

<b>Forum:</b>	Environmental Crisis Committee (ECC)
<b>Issue:</b>	The Burning of the Amazon amongst Emerging Environmental Crises
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## Introduction: The Age of Climate Catastrophes

The country, famous for natural wonders and wide open spaces, its beaches and deserts, is being ravaged by one of the worst wildfires seen and survived, with large swathes of the country devastated since the fire season began in late July, 2019. Blazes in Australia have torn through bushland, wooded areas, and parks like the Blue Mountains. Some of Australia's largest cities have also been affected, including popular places like Melbourne and Sydney -- where fires have damaged homes in the outer residential areas and thick plumes of smoke have slowly covered the entirety of the urban center.



Haze from the bushfires is seen over Sydney's Bondi Beach on December 10, 2019.

Entire towns have been engulfed and swallowed by flames, and residents across several states have lost several homes. The heaviest structural damage occurred in the country's most populated state, NSW, where 1,588 homes have been destroyed and over 650 roughly damaged. About half a billion animals have been affected by the fires, with millions likely dead; though experts expect up to a full billion dead animals by the time the fire shimmers. Some species, like koalas, aren't in immediate danger of extinction says university ecologists, but others that live in niche environments with a much smaller population, including certain types of frogs and birds, could be wiped out entirely if hit by fires.

Though natural causes are commonly blamed, like the dry lightning strikes in drought-affected forests, which are responsible for starting numerous fires in Victoria's East Gippsland region in late December, 2019; human activity has also been a reason for the rise of environmental crises like the wildfires happening in Australia.

These toxic effects (of human activity) can also be seen and reflected through the slow termination of the Amazon rainforests in northwestern Brazil. In comparison to the a hundred Australian

fires, there have been 72,843 fires in Brazil (2019), with more than half in the Amazon region. These fires belch soot, cover those who live downwind with thick, dirty air, hurt wildlife in their path and destroy part of one the most important carbon storehouses left. The number of fires burning across the Amazon is higher than at any point since the 2000s, which was a particularly bad year of drought, says Ruth DeFries, an expert on sustainable development at Columbia University. By late August, 2019, about 7,000 square miles of the forest were in flames, an area just smaller than the size of New Jersey.

Most fires observed in the region are caused by humans. Many of these burnings are set in previously cleared lands in order to quickly remove excess vegetation in fields. Others are set in lands that are still in the process of being cleared, in order to increase the area of open land for crops or cattle. But fires have been worse in the past -- because deforestation were more acute.

Fires caused by humans and deforestation look different. Researchers and experts can identify deforestation-related fires by the thick clouds of smoke that mass high into the atmosphere. Those kinds of plumes rise high because they are fueled by huge numbers of dried-out trees, which burns hot and long, heating up the air above and filling the atmosphere with heavy loads of burned material, explains Doug Morton, the chief of the Biospheric Sciences Laboratory at NASA's Goddard Space Flight Center. A major fear is that the deforestation-centered fires will spread to intact, healthy parts of the forest. Such burns can do serious damage, though, because they move slowly as they burn through leaf litter and ground cover, progressing only a few hundred yards each day. If they aren't identified and put out, they can blaze and light up many trees they encounter.

These environmental crises interfere with the fight between mankind and climate change, which has and will always be a prominent issue, especially in the polluted world we live in today. Unfortunately, the place children and families call home, is slowly but surely beginning to be intoxicated by insensitive human activities. Climate change poses an unprecedented threat to human civilization and the ecosystems of our planet. From the globally increased temperatures, rising sea levels, intense heat waves and wildfires, scientists predict that Earth may become uninhabitable in the near future depending on the amount of heat-trapping gases emitted globally each year. Due to climate change, the global temperature has already increased 1.9 Fahrenheit since 1880, and data provided from NASA's Gravity and Recovery Climate Experiment has shown that Greenland lost an average of 286 billion tons of ice per year between 1993 and 2016.

The 17 Sustainable Development Goals (SDGs) aim to end poverty, protect the planet, and ensure peace and prosperity for all. About half of the SDGs are directly environmental in focus or address the sustainability of natural resources, including human settlement and climate change. The UN Environment promotes environmental sustainability as a crucial enabling factor in ensuring the health of our planet, and is committed to working with all parties to ensure the success of the ambitious agenda. It is not just the responsibility of dedicated organizations to mitigate climate change, but it is also the

responsibility of every human being. Many members of the international community have already taken the first step in trying to reduce the amount of gas emitted.

## Definition of Key Terms

### The Amazon Rainforest

The Amazon Rainforest is a large tropical rainforest occupying the drainage basin of the Amazon River and its tributaries in northern South America and covering an area of 2,300,000 square miles (6,000,000 square km). Comprising about 40 percent of Brazil's total area, it is bounded by the Guiana Highlands to the north, the Andes Mountains to the west, the Brazilian central plateau to the south, and the Atlantic Ocean to the east.

The Amazon rainforest plays an important part in regulating the world's oxygen and carbon cycles. It produces roughly six percent of the world's oxygen and has long been thought to act as a carbon sink, meaning it readily absorbs large amounts of carbon dioxide from the atmosphere. It not only monitors this supply cycle, the rainforest houses at least 10% of the world's known biodiversity, including endemic and endangered flora and fauna, and its river accounts for 15-16% of the world's total river discharge into the oceans.

### Climate Change

Climate change is the long-term rise in the average temperature of the Earth's climate system. It exists as a result of gases building up in the Earth's atmosphere. It is a major aspect of climate change and has been demonstrated by direct temperature measurements and by measurements of various effects of the warming. Climate change, or global warming, directly affects human health through increases in average temperature and is also one of the biggest reasons for rising sea levels.

The direct impacts of climate change are devastating by themselves, but they also worsen existing inequalities and conflicts. For example: hotter temperatures and droughts will make corn, wheat, and other staple crop supplies less stable, leading to price spikes and food shortages. The roughly 800 million people currently living in extreme poverty will be most affected. Animals, insects, and plants -- already threatened by habitat destruction and pollution -- will experience worse. Only a small amount of warming will kill 70 to 90 percent of the world's coral reefs; up to half of plant and animal species in the world's most naturally rich areas could face extinction.

### Deforestation

Deforestation can be defined as the cutting, clearing, and removal of the Earth's forests on a large scale. The most immediate impact of deforestation occurs at the local level with the loss of ecological services provided by tropical rainforests and related ecosystems. Such habitats afford humans valuable services such as erosion prevention, flood control, water filtration, fisheries protection, and pollination—functions that are particularly important to the world's poorest people, who rely on natural resources for their everyday survival. Forest loss also reduces the availability of renewable resources like timber, medicinal plants, nuts and fruit, and game. The global rate of deforestation has continued to decrease due to national and international efforts to conserve forests.

## Environmental Crises

### Amazon Rainforest Wildfires

Ever since the 1970s, Brazil has been looking to industrialize the vast amount of raw resources and farmable land in the Amazon rainforest. Serving as an impasse for industrialization, in 1972, the Brazilian government made its first attempt to incorporate the Amazon into its then majority primary sector based economy by building the trans-Amazonian highway. Cutting from the coastal city of Cabedelo all the way into the Amazonian heart of Labrea, this highway clearly marked the ambition of the Brazilian government to anticipate further and hastened industrialization of the Amazon. Indeed, efforts by other governments reflected similar ambitions - in Peru and Bolivia, a series of laws were passed in order to take away indigenous control of highly productive land in favor of private cattle ranching and agricultural corporations, favoring privatization of Amazonian land. As a result, many corporations resorted to using traditional slash and burn techniques to create the necessary space and fertility to advance their own industries, leading to a long term trend of deforestation and arsonism, especially since lands cleared using slash and burn techniques only stay fertile for roughly two years. By the early 2000s, the leading causes of deforestation were done by the cattle sector to create livestock pasture, and by the early 2010s, mechanized agricultural had also become a leading cause of deforestation. Ever since 2015, other industrial pursuits, mainly the demand for palm and crude oil, have also become one of several leading causes of deforestation in the Amazon. As of 2018, over 800,000 sq km of Amazonian land have been lost, leading a little over 80% of total rainforest coverage compared to the 1970s.

In 2019, increasing rates of wildfires in the Amazon rainforest were reported by both Brazilian, Bolivian, and Peruvian activist groups. As of early August, 2019, Brazil's National Institute for Space Research (NISR) reported that over 80,000 fires in the Brazilian Amazon, with over 3,500 sq km of the Amazon rainforest as a whole lost to fires. For the purposes of this committee, the official starting date of

the crisis will be August 20, 2019, when the sky above the city of Sao Paulo, a coastal city roughly 2,800km from the Amazon rainforest, began to darken from the smoke produced by the wildfires.

### ***Brazilian and International Response***

Before the month of August, Brazilian president Jair Bolsonaro met environmental groups that have long been campaigning to save the Amazon with mockery and inattention. When the NISR reported the extent to which the Amazon was on fire, Bolsonaro was quick to accuse the NISR of taking anti-Brazilian action, calling the numbers fake and firing Ricardo Galvao, the head of the NISR. With increased press coverage came increased international pressure, featuring prominent figures like Emmanuel Macron and Justin Trudeau threatening to revoke trade deals such as the EU-Mercosur and even to take military action. Met also with strong internal environment and indigenous protests, Bolsonaro's hardline policy of no intervention began to falter, leading him deploy military troops to put out the wildfires and to sign a law banning intentional fire setting in the Amazon. Bolsonaro, like his Peruvian and Bolivian world leaders, campaigned on promises to restore the economy by exploring the Amazon's economic potential, even at the sacrifice of environmental security and indigenous policies.

Seeing this as an urgent global crisis, many countries have offered to help Brazil in extinguishing their Amazonian Rainforest fire. Neighboring countries such as Bolivia, Ecuador, Peru, as well as overseas powers such as the USA, UK, and France have also offered to battle the Amazonian fires. Neighboring countries have also signed a pact with Brazil at the Amazon Country Summit to help each other monitor the fires through satellite imagery and to collaborate on reforestation. The G7 have also pledged \$22,000,000 to donate to Brazil. Additionally, a variety of celebrities and NGOs such as Leonardo DiCaprio and Amnesty International contributed a significant amount of donations to combat the rainforest fires.

### ***Environmental and Cultural Damage***

The 2019 Amazon wildfires served as the culmination of half a century's worth of forced displacement and disrespect of native sovereignty in the Amazon. Roughly a third of Amazonian lands belong to indigenous groups, and though the majority of fires are set from non-native lands, the impact on native territories is still profoundly tangible. Forced displacement and decreased quality of life as a result of expansive mining, cattle raising, and agricultural pursuits have caught the attention of many local Brazilians, prompting many protests in the name of indigenous culture. As for the environment, there is no real way of knowing the impact of the wildfires in such a short amount of time; however, seeing as the Amazon produced 20% of the world's new oxygen, many expect increased rates of wildfires and a significant increase in carbon dioxide globally.

## Australian and Californian Forest Fires

In 2018 wildfires swept through California, forcing an estimated 250,000 people to flee their homes, leaving them homeless. The wildfire in California destroyed countless homes, animals, and people's lives. California Governor Jerry Brown requested that President Donald Trump declared the California wildfire as a major disaster, but the USA president blamed the raging fires on the poor forest management. Now in 2019 and 2020, Australia is experiencing a similar natural disaster. The raging wildfire in Australia has killed at least 24 people and millions of animals as of January 7, 2020. In addition, the bushfires have burned more than 12 million acres of land and the Australian government has deployed ships and aircrafts to help rescue and provide aid to the citizens who were in need.

## Implications of Climate Crises

### Diseases and Flu Pandemics

The impact of climate change on diseases, pandemics, and viruses are twofold. Firstly, an increase in average global temperature also means an increase in preexisting infectious diseases such as HIV/AIDS, Hepatitis C, Malaria, amongst others. These serve as an increased burden to public welfare and public health, but for the purposes of the crisis committee, the focus will be on the latter impact of climate change on diseases.

This impact is that of increased infectiousness of newly circulating diseases such as Ebola, Zika virus, and coronavirus. Viruses and flu pandemics alike are both airborne and/or waterborne diseases, making it easy for previously isolated and not extremely infectious diseases to spread quicker and faster as a result of warmer water or air temperatures. These warmer temperatures makes the environment more friendly to host dangerous viruses and diseases. Since the range of mosquitoes have also increased over time due to increased average global temperature, places that has previously limited mosquitoes are now also significantly more vulnerable to infections, as seen in the case of malaria along the Soan river in the region of Punjab.

### Economic Fairness

One of the cornerstone arguments against international retaliation of climate change is the concept of industrial equality. Many developing countries, especially in the sub-Saharan, have been vocal and adamant about the fact that renewable energies are too expensive and not feasible sources of early, primary sector industrialization. Additionally, many are quick to point out that it is unfair that the majority of western countries already exploited their natural resources decades ago yet now seek to limit developing countries from doing so. However, since developing countries are also the ones that are

disproportionately negatively impacted from climate change, developing countries also face a conflict of interest in the area of industrialization, as continued climate change would be significantly detrimental in the long run.

Many efforts put forward to try to mend this economic inequality of industrialization, be it through bilateral deals or international climate conventions, such as COP 21. In the United Nations Framework Convention on Climate Change (UNFCCC), mechanisms such as the carbon market and joint development programs seek to limit and equalize the power of both developing and developed nations in their exercise of greenhouse energy. However, this issue of economic equality still remains at large.

## Major Countries and Organizations Involved

### IPCC

The Intergovernmental Panel on Climate Change (IPCC) is an intergovernmental body of the UN that has devoted their time to providing scientific information relevant to climate change as well as climate change's natural, political and economic impacts on Earth. The IPCC conducts research on climate change and creates reports every five to seven years. The most recent report published in 2014 by the IPCC talks about the causes, impacts, and the future of climate change.

### COP 21

The 2015 United Nations Climate Change Conference was a conference held in Paris where members of this conference created an international treaty which aimed to reduce the emission of gases. In the conference itself, one of the main issues in which countries negotiated and debated on was the issue of transferring funds from MEDCs to LDCs. The end goal of this two week negotiation was to achieve balance after 2050 between atmospheric inputs of harmful gases by emission source. Another major goal was to help LDCs improve their economies and reduce poverty, and thus it called for developing countries to “enhance their mitigation efforts” and strive for emission reduction. This treaty, called The Paris Agreement, has been signed by 197 countries and ratified by 187 as of November 2019.

### Green Peace

GreenPeace is a non-governmental environmental organization dedicated to fighting for a greener, healthier world to free Earth of it's pollution. The organization mainly focuses on worldwide issues such as climate change, deforestation, genetic engineering, etc. Currently, GreenPeace has

written reports and conducted research on the forest fires in the Amazon Rainforest and has been spreading awareness about the issue to the public.

## USA

The United States of America along with other members of the G7 initiative has offered \$22,000,000 to Brazil in an effort to combat the Amazonian fires in which Brazil rejected. Nonetheless, the US has claimed that it is ready to assist Brazil if Brazil was ever in peril, and they believed that “the most constructive way to assist with Brazil’s ongoing effort is in coordination with the Brazilian government.”

## Brazil

On August 27, Brazil, a country that contains some parts of the Amazon Rainforest, rejected G7’s offer of \$22,000,000 to help combat against the forest fire. However, in an effort to reduce the raging fires in the rainforest, President Bolsonaro has accepted Chile’s offer of four planes to battle against the fire and has also deployed 44,000 soldiers to seven states. In addition, Brazil and the US have agreed to promote private-sector development in the rainforest and have also pledged a \$100,000,000 biodiversity conservation fund for the Amazon. Also, Brazil along with six other South American countries have agreed to sign a pact, and set up a disaster response network and satellite monitoring.

## G7

The G7 initiative, consisting of 7 different nations, recently on August 27, 2019, held a weekend summit in which they discussed about numerous issues including the Amazonian wildfires. At the end of the summit, the members of the G7 organization (Canada, France, Germany, Italy, Japan, UK, US) offered Brazil a \$22,000,000 assistance package to help extinguish the fires, primarily to pay for more firefighting planes. Unfortunately, the offer proposed by the G7 was declined by President Bolsonaro after the head of Brazil claimed that Brazil has the fire under control.

## Timeline of Events

<b>Date</b>	<b>Description of event</b>
1800-1870	First Industrial Revolution. Coal, railroads, and land clearing speed up greenhouse gas emission, while better agriculture and sanitation speed up population growth.



1879	International Meteorological Organization begins to compile and standardize global weather data, including temperature.
1870-1910	Second Industrial Revolution. Fertilizers and other chemicals, electricity, and public health further accelerate growth.
1970	First Earth Day. Environmental movement attains strong influence, spreads concern about global degradation.
1989	Fossil-fuel and other U.S. industries form Global Climate Coalition to tell politicians and the public that climate science is too uncertain to justify action.
2001	Third IPCC report states baldly that global warming, unprecedented since the end of the last ice age, is "very likely," with highly damaging future impacts and possible severe surprises. Effective end of debate among all but a few scientists.
2018	Damage from impacts — droughts, floods, tropical cyclones, wildfires, decline of wildlife—is seen sooner and at lower CO2 levels than expected.

## Relevant UN Resolutions and Treaties

- Kyoto Protocol, 11 December 1997
- COP 21, 12 December 2015

## Possible Solutions

Climate change is one of the most challenging problems that humanity has ever faced. At stake are hundreds of millions of lives, innumerable species and ecosystems, the health and viability of the economy, and the future habitability of this planet. Various countries have the technologies, resources, sciences and financial support; while climate change cannot be stopped, it can be slowed.

Steps organizations and corporations should take is cutting emissions. Carbon dioxide and other heat-trapping gases are the main drivers of global warming. To avoid and lessen the worst consequences of climate change, nations will need to regulate legislatures in order to reach "net zero" carbon emissions by 2050 or sooner. Net zero meaning that no more carbon is dumped into the

atmosphere than is taken out. To achieve this, there is a need for massive transformation in how we produce and consume electricity. Such as newer and better transportation systems. The restriction of deforestation and finding alternatives; and other climate-friendly agricultural system. Following, communities need to combat the spread of disinformation. For years, media advisors and special interest groups funded by fossil fuel companies have raised doubts about the truth of global warming. These messages downplay and distort the evidence of climate change, lobby for policies that reward polluters, and attempt to undercut existing standards. This barrage of disinformation misleads and confuses the public about the growing consequences of global warming and makes it more difficult to implement the solutions the international community really need.

Governments should play an active role in promoting and raising awareness for climate change by supplying educational tools to reduce consumerism for instance, or to reward safe and sustainable companies. In general any actions to tackle global warming can only benefit our community, however it might be time to step up measures and create more forums for the major countries and habitations at risk. Sharing ideas and discussing good methods practiced by some can only benefit those who can't afford the cost of planning and research.

The best policy ideas in the world aren't worth much if our society don't pursue activists, experts, and everyday people fighting for change. From school groups to churches; from corporate businesses to mayors and local leaders: our international community needs action.

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