

Hilton 2021

United Nations Environmental Programme

Committee Overview

Deforestation in the Amazon Rainforest

Melting Ice Caps in the Arctic

Impact of Climate Change on Coral Reefs

Committee Description

This committee will be run Harvard Style, meaning that resolutions are not to be written until the date of the conference itself. Additionally, it is highly suggested that every delegate write at least one position paper on a topic, as doing so will be necessary to be considered for an award. If the conference is online, position papers should be emailed to the chairs a couple of days before the day of the conference. If it is in person, position papers will be due the first day of committee.

All delegates are expected to come to the first day of the conference with a working knowledge of all or most of the topics as well as the policies of the countries that they represent. As the United Nations Environment Programme, we are responsible for coordinating responses to environmental issues. Above all, remember that Model UN is not a competition, so get to researching and try to have a little fun!

Chairs

Atharva Shaligram | shaligramatharva@gmail.com

Hello delegates! My name is Atharva Shaligram, and I am a senior at Brighton High School. This is my fourth year of Model UN and my third time as a chair. Along with MUN, I participate in FBLA and Science Olympiad, and enjoy playing tennis and doing karate. If you have any questions or concerns, please don't hesitate to email me and my co-chair. I am looking forward to meeting you all at Hilton!

Adhya Sharma | SharmaA2022@365.bcsd.org

Hello Delegates! My name is Adhya Sharma and I'm a senior at Brighton High School. I've done Model UN for all of high school and this is my first time chairing. Outside of MUN I am on the tennis team, an editor of my school newspaper, and Vice President of my school's Friends of Rachel Club. I'm looking forward to an amazing committee with all of you - feel free to email me or Atharva anytime if you have questions or just want to say hi!

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Deforestation in the Amazon Rainforest



The Amazon is the world's largest rainforest and largest river basin on the planet. In addition, it is home to millions of species of plants and animals, more than anywhere else. Unfortunately, the rainforest has been under constant threat ever since deforestation rates peaked in the area in the late 1990s and early 2000s. This has been damaging, as 17% of the Amazon was lost by 2018.

The Amazon Rainforest has been targeted for development. The leading cause of deforestation is cattle ranching, which is a popular industry in Brazil, a country which holds a majority of the rainforest. Large suppliers of beef are expanding their ranches into the area, which has led to an excessive amount of deforested land. Industrial agriculture is also growing, with soy farms sprouting up in cleared lands to provide food for animals. Cows, logging and mining operations all fuel deforestation. Thus, forest fires are being spurred and are destroying more land.

The impacts of deforestation in this complex ecosystem are significant. Rainfall has decreased and temperatures have risen as a result of the destruction of this self-sufficient forest. Also, the Amazon is known as the "Lungs of the Planet" for providing more than 20% of the world's oxygen, and it will all be at

risk with the current magnitude of trees being chopped down every day. Furthermore, the Coronavirus pandemic has led to a 55% increase in deforestation in the first four months of 2020 as a result of people taking advantage of the crisis to carry out illegal activities.

As a result, Brazil has created protections to reduce deforestation rates in the past decade, but the election of Brazil's president Jair Bolsonaro in 2018 has allowed the Amazon Rainforest to be developed into cattle ranches, farmland, and mining locations faster with looser environmental protections, severely impacting indigenous tribes and the wildlife in the region. With governments such as that of Brazil, the ecosystem will be in danger of survival. If deforestation does not end, then by 2030, 27% of the Amazon biome will be without trees, according to the World Wildlife Fund.

While the effects of deforestation in the Amazon surely impact communities in the region, there are also worldwide impacts like climate change, which has been accelerating due to a lack of vegetation to absorb carbon dioxide. Action needs to be taken to prevent any further damage in the rainforest, or there will be inevitable consequences.

How can UNEP help reduce the rate of deforestation in the Amazon Rainforest while recognizing each country's national sovereignty? What are some ways that deforestation can be prevented while the economies of South American countries in the region like Brazil are not negatively impacted? What can the international community do to currently help restore damaged areas of the Amazon, and what are some solutions to protect the rainforest from further damage?

Sources:

Sentient Media: Amazon Deforestation: Causes, Effects, Facts, and How to Stop It

<https://sentientmedia.org/amazon-deforestation/>

Time: Why is the Amazon Rainforest Disappearing?

<https://time.com/amazon-rainforest-disappearing/>

BBC News: Brazil's Amazon: Deforestation 'surges to 12-year high'

<https://www.bbc.com/news/world-latin-america-55130304>

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Melting Ice Caps in the Arctic



Polar ice caps are melting at great rates as global warming causes climate change. Arctic sea ice is lost at a rate of about 13% per decade, and over the past 30 years, the eldest and thickest ice in the Arctic has declined by an astounding 95%. Accumulatively, the Antarctic and Greenland ice sheets drop about 466 tons of ice a year on average. Put in perspective, that's more than 1.1 billion tons every day. The cryosphere, the icy part of our planet, is so interconnected with other parts of the Earth; therefore, what happens in the cryosphere affects the Earth as a whole.

Snow and ice reflect heat back into the atmosphere, which cancel out other parts of the world that absorb heat. Less ice correlates to less reflected heat, more intense heat waves worldwide, and more extreme winters. Similarly, the ice and permafrost store large amounts of methane, a greenhouse gas. When melted, methane is released, and global warming increases even more.

In addition to increasing our global temperatures, the melting ice caps put coastal communities at risk. Melting ice causes sea levels to rise and harm coastal cities and small islands by heightening coastal flooding and storms, making dangerous weather events even more possible. About 40% of the human population live 100 kilometers from the coast. Terrible weather conditions may force humans to migrate to new lands, and this may cause a population problem. For example, Hurricane Sandy caused nearly \$70 billion in damage and killed 233 people across many countries. In addition to human life, wildlife suffer the effects of global warming. Ice dependent species such as narwhals, polar bears, and walrus are at increasing risk of perishing with shrinking sea ice cover.

Climate change in the Arctic is a global issue that requires a global solution. As carbon dioxide emissions continue to rise, the need for curtailing climate change is imperative. Now is the time to address the widespread effects of the melting ice caps.

What immediate actions can be taken to help people and wildlife suffering from the environmental effects of the melting ice caps? How can UNEP raise awareness about rising global temperatures? What can people do to reduce their carbon footprint?

Sources:

The National Academic Press: The Global Connection to Changes in the Arctic

<https://www.nap.edu/read/21717/chapter/5#16>

Discover Magazine: The Ice Caps Are Melting. Will They Ever Disappear Completely?

<https://www.discovermagazine.com/environment/the-ice-caps-are-melting-will-they-ever-disappear-completely>

World Wildlife: Six Ways Loss of Arctic Ice Impacts Everyone

<https://www.worldwildlife.org/pages/six-ways-loss-of-arctic-ice-impacts-everyone#:~:text=We%20lose%20Arctic%20sea%20ice,in%20the%20summer%20by%202040.>

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Impact of Climate Change on Coral Reefs



Coral reefs are vital ecosystems in oceans, forming a habitat for about 25% of marine life. Sadly, they have been a target of climate change. According to a study, Australia's Great Barrier Reef has lost more than half of its corals since 1995 due to warmer seas driven by climate change. This will accelerate, as over the next 20 years, scientists estimate about 70 to 90% of all coral reefs will disappear primarily as a result of warming ocean waters, ocean acidity, and pollution.

Increased greenhouse gas emissions have led to warmer atmospheric temperatures and increasing levels of carbon dioxide in seawater, killing coral reefs. Also, they are extremely sensitive to warming waters, and an increase in water temperature by a few degrees can cause mass bleaching, a process where algae leaves a coral due to rapid changes in temperature, turning the coral white. Without the coral's main source of food, they are vulnerable and are susceptible to disease and death.

Coral reef destruction negatively impacts the aquatic life that depends on coral communities. Warming causes corals to lose their algae and bleach; acidification limits the calcium deposits that individual corals make, ultimately restricting the size of the coral itself. Unhealthy reefs threaten the survivability of the organisms that inhabit them, but also threaten the human economy. For instance, Coral reefs protect coastlines from storms and erosion, provide jobs for local communities, and offer opportunities for recreation, all of which are at risk due to their destruction. For example, the Great Barrier Reef presents \$3.84 billion to the Australian economy.

While action has been taken to reduce the rate of coral reef destruction, such as transplanting more resilient coral, it is not enough to combat climate change's fast pace. If this issue is not addressed, there will be extensive disturbances to marine ecosystems and their surrounding communities.

How can UNEP help restore damaged coral reefs in the long term? What are some ways to directly protect the marine life that is harmed by coral reef destruction? Are there any ways the global community can assist affected regions?

Sources:

Chemical and Engineering News: Climate Change is Destroying our Coral Reefs. Here's how Scientists Plan to Save Them

<https://cen.acs.org/environment/climate-change/Climate-change-destroying-coral-reefs/98/i6>

CNN: Climate Change Could Kill All of Earth's Coral Reefs by 2100, Scientists Warn

<https://www.cnn.com/2020/02/20/world/coral-reefs-2100-intl-hnk-scli-scni/index.html>

NPR: Scientists are Trying to Save Coral Reefs from Climate Change

<https://www.npr.org/2021/05/27/999837654/fearing-their-kids-will-inherit-dead-coral-reefs-scientists-are-urging-bold-acti>