

"What can I do? I am just one person,"

FAYEZA MUIZZ
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COPY EDITOR

It's true. Let's admit it. We hear about climate change everywhere: in schools, news headlines, public establishments, random commercials, and more that we can name of. As much as it's overwhelming to hear this here and there, we have to be overwhelmed with the simple, terrifying truth that climate change could be irreversible seven or more years from now. Saying it again for the people in the back: Climate change could be irreversible seven or more years from now.

And that's something we need ingrained in our heads. According to the UN Intergovernmental Panel on Climate Change (IPCC), immediate and urgent actions need to be taken before the catastrophic effects of global warming further worsens. But you know what's a fact too? IPCC reports we can halve emissions by 2030. A golden lining of hope, right? Saying it again for people in the back:

We can halve emissions by 2030.

IPCC says it is possible through the "right policies, infrastructure, and technology." This is where we, as humans who inhabit the planet, come in. What can we, as students who belong to the youth sector, change about what's happening with the world right now?

Conserve energy and water. Practice 3Rs. Invest in Sustainability. Big terms, but if you think about it more carefully, it is actually quite easy to incorporate in our daily lives.

How do we conserve energy and water? A recent report by Oxford Scholastica Academy this year advises students to turn off or unplug lights, computers, electronic devices, or appliances when not in use, and lessen our water consumption by taking shorter showers if not urgent or by turning off the taps as we brush our teeth. While using electricity and water is now a staple in our daily lives, too much and wrong usage of it emits more pollutants

into the atmosphere, and pollutants are never good news. Conserve and use energy in moderation.

How do we practice 3Rs? Rogue Disposal and Recycling, a community-involved company specializing in "curbside trash, recycling and yard debris pick-up services", lists ways on how to have as less materials and waste in landfills as possible.

Reduce: Instead of using too much paper and plastic bags that create too much waste, pack our lunch in a lunchbox, use reusable bags for grocery shopping, and lessen our usage of bottled water.

Reuse: Rather than throwing away items and increasing our trash footprints, we can donate or sell them instead.

Recycle: A better alternative for discarding old and useless materials is turning them into something new and useful like an old newspaper becoming construction paper and corrugated cardboard to paper bags or paperboard.

All these waste take up a lot of space in the environment, and most of the time, they end up in a landfill, bodies of water, and even get burned, further resulting in the deterioration of the planet.

Now, as we try to practice these environmentally-friendly waste disposal methods, we also get to invest in sustainability or our ability to live in this world without compromising the future.

I mean, aren't we all doing this for today and the many tomorrows to come? Scary enough, a study published in Journal Science says that the current generation of children will be living through thrice as their grandparents' experienced climate disasters. To be more specific, if today, oceans are dying, more than a million of species are being extinct, more and more people are being displaced due to climate change, and increased warm sea levels, we will be at risk of these three more times in the future.

It's true. Let's admit it. This does sound alarming. But you know what's bound

to be more alarming? If we don't take immediate, urgent actions to help minimize or stop all of these. If not now, when? If not now, it's all gonna be worse, worse, then worst, until we can't do anything about it anymore.

Frohlich works for the Ann Arbor Office of Sustainability and Innovations. The Office of Sustainability and Innovations has adopted a seven-part plan to get community wide carbon neutrality by 2030, which means releasing and removing the same amount of carbon dioxide into and from the atmosphere.

The seven strategies that A2Zero has are to use fully renewable energy for the electric grid, switch all appliances to electric, improve energy efficiency in places across the city, reduce the number of miles traveled by at least 50 percent, change the way we use and dispose of materials, enhance resilience of the people and anything else under another category.

Frohlich does resilience work for the city which focuses mainly on adaptation and neighborhood

Mitigation and Resilience: Combating climate change on a local level

SATVIKA RAMANATHAN
EDITOR-IN-CHIEF

When people think about being sustainable, that oftentimes comes with the thought of a reduced quality of life. They think that they'll have to give things up and be unsatisfied with what they have. But that's not actually the case.

"I think there's a lot of technology, there is a lot of smart innovation happening to have a better world that is removed from fossil gas and fossil fuels," City of Ann Arbor Community Resilience Specialist Bryce Frohlich said.

"Climate change is obviously a global problem. We're situated in a region where climate impacts overall are minimal, but that doesn't mean that we still don't have to prepare for possible future projections of a changing climate. There are a lot of things that people can do to make themselves more resilient."

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programs. A lot of that is thinking about how to develop programs that help the community adapt to changing climates and how to build more community and social cohesion to respond to climate change.

"I've lived in Ann Arbor for about four and a half years," Frohlich said. "And even in my short time here, I have seen the frequency of power outages and severe events. And they're coming more frequently. They're coming more extremely."

According to the GLISA, the Great Lakes Climate Adaptation Partnership team, the number of days a year where there is more than 1 inch of precipitation has increased by about three days in Ann Arbor between 1951 and 2022. The annual precipitation in Ann Arbor has also increased by 46 percent between 1951 and 2022. Those numbers aren't small, and they are continuing to grow.

The community resilience strategy is in place to get the people living in Ann Arbor to be more able to deal with the extreme climate impacts that are becoming more and more common like power outages, extreme heat, and extreme cold.

There are many ways that people can educate themselves and prepare for future climate struggles, whether that's learning about different assets the city has, coming up with a household emergency plan, talking with their family about what to do if the power goes out, or even weatherizing their home if it's financially possible. But there are also ways to combat climate change at a community level.

"What climate and sustainability really means for people in Ann Arbor is that it really is a community wide effort," Frohlich said. "It has to be a community wide effort to be able to achieve community wide carbon neutrality."

For individual people, that might seem like a far-away goal.

"For the average person, it's not just about greenhouse gas reductions or how we are going to slow down or stop the warming of our planet," he said. "Really what I think sustainability and A2Zero can mean is the possibility to rethink everything in our society, on how we commute, how we interact with each other, where we get our foods from, our purchasing habits and really think about how we can ingrain sustainability into our everyday lives."

Climateologist with GLISA Kim Channell says that the first step to responding to, adapting to, and mitigating climate change is to be informed on its impacts, especially locally.

"We hear all these global-scale terms used really often," she said. "But that doesn't mean anything to a lot of people who are trying to think about what are the actual impacts to me and my city, my neighborhood, my community."

Being informed of these local trends is really that first step to moving

forward with individual responsibility and collective responsibility at the city level, the county level, the state level and the national level."

Frohlich agrees.

"Pay attention to local funding and state initiatives," Frohlich said. "Pay attention not just to the A2Zero plan, but also the Michigan healthy climate goals. Even though we do need a lot of federal action, a lot of impact can happen by putting people in the right local positions to be able to make those changes. Getting out and voting and getting public support behind these options are some of the biggest things that we can do to make those larger chunks of progress."

He believes that when people work together the results can be large.

"Mitigation at the individual level can seem like a hard thing to do," Frohlich said. "There is a lot that an individual can do. Can one person's actions alone change the course of the climate crisis? No. But together collectively, it can make an impact."

Frohlich says that one of the biggest ways to make a difference is to think about transportation. If it's affordable and accessible, he encourages people to take action and ride the bus, car pool with a friend, or even bike somewhere.

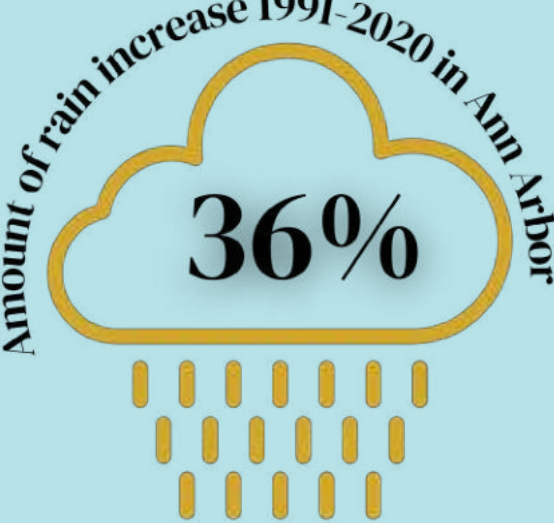
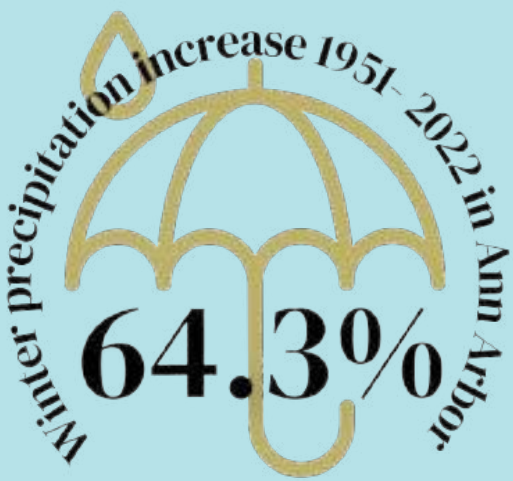
"If you're a person who wants to go see a friend who lives in a place where

you may have to take carbon intensive transit, I don't think you should burden yourself on deciding, 'Oh, I'm not going to take this flight or go to this event' and punish yourself because you're scared of the emissions," he said. "Those impacts will not change the course of the climate crisis. But making those choices in your everyday life really can stack up."

Frohlich believes that incorporating sustainability into every-day life is an act of love towards the community and world.

"I think one of the reasons why sustainability and the climate crisis present such a challenge, but an opportunity within itself, is because as a society overall, the way that we can tackle sustainability issues, comes with a lot of care," he said. "Folks who live on frontline populations or are lower income residents are going to be ones who feel the brunt of these climate impacts the most, and we have a real opportunity to address those inequitable situations and make sure that those who are going to be most affected by the climate crisis are safe and encouraged and supported through all that. Sustainability not just presents us a chance to care for each other, but for the natural world and to span beyond that."

According to the Great Lakes Integrated Sciences and Assessment based out of the University of Michigan,



said eight billion people together.

Wheels on the bus go ‘round and ‘round, cleanly through the town

SAMUEL KEREKES AND DANIEL HEMATI
STAFF WRITERS

All around us, Ann Arbor Public Schools is slowly making its eco-friendly future a reality. Talk of the adoption of electric buses has been spreading for a long time now. Their implementation into the district years ago may not have felt like much, though the district might have a lot more to look forward to in the near future. According to a ClickOnDetroit article, the first ever electric school bus in Michigan was unveiled in Lansing in 2019. Seventeen electric buses were deployed out to seven Michigan school districts, one of them being the Ann Arbor Public Schools. The electric buses were deployed under the Michigan Department of Environment, Great Lakes, and Energy (EGLE) diesel bus replacement program, which is funded partially by a Volkswagen mitigation settlement. The objective of the electric school bus program is to upgrade children’s safety by promoting a cleaner atmosphere. This is achieved

by eliminating harmful diesel exhaust emissions coming from the diesel-powered buses. These diesel exhaust emissions contained over 40 contaminants, which the U.S. Environmental Protection Agency has classified as hazardous. In January 2021, the Ann Arbor Public Schools began to roll out electric buses to deliver meals to kids who qualify for free or reduced lunch. They purchased four Thomas Saf-T-Liner eC2 Electric School Buses with financial help from a Volkswagen mitigation settlement, bringing the price from \$1.37 million down to \$412,000. Additionally, DTE Energy provided \$189,000 for the purchasing of the charging stations. During the remote learning era, the electric school buses transported food to 22 distribution sites throughout the AAPS district. Now, after around three years of service, their operation has not been spotless. “We had a few issues with the charging stations - particularly the type of vehicle to grid (V2G) software utilized - but those have been replaced with more reliable and predictable

fast charging equipment,” AAPS executive director of school safety and district operations Liz Margolis said. Battery problems occurred early in the rollout of the EVs, meaning Electric Vehicles, which the district had to learn from, too. “Initially we had some equipment issues with our EV buses and batteries that took some patience, until that was solved by the vehicle and battery manufacturer,” Margolis said. “We understand the EV buses and charging infrastructure represent a new technology, and we are tracking lessons learned through this process.” The district stuck with their EVs. Doubts aside, they still seem to provide some benefits over diesel buses, other than lower emissions. “When operating efficiently and effectively, electric vehicle buses should save the district on fuel costs, which is very exciting for AAPS,” Margolis said. The position of this technology in the market, and its current state of development, pose extra challenges to a green future. “Right now, EVs

present some cost challenges in two areas, the cost or retail cost of EV purchase, and the cost of the charging infrastructure,” Margolis said. There lies the next challenge vital to the use of electric buses. “There is another potential challenge, which is the electrical capacity available to provide power to the charging infrastructure,” Margolis said. “As the district continues to invest in EV buses, this capacity question becomes potentially more challenging as the electrical demand increases with more buses. Adding electrical capacity to a location would require DTE’s involvement, as they will need to bring that additional power to the site and may need to add or replace electrical gear as part of that effort.” Transportation currently only account for around 4% of the district’s greenhouse gas total, but this isn’t stopping AAPS. “The four electric buses represent 3% (4

out of 132) of the fleet, so emissions saved from these buses represent a relatively small percentage of the district’s total GHG emissions,” Margolis said. Though transportation is only a minor part of the district’s greenhouse gas emissions, AAPS is committed to reducing its contribution to climate change everywhere it can. “AAPS is reviewing the next bus purchase as part of our commitment to the community to ensure our bus fleet is well-maintained, with buses in rotation to replace other buses,” Margolis said. “As part of this process we are examining all bus options including EV, diesel and hybrid models as well as the incentive programs that are available to AAPS. We expect the next bus purchase to occur in 2024.” Sacrifices will be necessary to achieve the dream of tomorrow. And though challenges certainly dot the road ahead, it’s nothing a hardy school bus can’t handle.

36%
Rain increase in Ann Arbor between 1991-2020

1.5°F
Average increase in winter temp in Ann Arbor

1-9%
Projected precipitation increase in Ann Arbor by 2050

Green Team members implement environmentally friendly practices

MELINDA MEI
WEBSITE EDITOR-IN-CHIEF

Truly making a difference in fighting for environmental preservation goes beyond just attending weekly club meetings – Green Team members implement practical steps into their lives while the club as a whole takes direct action to make a difference. “Observing the world and just noticing the way we have polluted it motivated me to start changing how I live my life, even though it may be minimal,” Green Team member senior Zubair Alam said. “I started trying to limit the amount of waste I produce and start being more sustainable.” To reduce waste and become more sustainable, many

people have turned to using reusable items, from water bottles to containers and bags. In recent years, however, thrifting has also been picking up in popularity. “Plato’s Closet” and “Goodwill” in particular are a favorite locations for high schoolers to purchase second hand clothes and accessories. “So much clothing goes to waste and factories that make clothing cause a lot of carbon emissions, so I thrift most of my clothes,” Green Team member senior Lorelai Sell said. Green Team president senior Anna

Wyman leads the group in spreading awareness about sustainable measures and taking direct action to make a difference. The club meetings usually consist of engaging lessons about how to be more environmentally friendly, such as what can be recycled and how to recycle, and end with a trash pick-up. On a larger scale, the Green Team is trying to make a bigger impact in the larger community. “Green Team is currently trying to get compost and recycling bins

in the cafeteria as well as need to do our part to raising community awareness, and lobbying to our local legislators who have the ability to change things on a larger level,” Wyman said. From using reusable bottles and thrifting second hand clothing, to picking up trash and striving to compost, there are many actions Green Team members take to better the environment. Ultimately, though, everyone is working toward one goal: preserving the world that they live in. “We only have one beautiful Earth so we

A call for action

STAFF

Change is inevitable. Leaves fall, skies darken and flowers wilt. We watch as the snow comes later each year. We watch as there are heavier rains each year. We watch as the power goes out more frequently each year. We feel helpless. But we’re not. We forget that we are not alone. As an individual, sure, picking up one piece of trash may not make a substantial difference. But as a world, if eight billion people pick up one piece of trash each, that could impact the globe on a large scale. We have to

start somewhere. It only takes one small spark to light a whole fire. Caring for the Earth that holds us and takes care of us is the least we can do. Every step we can take towards a cleaner, greener future is a step in the right direction. And as

Chinese philosopher Lao Tzu said, “A journey of a thousand miles begins with a single step.”



GRAPHICS BY ANNA LEE