

Earth Has a Deadline

7 years :103 days :15 hours :40 minutes :07, 06 ,05 seconds, flashed on the Metronome a huge fifteen digit clock that looks out onto Union Square in Manhattan. Passerbys looked to try to figure out why this countdown had started on September 19 2021, then the words flashed, “Earth has a deadline”. The deadline being the time left before climate change increases the global temperature measured at the equator by 1.5 degrees celsius, the point where climatologists have determined climate change is irreversible. However, the issue with measuring temperature increase at the equator is it receives a consistent amount of sunlight year round so its temperature is relatively constant. This means that when the temperature increases at the equator by a few degrees it is increasing by up almost 5 degrees celsius at the poles leading to the loss of albedo and the melting of the arctic, a huge proponent that keeps the global temperature down. Even though we as a society have a few years left on the clock, we are already seeing the effects of this climate change in our daily lives.

In my own county, wildfires are burning crops, houses, and infrastructure to the ground as our climate becomes drier and warmer due to the greenhouse effect expedited by the excessive use of fossil fuels. This change in climate has not only caused fires, but drought. Sonoma County is currently experiencing the driest year to date in over 128 years, which makes people question, what will this year’s fire season look like? Maybe we will get lucky and be blessed with rain after all. Yet the fear of flood marinates in the back of our minds, considering our dry conditions. As a resident of the county, I remember a time just five or so years ago when I didn’t have to worry about fires, evacuations, or smoke. As an agricultural based county, Sonoma is begging for a decade of consistent and safe climate conditions.

However these extreme effects of climate change don't stop at the county level, the entire United States is facing its own dose of mother nature's karma. In June of 2021, 194 people between Washington and Oregon died in a record breaking heatwave. Temperatures reached a high of over 115 degrees Fahrenheit, an anomaly to moderate climate of the pacific northwest. In states like Texas polar vortexes have caused extreme and prolonged cold spells that the infrastructure could not sustain in the past few years. In Florida, sea level has risen by one foot since 1990 and is expected to rise another 10 to 17 inches by 2040. This might seem like a small increase, but the city of Miami is spending billions of dollars just to keep their city afloat. Not to mention, these extreme disasters caused by climate change don't stop at the national level.

Around the world, countries are experiencing environmental catastrophes. In 2020, fires razed more than 19 million acres of the Amazon rainforest, which stores over 123 billion tons of carbon. In Australia, over 10 million hectares were burned by the 2020 wildfires due to climate change. Other areas are experiencing droughts and floods and hurricanes more frequently than ever in the past two decades. In the future, we can expect more of the same as well as change in crops that can grow in certain areas, and more irregularity in climate.

Yet there is hope. By shedding light on the issues brought on by climate change, the world is seeing a change in mindset, a Green Revolution that prioritizes sustainability and green living. This change is worldwide and brings unity to all people despite their differences to work towards the common goal of saving the earth. For example we are seeing more people in developed nations using solar energy and electric cars. Currently around 13% of the world's energy needs are met using renewable resources, something that would've been impossible to say just a few decades ago. \$9.52 billion have been raised by the Green Climate Fund to assist developing countries in adaptation and mitigation practices to counter climate change. Australia

has pledged \$700 million to protect the Great Barrier Reef from climate change and France has banned plastic packaging on most fruits and vegetables. Not to mention, government officials around the world are placing regulations on corporate carbon emissions and funding research and advances in renewable energy and sustainable practices. It is not enough yet, but we are seeing a shift to more mindful living. Today as I'm writing this paper, the climate clock reads, 7 years 103 days 5 hours 24 minutes 51, 50, 49 seconds meaning we as humanity have bought ourselves two years since 2020 if we continue to focus on saving the Earth maybe we could slow down the irreversible effects about to avalanche our world.

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