietary practices.

MICROBIAL DISEASES

There are microbes called pathogens that can cause human disease. They can come from the soil, water, and even the air. Because of climate change, organisms that carry these pathogens to hosts (vectors) are changing migrational patterns, increasing the geographical area in which these organisms spread disease.



How The Environment Impacts Reproductive Health

Makenzie Hicks

Every day, people around the world encounter pollutants and environmental contamination without realizing the true impact they have on our bodies. Additionally, more and more families across the US try to have children and find that they are unable. The reproductive health of both men and women can be impacted by an increase of pollutants in an individual's environment. There have been increases in pregnancy complications and decreases in fertility in both men and women that can be directly correlated to ongoing environmental issues. A variety of different types of pollution, agricultural practices, and chemical contamination are all factors that have contributed to these negative effects on reproductive health.

Chemical	What is it in?	What does it do?
<u>Bisphenol A (BPA)</u>	Plastics and resin	Effects the brains of fetuses
Di(2-ethylhexyl) phthalate (DEHP)	Food packaging and medical devices	Risk to the development of infants
Parabens	Deoderants and Skin care products	Linked to sterility in males and hormone imbalances in females
Phthalates	Many beauty products	Lowered sperm count and birth defects
Dioxin	Antibacterial Ingredients	Can cause miscarriages and birth deformities

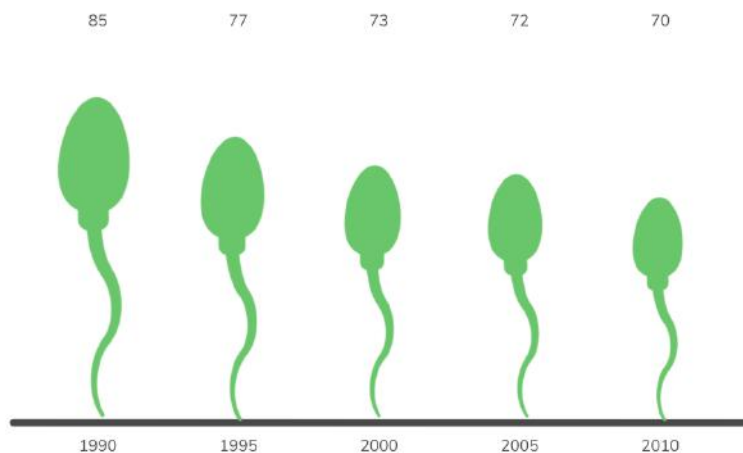
"More and more families across the US try to have children and find that they are unable."

Pollutants found in an individual's surroundings, such as excessive vitamin A or radiation, can have negative impacts on the female reproductive system. Chemical pollutants in food and the environment have been shown to slow uterine growth and lead to the loss of the baby during the pregnancy. Furthermore, air pollutants not only slow uterine growth but also greatly reduce infant health outcomes. Women exposed to air pollutants are more likely to have low-birth-weight babies, premature birth, or have their newborns die. This is a concern for women everywhere as it is difficult to determine exposure to these pollutants.

One of the largest factors affecting reproductive health in women is the presence of steroids, antibiotics, and phthalates in agriculture and the environment that interrupt the process of reproduction. These chemicals keep women from being able to become pregnant while also decreasing the quality and quantity of sperm in men. Commonly found in plastics, personal care products, and food items, these dangerous substances are not easily avoided. They can also cause women to have severe complications during pregnancy either leading to a loss of life or a loss of the pregnancy. Some women feel uninformed about these issues and their impacts on the human body.

Male reproduction is also impacted by environmental factors. Studies have shown that their sperm count is decreasing, there are changes in sexual behavior, and the prevalence of both genital cancers and mood disorders has increased. Each of these conditions can lead to fertility issues in men. This can also be attributed to an increase in heavy metals and chemicals in agriculture, global warming, increased radiation exposure, and estrogen contamination in the environment.

Average Sperm Concentration in the US
MILLIONS PER MILLILITER



Data From: "Temporal trends in sperm count",
by H. Levine et al., Human Reproduction Update

These issues disproportionately impact people in poverty and racial minorities. One study found that pregnant black women had a higher concentration of phthalates, which are chemicals that regularly leads to loss of pregnancy and birth defects. It is commonly found in fast food and cheaper shampoos, soaps, and nail polishes. However, it is difficult to address because cheaper personal care and food products are sometimes the only things a person can access.

To address these fertility effects, more research needs to be done. Firstly, international collaboration is a must. Environmental issues are not limited to just one region or country. no one environmental issue is more important than the other, it is important to prioritize exposures to chemical, physical, and biological agents as they are the leading cause of reproductive problems.

As an individual, there are some ways to avoid these pollutants and chemicals. Firstly, buying organic food items will reduce the risk of exposure through agricultural products. Also, you can buy soaps, shampoos, and other personal care products that are free of sulfates and phthalates. To help push for change, we can make phone calls and write letters to our local legislators bringing attention to the impact of these chemicals in our products.

THE 2021 UN CLIMATE CONFERENCE

What You Need To Know

McKenna Kaufman



The 26th UN Climate Change Conference (COP26) brought 120 world leaders and thousands of delegates to Glasgow, Scotland in the fall of 2021 to discuss global climate change—its causes, its implications, and its solutions.

Climate change, and the extreme weather events that come with it, poses a major injustice to individuals living in low- and middle-income countries. Populations in these countries are often more susceptible to displacement due to climate change, lack of access to clean water, unreliable crops, and numerous other obstacles. The inequity between countries' climate change preparedness exemplifies the impacts of environmental injustice.

After two weeks of negotiations, the Glasgow Climate Pact, a document that outlined global goals for minimizing the effects of climate change, was created by over 200 countries. COP26 recognized the need for an international effort to minimize greenhouse gas emissions and the disproportionate impact global warming has on low- and middle-income countries.

The Glasgow Climate Pact

Oil and gas are two of the main drivers of global warming. Despite pushback, countries present at COP26 agreed that the world needs to diminish its reliance on coal power and fossil fuels, which were deemed “inefficient.” High-income countries fell short on their promises to compensate low- and middle-income countries for the negative impacts they suffered as a result of climate change caused by industrialized countries, perpetuating major inequities in global climate change preparedness. The Glasgow Climate Pact urges high-income countries to provide the promised \$100 billion in compensation to low-income countries as soon as possible. Additionally, the pact aimed to better support low- and middle-income countries in financing climate disaster preparedness and adaptation efforts.



Progress

Outside of the Glasgow Climate Pact, numerous countries at the conference made a pledge to protect forests, limit methane emissions, promote zero-emission vehicles, limit coal power, and curb corporate emissions.



Shortcomings

However, many nations did not agree to slow emissions at a rate fast enough to avoid devastating damage as a result of extreme weather events, like storms, heat waves, and droughts. Low- and middle-income nations still do not have a reliable source of compensation for past, current and future obstacles caused by climate change.

Action to curb the rise of global temperature still has a long way to go.

Without comprehensive climate disaster plans, compensation for developing countries facing the worst of the crisis, and rapidly diminished global emissions, significant progress may not be made in time to reverse the damage caused by climate change. COP26 revealed many global shortcomings in eradicating environmental injustice.

The Future

"For us, this is a matter of survival," Aminath Shauna, Minister of Environment, Climate Change and Technology of the Maldives, said. "Please do us the courtesy to acknowledge that it does not bring hope to our hearts but serves as yet another conversation where we put our homes on the line, while those who have other options decide how quickly they want to act to save those who don't."



“WAITING FOR DISASTER TO STRIKE IS NOT AN OPTION”

Global Climate Refugees

McKenna Kaufman

“I live here with my whole family. My uncle, father, mother, and nieces depend on me,” Darwin Mendez, a farmer in Guatemala, said. “But whatever we grow in our land is not enough to feed ourselves.”

Mendez lives in a region of Central America called the Dry Corridor, a strip of land that stretches through four countries and is prone to extreme weather events like drought and torrential rain. These drastic changes in climate are devastating to individuals in the region, as many rely on farming to make money and supply their families with food.

Mendez is one of the many farmers in the Dry Corridor that is experiencing poverty and food insecurity as a result of climate change and extreme weather events. His family is lucky if they are able to eat two meals a day, he said, and his children are at risk of malnutrition and other health complications.

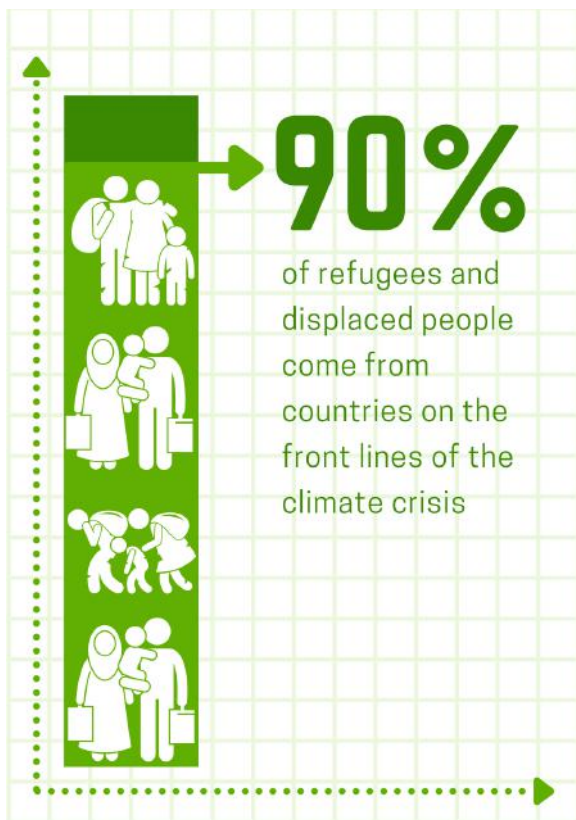
Families in Guatemala and other parts of the Dry Corridor are being forced to decide between staying in the region and potentially starving, or making the dangerous journey north toward the United States. In many cases, people who migrate to the U.S. from Central and South America are turned away or deported once they get to the southern border.

Crises like what is occurring in Guatemala are happening across the globe as a result of climate change. Extreme weather events are only increasing in frequency as the world gets warmer. The impacts of these events can displace entire communities or exacerbate obstacles for refugees and migrants who are already fleeing internal conflict or violence in their home country.

“Refugees, internally displaced people (IDPs) and the stateless are on the frontlines of the climate emergency,” according to the UN Refugee Agency.

More than 20 million people leave their homes as a result of extreme weather events like droughts, heavy rainfall, sea-levels rising, and hurricanes each year. Individuals experiencing primary or secondary displacement as a result of climate disasters are called climate migrants. People in low-income countries or countries that lack the resources to respond to extreme weather events are disproportionately affected by global warming and its consequences– a crisis that was caused by wealthy countries’ reckless behavior.

“The carbon footprint from industrialized countries has significantly contributed to global warming and we are now bearing the



brunt of these extreme weather events.” Paris Rivera, a climatologist in Central America, said.

Many climate migrants are fleeing from rural areas, where many communities rely on climate-sensitive industries like agriculture and fishing. However, people in urban areas can also be forced out of their homes due to climate change, as coastal communities have been uprooted due to rising sea levels.

Extreme weather events can often create an internal displacement crisis within a country’s borders. According to the World Bank Group, there could be up to 216 million internal climate migrants globally by 2050. Many communities affected by climate change have no choice but to stay in “climate hotspots” due to a lack of resources.

Climate hotspots are regions of the world that respond especially dramatically to the influence of global warming. People who

are already displaced or seeking refuge after escaping another disaster often reside in these climate hotspots, because they do not have anywhere else to go, leaving them more vulnerable to extreme weather events and less likely to find a safe place to live.

According to the World Bank Group, global efforts can be made to mitigate the effects of climate change on vulnerable populations and prevent mass climate displacement. These efforts include reducing greenhouse gas emissions quickly, shifting international population distributions so individuals can more easily escape poverty, and initiating “orderly and well-managed” climate migration.

"There could be up to 216 million internal climate migrants globally by 2050."

“We need to invest now in preparedness to mitigate future protection needs and prevent further climate caused displacement,” Filippo Grandi, the UN High Commissioner for Refugees, said. “Waiting for disaster to strike is not an option.”

an easy guide to SUSTAINABLE LIVING

Suha Mohiuddin

/sə'steɪnəb(ə)l 'lɪvɪŋ/

"Aim[ing] to live in ways that are less taxing on Earth's natural resources"



REUSABLE
SHOPPING BAG



BEEWAX WRAPS
(IN PLACE OF PLASTIC WRAP)



SECOND-HAND
CLOTHING



CLOTH PAPER
TOWELS



COMPOSTING



DRYER BALLS



DOUBLE-SIDED
PRINTING



REUSABLE JARS



REUSABLE
STRAWS



REUSABLE GLASS
CONTAINERS



OWN UTENSILS



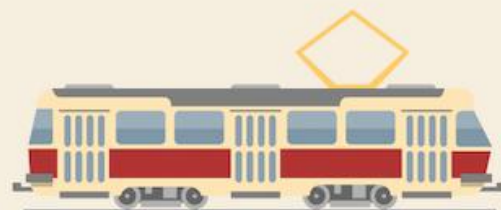
REUSABLE COTTON
PADS FOR MAKEUP



REUSABLE
WATER BOTTLE



REUSE OLD BOXES



USING PUBLIC TRANSPORTATION

ADDITIONAL RESOURCES

PODCASTS

- *Living Planet* **by Deutsche Welle**
- *How to Save a Planet* **by Gimlet**
- *Broken Ground* **by the Southern Environmental Law Center**

BOOKS

- *How to Give up Plastic* **by William McCallum**
- *The Uninhabitable Earth* **by David Wallace-Wells**
- *Silent Spring* **by Rachel Carson**

MOVIES

- *Stink!* (2015)
- *Toxic Beauty* (2019)
- *Dark Waters* (2019)

ORGANIZATIONS AND EVENTS

- MU Green Coalition
- Float Daze River Cleanup
- Healthy People 2030

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