

# UNEP

*Advanced  
ECOSOC*



**TOPICS:** Deforestation in the Amazon,  
Combating Plastic Pollution

**CHAIRS:** Neekou Hashemi-Nejad, Lola Fasano

LAIMUN XXIX

*December 2-3*

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## Letter from the Secretaries-General

Dear Delegates,

On behalf of our entire staff, it is our pleasure to welcome you to Session XXIX of the Los Angeles Invitational Model United Nations (LAIMUN) conference. LAIMUN XXIX will take place on Saturday, December 2 and Sunday, December 3 of 2023 at the Mira Costa High School (MCHS) campus.

Our staff, composed of over 120 MCHS students, has been working tirelessly to make your debate experience the best it can be. You will find your dais members to be knowledgeable about the issues being debated and MUN procedure. We pride ourselves in hosting a conference that is educational and engaging, and we hope you take advantage of that as you prepare and debate.

At LAIMUN, we value thorough research and preparation. We ask that delegates write position papers following [these directions](#). The deadline to submit position papers to be considered for Committee and Research Awards is Friday, November 24 at 11:59 PM PT. The deadline to submit to be considered for Committee Awards is Thursday, November 30 at 11:59 PM PT.

We also encourage all delegates to read the [LAIMUN Rules of Procedure](#) for conference-specific information and as a reminder of points and motions that can be made during committee.

Feel free to reach out to our staff with any questions or concerns you may have. Delegates can find their chairs' contact information next to their committee profile and the Secretariat's email addresses on the staff page. Any member of the LAIMUN staff will be happy to assist you.

We look forward to seeing you in December!

Sincerely,

Akash Mishra and Lily Stern  
Secretaries-General, LAIMUN XXIX  
[secretarygeneral@mchsmun.org](mailto:secretarygeneral@mchsmun.org)



## Introduction to the USG

Hi delegates!

My name is Claire Koerber and I am the Under-Secretary General of the Economic and Social Council (ECOSOC) for Mira Costa Model UN; I am excited to welcome you all to LAIMUN XXIX.

The advanced and novice ECOSOC committees cover a variety of prevalent international issues that require multifaceted approaches and solutions. Each delegate brings a unique perspective into debate and it is important to use creativity in developing solutions while also paying attention to country policy. Your chairs will hold you to high standards in regards to solutions, speeches, caucusing, and diplomacy, so please be sure to keep this in mind.

To ensure you are adequately prepared for debate, please submit your position papers promptly to your chairs. All work should be your own. This goes for all preparation, speeches, solutions, and resolutions as well. LAIMUN has a strict no pre-written resolution policy, and resolutions should only be worked on at the chair's discretion. Be sure to act respectfully in committee towards fellow delegates and chairs.

I hope LAIMUN XXIX provides you with lasting memories and educational experiences. Our LAIMUN staff do their utmost to give all delegates the best experience possible. We want all delegates to gain knowledge, confidence, speaking skills, and most importantly, a new understanding of international relations and the current events around us that affect the way we live today. Throughout the weekend, make sure to participate and stay engaged during debate. Who knows...if nothing else, you may actually learn a thing or two.

If you have any questions or concerns, please don't hesitate to reach out to [ecosoc@mchsmun.org](mailto:ecosoc@mchsmun.org) or any other secretariat member. Looking forward to seeing you in December and best of luck in your preparation towards success!

All the best,

Lily Stern and Akash Mishra  
Secretaries-General

Claire Koerber  
Under-Secretary General ECOSOC

## Introduction to the Dias

Hello Delegates!

My name is Neekou Hashemi-Nejad and I am excited to be one of your chairs for UNEP Advanced! I am a senior at Mira Costa, and this is my fourth year being involved with the MUN program. I have participated in several local and travel conferences, including conferences in New York, at Yale, and in Montreal. This year, I am a TA for our freshman Intro to MUN program, and I love being able to share what I've learned over the last four years with a new generation of MUN students.

Outside of MUN, I am co-president of Costa's Mock Trial program and co-founder of a local initiative called Digital Truths, which works to fight misinformation in marginalized communities. Outside of Costa, I love to go to concerts and see live music! I also really enjoy thrifting and trying new foods and restaurants. I love to travel and see new places with my friends and family. A fun fact about me is that I can speak Farsi. I'm very excited to see the result of all your careful preparation for our UNEP committee.

Our topics are specifically chosen to correlate with crucial issues the international community currently faces, and I look forward to hearing comprehensive, holistic, and fully feasible solutions to address the mitigation of these issues. Don't be afraid to get creative and formulate solutions that are not only effective, but also very unique. We look forward to seeing you in committee!

–Neekou Hashemi-Nejad

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Hello delegates!

I'm Lola Fasano and I'm a junior here at Mira Costa. I've been in the MUN program for 3 years and I've had a great time debating since then. I've legaled at LAMUN last year for crisis and it's one of the most informative and interactive debates that I have attended.

Last Year I was invited to NISMUN in New York and placed 5th overall. Some things about me are that I play softball for Costa and for my travel team and I've been playing for my whole life. I'm also on the first ever girls flag football team here at costa. I started a Pickle Club here where we just sit around and eat pickles and sell pickles for Club Day. We are currently in the process of getting customized merch and it's sponsored by Grillos Pickles. I used to live in Boston but I moved out here in 5th grade so I've been in California for the past 8 years. I love country music and I believe Morgan Wallen is the best singer songwriter in country music history. I've been to three Wallen concerts in the past two years and I've gotten pretty good at sneaking into the pit. One of my favorite hobbies is going to concerts and listening to music when I'm driving to practice.

I'm so excited to be chairing LAIMUN this year and cannot wait to see all the interesting solutions you guys will bring to debate. Looking forward to seeing you all in December.

Best,

Lola Fasano

## Committee Description

The United Nations Environmental Programme was established in May 1985 by Governing Council Decision 13/2, serving as an organ of the United Nations Environment Assembly. UNEP has been the largest global authority that sets environmental agenda, while ensuring the proper implementation of the environmental aspect of sustainable development. UNEP's actions can be specifically traced to the Sustainable Development Goals (SDGs) in which an emphasis is placed on environmental policy.

The meetings of UNEP are coordinated and directed by the Committee of Permanent Representatives (CPR). The Committee of Permanent Representatives within the UN Environmental Assembly had strengthening measures recently implemented to ensure the proper management of the UN Environmental Programme. These various measures include contributing to the preparation of the agenda of the UNEA governing body, providing substantial advice to the UNEA on policy matters, preparing decisions for adoption by the UNEA and overseeing the implementation of any resolutions or recommendations. Moreover, UNEP covers subprograms aimed at climate action, nature and science policy, environmental legislation, and chemicals and pollution action.

The UNEP's overall mission intends to provide leadership and establish international partnerships in providing support for the environment through inspiring, enabling and informing nations of ways to improve policy without having to compromise the future of new generations.

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Overall, UNEP works with 193 member states as well as businesses and other major groups to create multilateral environmental agreements and research agencies.



## Topic A: Deforestation of the Amazon

### I. Background

The Amazon Forest is about similar to the size of the United States where most of it lies in Brazil. Over the past half decade, Brazil has lost around a fifth of its forest which is almost 300,000 square miles. The loss of trees is the second largest source of greenhouse gas emissions after the burning of fossil fuels.<sup>1</sup> Not only do the trees absorb the carbon from outside air, but can store this carbon in their trunks and roots. Currently, the trees in the Amazon Forest can hold 48 billion tons of carbon. The Amazon Forest is also a major source of oxygen being produced which was originally identified as “the Earth's pair of lungs”. That statement doesn't make much sense because the forest is technically exhaling oxygen instead of breathing it in according to scientists.<sup>2</sup> Deforestation has led to an extreme decrease in the amount of oxygen the forest is providing. Along with affecting climate change, deforestation of the Amazon also has a negative impact on the local communities that live within the forest. Numerous animal species depend on the forest for a home which are quickly going extinct because their habitats are being destroyed. Also over 400 indigenous groups are being forced out of their lands, religion, culture and tradition by land grabbing organizations. There are a multitude of factors that contribute to the deforestation of the Amazon.

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<sup>1</sup> <https://www.cfr.org/amazon-deforestation/#/en>

<sup>2</sup> <https://www.nationalgeographic.com/environment/article/why-amazon-doesnt-produce-20-percent-worlds-oxygen>

Reducing deforestation is crucial because when plants and trees go through photosynthesis, they absorb ample amounts of carbon and sunlight to produce oxygen. When these plants die, they release all the carbon they originally absorbed. Deforestation has caused a decrease in the amount of carbon being sucked up leading to climate change becoming worse. Therefore, the Amazon has become more susceptible to wildfires due to the increase in temperature. On August 22, 2022, they recorded 3,358 wildfires spread across the forest regions in Brazil. This has been the most wildfires recorded since 2007. Most of these fires are being started intentionally. In Brazil, the Amazon accounted for 72% of all fires in the past year but 71% of those fires were created by humans.<sup>3</sup> These people who start the fires are land grabbers who want the land for cattle ranching, growing animal feed or illegal logging.<sup>4</sup> Fire also releases a lot of carbon and smoke into the atmosphere leaving lasting effects not only in the Amazon, but in surrounding regions.

The Amazon is one of the most biodiverse areas in the world. It is home to more than 40,000 plants and over 4,000 animal species which are just the recorded species discovered by humans. Deforestation threatens the ecosystems of many plants and animals that could put thousands of species into extinction. The top eight endangered species include The Golden Lion Tamarin, Jaguars, the Amazon River Dolphin, Giant Otters, Uakari Monkeys, Hyacinth Macaw, South American Tapir, and the Poison Dart Frog.<sup>5</sup> Most of the aquatic species are in danger due

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<sup>3</sup>

<https://news.mongabay.com/2022/11/2022-amazon-fires-tightly-tied-to-recent-deforestation-new-data-show/#:~:text=Nearly%201%2C000%20major%20fires%20burned,burned%20in%20recently%20deforested%20areas.>

<sup>4</sup> <https://www.greenpeace.org/international/story/55533/amazon-rainforest-fires-2022-brazil-causes-climate/>

<sup>5</sup> <https://earth.org/amazon-rainforest-endangered-species/>

to contamination of the waters throughout the Amazon. With the loss of many different creatures, it throws off the forest's equilibrium which causes more plants and animals to die off. A lot of species have already gone extinct due to deforestation and the loss of their habitats. Something that humans forget is that many of the plants and some animals in the Amazon contain important medical properties that have not been fully explored and tested yet. The loss of these unique species can mean the loss of potential cures and medicines for diseases.

Indigenous groups have been native to the Amazon for 11,200 years which beats the arrival of European settlers in the 16th century. Within the first 100 years of European colonization, the population dropped 90%. Most of the population loss was due to disease, but those who remained alive were pushed into slavery, persecution and warfare. Today, indigenous people living in the Amazon do not have to worry about being killed off by diseases but by legal and illegal exploitation of the forest. These indigenous tribes have been greatly affected by the fires as well as ranching but they are still able to maintain their livelihoods.<sup>6</sup> They are able to care for the forest and use what the forest has provided for them. Indigenous tribes use tourists to their advantage by selling different fabrics and weaved items to local markets. Some cultural differences are with their clothing and tribal face paint which are used to differentiate the tribes. They also believe in the spirits of the Amazon by using hallucinogens to connect deeper with the forest. With the deforestation growing, their homes are in danger and are quickly being destroyed.

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<sup>6</sup> <https://www.rainforestcruises.com/guides/how-do-indigenous-tribes-live-in-the-amazon-rainforest>

While laws are put in place throughout Brazil to authorize logging in the Amazon, most of the logging that has been done has been illegal. There have been many instances where the permits were not authorized or even forged to grant access to log. Many companies disregard which parts of the rainforest are specifically blocked off to prevent logging. Most of the timber being cut down is smuggled into Peru or Brazil with no intention of recovering the damaged areas.<sup>7</sup> In 1965, Brazil created its first Forest Code which had landowners keep 35% to 80% under vegetation and only allow 20% to be used for farming. These laws have been extremely difficult to enforce over the years due to the lack of boundaries around the forest and limited barriers to keep people out.<sup>8</sup> These places take years to be revived and regrown. When the land is cleared after being destroyed, loggers typically remove all the expensive, valuable hardwood first. Once that is all moved out, all the rest of the wood is typically burned. When logging the trees in the Amazon, many companies bring in trucks that destroy everything in their path which also includes indigenous tribes sanctuaries. Along with logging, most of the land that has been logged is used for cattle ranching. There has been an incline of the demand of beef from America and parts of Asia. This has caused Brazil to be the top exporter of beef in the world, with exports around \$7 billion in 2020.

## **II. UN Involvement**

Addressing the issue of deforestation throughout the world is a concern of the UN. The UN has long recognized the devastating effects that deforestation has on the environment,

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[https://www.panda.org/discover/knowledge\\_hub/where\\_we\\_work/amazon/amazon\\_threats/other\\_threats/logging\\_amazon/](https://www.panda.org/discover/knowledge_hub/where_we_work/amazon/amazon_threats/other_threats/logging_amazon/)

<sup>8</sup> <https://www.nature.org/en-us/about-us/where-we-work/latin-america/brazil/stories-in-brazil/brazils-forest-code/>

humans, and wildlife. In 2015, the UN launched the Sustainable Development Goals (SDG's), a set of 17 goals that aimed to create a more sustainable world by 2030. More specifically, Goal 15 is about protecting and restoring ecosystems which include forests such as the Amazon. In 2008, the UN also established the Reducing Emissions from Deforestation and Forest Degradation (REDD+) . This program provides financial incentives to other countries that make an effort to reduce their greenhouse gas emissions by protecting forest lands. In addition to these initiatives, the UN recognizes the importance of considering and involving indigenous tribes who live in the forest in efforts to combat deforestation. Some of the efforts made by the UN are adopting The UN Declaration on the Rights of Indigenous Peoples which recognizes their rights to their homes and traditions. They also established the Forest Dialogue which creates a gathering for dialogue between everyone who is involved with the forest. This was created so people from different backgrounds can be heard and ideas shared to promote sustainable forest management.

In 2020, an international panel of 200 scientists came together to discuss putting a halt to deforestation in the Amazon. This panel, under the United Nations Sustainable Development Solutions Network, issued a 33 chapter report in the Amazons ecosystem in response to climate change. These changes have been happening at an alarming rate so it was agreed upon that it is time to do something. The panel also addressed the illegal activities as well as the expansion of manmade agricultural areas.<sup>9</sup> These areas included any land being used for cattle ranching and burning of unwanted logs from logging organizations. Most of these practices are done illegally

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<https://news.globallandscapesforum.org/54277/u-n-science-panel-releases-initial-findings-of-upcoming-overview-of-the-amazon/>

and without proper documentation. These scientists made sure to research the community of indigenous tribes and the biodiversity throughout the Amazon to make sure that every problem is accounted for.

The United Nations Forum on Forests, represented by the UN Department of Economic and Social Affairs, came to the conclusion that by 2030 the UN Strategic Plan for Forests will be implemented and making progress. This plan will help reverse the major loss of forest by deforestation by promoting sustainable forest management. Their goal is to increase forests all over the world by 3%. Along with strategies to help rebuild forests, the Strategic Plan will also help eradicate extreme poverty in places that rely solely on the Amazon. With improved management of land, forests and trees could help mitigate 30% of greenhouse gasses by 2030 to keep the global average temperature from increasing 2 degrees Celsius.<sup>10</sup> This is extremely important due to the warming of the earth. Ice caps are melting and plants are dying from the extreme heat. By implementing more trees to revive the forest, the trees will provide a cooling effect to the world. The FAO has also made it clear that combating deforestation requires looking beyond the main sectors and finding the driving causes for this destruction.<sup>11</sup> Since cattle is becoming a huge demand all over the world, it's important to create more sustainable ways to ranch and farm so it's healthy for the surrounding forest. The UNEP (United Nations Environment Programme) has expressed that there is an urgent need for transforming economic systems relating to food and land usage surrounding deforestation. More efforts should be put into rebuilding the forest lands that have been taken over by illegal loggers or cattle ranchers

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<sup>10</sup> <https://www.un.org/development/desa/en/news/sustainable/cop25-deforestation.html>

<sup>11</sup> <https://www.un.org/development/desa/en/news/sustainable/cop25-deforestation.html>

instead of pouring money into organizations that promote land grabbing. Increasing the funds for replenishing the Amazon will balance out the forests equilibrium of biodiversity and throughout indigenous tribes.

Many organizations are recognizing the importance of ending deforestation. The UN has called for increased action to address deforestation which includes enforcing stronger laws, increased funding for reconstructions, and greater involvement from local communities.

However, much more needs to be done to address this pressing issue and to reduce the amount of deforestation throughout the Amazon.

### **III. Topics to Consider**

#### **A. Carbon Emissions**

The biggest and broadest topic relating to deforestation of the Amazon is climate change. Most of the world's oxygen comes from the trees through the forest and with the growth of the carbon emissions from machinery, the trees can't keep up. Since the 1800, humans have been the leading cause of climate change due to burning fossil fuels. Driving cars, heating buildings and especially cutting down trees can increase the amount of greenhouse gasses in the atmosphere. The increasing temperature creates more wildfires and more loss of biodiversity throughout the Amazon Forest.<sup>12</sup> Lands suffering from deforestation contribute to 12%-20% of all greenhouse emissions. Some forests around the world are now emitting more carbon than actually absorbing it.<sup>13</sup> Carbon emissions are a critical component of the global climate system. Changes in these

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<sup>12</sup> <https://www.un.org/en/climatechange/what-is-climate-change>

<sup>13</sup>

<https://www.lse.ac.uk/granthaminstitute/explainers/whats-redd-and-will-it-help-tackle-climate-change/#:~:text=When%20deforestation%20occurs%2C%20much%20of,Africa%2C%20followed%20by%20South%20America.>

amounts can have far-reaching impacts on the environment and even ocean patterns or currents around the globe. Protecting the Amazon rainforest is essential for controlling the impacts of climate change.

## B. Illegal deforestation

Illegal logging is one of the biggest threats to the protection of the Amazon. Many citizens are standing up in the forest because the law enforcement won't. These loggers have threatened to kill anyone who steps in their way which makes it even a bigger issue. In the last decade, around 300 people have been killed due to disputes over the protection of forest lands. The loggers' goals are to make room for cattle ranching and farming which means clearing out hundreds of acres of land. Most of the timber that isn't good enough to sell or used to build houses is burned causing more fires and more carbon emissions. Under the 2015 Paris Agreement on Climate Change, it stated that it would eliminate illegal deforestation by 2030. This would account for 90% of all deforestation. This would also mean that Brazil would have to start rounding up criminal groups that do a lot of the illegal logging and mining.<sup>14</sup>

## C. Protecting Indigenous Tribes

With so many people living within the forest, it is so important to protect the rights and lives of these individuals. Agriculture is extremely important to the indigenous peoples day to day life. They use the wild for hunting and gathering as well as using the trees for cover from the storms. Deforestation takes away everything from them. It takes their homes, their source of

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<sup>14</sup>

<https://www.hrw.org/report/2019/09/17/rainforest-mafias/how-violence-and-impunity-fuel-deforestation-brazils-amazon>



food, their tradition, and their culture. Illegal logging has been an issue because loggers will become violent towards anyone trying to defend the forest. Especially since there are “uncontacted tribes” where they have no contact with the outside world, they aren't getting the representation they deserve to protect their homes. There could be as many as 70 uncontacted tribes within the Amazon. Deforestation has made a few tribes initiate “first contact” which shows how much of an issue this is. Now the government doesn't know how to regulate policies regarding territory boundaries, language barriers and especially new diseases.<sup>15</sup> Indigenous communities have inhabited the rainforest for thousands of years and have developed unique knowledge about the ways of the forest and practices relating to preserving the forest. By supporting the indigenous land and tribe rights, we can help preserve the Amazon rainforest and the biodiversity it supports.

#### **IV. Case Study -Yanomami Tribe**

Deforestation has been its worst it's been in 15 years. The INEP or Brazil's National Institution for Space Research came to the conclusion that 13,235 square kilometers of the forest was deforested between August 2020 and July 2021.<sup>16</sup> Farmers have been burning this land to create space to raise livestock. The Amazon also is one of the key components for weather patterns. Trees release water into the atmosphere through transpiration. This water can form vast rivers and big rain clouds which affect different countries around the world. These rain clouds

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<sup>15</sup> <https://www.rainforestcruises.com/guides/how-do-indigenous-tribes-live-in-the-amazon-rainforest>

<sup>16</sup>

<https://www.cnbc.com/2021/12/30/why-deforestation-in-brazils-amazon-has-soared-to-its-highest-level-in-15-years.html>

can especially affect Mexico and the United States.<sup>17</sup> The change in weather and temperature have greatly affected the indigenous tribes throughout the Amazon. Scientists estimate that around 90% of the Amazon has to stay intact for the weather and moisture cycles to continue. This will keep all the ecosystems throughout the forest healthy.<sup>18</sup>

One ecosystem that has not stayed healthy is the Yanomami tribe located on the border of Brazil and Venezuela. This tribe has a population of about 29,000 who hunt and gather to stay alive. The Yanomami tribe is one of the largest groups in the Amazon rainforest. Due to deforestation, they are in serious risk of losing their lands altogether. Their land is very important to them because they have a strong connection to the natural world and they believe that all living things are interconnected through natural spirits. Many people who have come into their lands to cut down trees and mine for gold have attracted a huge wave of illegal prosecutors. These prosecutors have poisoned rivers and brought deadly diseases to the people of the Yanomami tribe. The Yanomami tribe has been fighting for their rights and protection from the government for many years.

There are an estimated 20,000 illegal gold miners in the lands of the Yanomami tribe. They are known as garimpeiros and they mine protected land which is off limits.<sup>19</sup> During international news reports, garimpeiros are depicted as violent and villains who destroy the land beyond reach of the law. These reports really show how Amazonians really feel about

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<sup>17</sup>

<https://www.washingtonpost.com/climate-environment/2022/07/08/amazon-rainforest-deforestation-record-climate/>

<sup>18</sup> <https://amazonaid.org/weather-patterns/>

<sup>19</sup> <https://www.ohchr.org/en/stories/2022/08/amazon-rainforest-indigenous-tribe-fights-survival>

garimpeiros coming into their territory.<sup>20</sup> Joenia Wapichana who is a part of the Brazilian Congress, has stated that the devastation created by the garimpeiros has been seen as a threat to the extensive biodiversity and the very existence of Indigenous tribes. When trees and parts of the forests are destroyed, the indigenous people lose their traditional values and practices such as using plants for medicines. Since the Yanomami tribe have a rich cultural heritage containing unique art and music, keeping their livelihoods will ensure their history as a community alive.

Garimpeiros also bring mercury, malnutrition and malaria. When they shift for gold, they use mercury to separate the gold to easily be collected. This mercury is then washed away into the rivers where children in the Yanomami tribe ingest it. This can cause mercury poisoning as well as development problems. Since garimpeiros are destroying plants and trees, the Yanomami tribe members can't hunt or gather anymore causing an extreme change in their diet. Growing children no longer have enough to eat and malnutrition rates have skyrocketed. Malaria rates have also soared throughout tribes from mosquitos that garimpeiros have brought in.<sup>21</sup>

## V. Guided Questions

- A. How can you ensure the voices of indigenous tribes are heard and are protected due to illegal logging and land grabbing?
- B. How can we solve the problem of deforestation on a community level and a governmental level?
- C. How can we protect numerous species and make sure they will not go extinct due to the destruction of ecosystems?

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<sup>20</sup> <https://www.library.ucsb.edu/events-exhibitions/garimpeiros-wildcat-gold-miners-amazon-rainforest>

<sup>21</sup> <https://www.ohchr.org/en/stories/2022/08/amazon-rainforest-indigenous-tribe-fights-survival>

- D. How can we start to lessen the transparency surrounding illegal deforestation and maintain proper documentation that the deforestation is authorized by the government?
- E. How can the laws regarding deforestation become more effective?

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## Topic B: Combating Plastic Pollution

### I. Background

Plastics became a significant player in mass production in the context of World War II, where wartime industries welcomed the easily produced, highly malleable commodity. Plastic, or as it was once called, celluloid, was seen as a miraculous replacement for limited natural resources such as elephant ivory, wood, or even metal. Weapons and machinery needed for the war effort were produced with plastic, and the cost-efficient plastics became increasingly prevalent in insulating electric wires and creating electric devices. After the war, when plastic production had increased in the United States by 300%, the versatility and cost-effectiveness of plastic attracted manufacturers and consumers in a world observing rapidly expanding capitalism and mass consumption.<sup>22</sup> By the 1970s, plastic had attracted public attention in a less favorable light. Internationally, people grew increasingly aware of the negative effects human consumption had on the environment, plastic waste being increasingly perceived as a primary concern. Marine plastic debris was first studied in the Sargasso Sea in 1972, prompting public awareness and environmental activism, and eventually leading to paramount discoveries, such as the discovery of the notorious Great Pacific Garbage Patch in 1996.<sup>23</sup>

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<sup>22</sup>

<https://sciencehistory.org/education/classroom-activities/role-playing-games/case-of-plastics/history-and-future-of-plastics/>

<sup>23</sup>

<https://tos.org/oceanography/article/the-story-of-plastic-pollution-from-the-distant-ocean-gyres-to-the-global-policy-stage>

Plastic debris enters the ocean through anthropogenic activities. 80% of marine plastic pollution is from land-based activities, where 20% comes from aquaculture and shipping. Inadequate waste management systems allow an abundance of both macroplastics and microplastics to reach the sea. For example, gray water - visibly uncontaminated waste water from washing textiles and clothing - that is used to wash textiles made from synthetic materials, gives off microplastics that enter waste treatment plants. Nearly 90% of microplastics that reach these waste treatment plants remain in the sewage sludge that is transferred to farms to fertilize agricultural fields. With the highly unsustainable agricultural methods currently used in much of the world, high levels of runoff transfer the microplastics in the fertilizer to waterways and eventually, the ocean.<sup>24</sup>

Plastic pollution in marine environments can prove catastrophic for its inhabitants. Plastic is not biodegradable, and instead, upon entering marine and terrestrial ecosystems, ultraviolet radiation and solar energy causes photodegradation, which breaks down visible plastic debris, or macroplastics, into smaller microplastics and nanoplastics.<sup>25</sup> As microplastics accumulate on ocean surfaces, they block sun rays from penetrating the surface, restricting autotrophic phytoplankton and algae from being able to photosynthesize and support food webs. Plastics also leach harmful chemicals that lead to further environmental strain, including BPA, or bisphenol A, which can cause serious health complications for marine life.<sup>26</sup> Larger debris can be mistaken as food by predators, causing choking and internal organ damage. Plastic fishing nets, abandoned

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<sup>24</sup> <https://www.iucn.org/story/202207/plastic-pollution-crisis>

<sup>25</sup> <https://www.iucn.org/story/202207/plastic-pollution-crisis>

<sup>26</sup> <https://education.nationalgeographic.org/resource/great-pacific-garbage-patch/>

by fishing corporations, are known to trap sea animals, often proving fatal for mammals such as seals who, once trapped, cannot make their way back to the surface for air.

Apart from simply emitting harmful chemicals, plastics also absorb industrial pollutants, including polychlorinated biphenyls (PCBs). These chemicals, easily transmitted to absorbent ocean plastics, then enter the food chain upon being mistakenly consumed by sea life. It is estimated that by the year 2050, 99% of seabird species will have experienced the harmful effects of eating plastic. Swallowing plastic can lead to starvation, as the volume of the plastic consumed takes up too much space in a bird's stomach, not allowing the consumption of proper sustenance.<sup>27</sup>

Chemicals emitted by plastics can also have detrimental effects on human health. With plastics being broken down in the ocean, 55% of fish species that humans fish for consumption are found with harmful microplastics in their gastrointestinal tracts.<sup>28</sup> Furthermore, plastic being one of the most common materials for packaging for food and personal items, scientists and civilians alike worry about the effect of chemicals, like bisphenol A or phthalates, on human processes, such as the endocrine system and reproductive health. Others advocate for lesser consumption of plastic goods, such as plastic bags in grocery stores, to decrease humanity's ecological footprint in terms of plastic pollution.<sup>29</sup>

The synthetic nature of plastic makes its removal from landfills and marine ecosystems near impossible; a piece of plastic can take as long as 1,000 years to decompose. With its usage

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<sup>27</sup> [https://www.biologicaldiversity.org/campaigns/ocean\\_plastics/](https://www.biologicaldiversity.org/campaigns/ocean_plastics/)

<sup>28</sup> <https://wwf.org.au/blogs/plastic-fish-and-the-great-pacific-garbage-patch/>

<sup>29</sup>

<https://sciencehistory.org/education/classroom-activities/role-playing-games/case-of-plastics/history-and-future-of-plastics/>

for mainly disposable products, plastics are often mindlessly disposed of, with only 10% of plastics produced since the 1950s being properly recycled or reused. Nearly 4/5 of plastic waste ends up in the ocean or in landfills.<sup>30</sup> Recycling projects have been started, such as the plastic-collection program the plastic industry implemented in the 1980s. However, large corporations are exacerbating the problem rather than helping heal the damage they have catalyzed. Fossil fuel industry giants have planned to increase plastic production by as much as 40% within the next decade, signaling a continuation of the highly harmful practice of hydraulic fracking for further plastic and atmospheric pollution.<sup>31</sup>

With industrialization and the effects of industrialization - notably, the proliferation of plastic in daily use - reaching more areas than ever before, the juxtaposition of short-term, profit-focused commercial interest and long-term, environmentally sustainable goals often seem unable to coexist. While governments around the world make pledges to curb both the causes and effects of plastic pollution, industry and commerce speak a different truth. Many European industry leaders are trading with the United States to acquire ethane and other by-products of hydraulic fracking that can be used in manufacturing plastics.<sup>32</sup> While the European Union asserts its intentions to address climate change and plastic pollution, Europe's plastic industry, with the support of the United States, seems to only be increasing the intensity of plastic production. In order to stop the already global and irreversible effects of plastic pollution, the

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<sup>30</sup> <https://www.soalliance.org/soablog/plastic-free-july-20-countries-taking-action>

<sup>31</sup> [https://www.biologicaldiversity.org/campaigns/ocean\\_plastics/](https://www.biologicaldiversity.org/campaigns/ocean_plastics/)

<sup>32</sup>

<https://www.nationalgeographic.com/environment/article/europe-plastics-industry-about-to-boom-us-fracking-driving-it>

global community must examine its priorities and recognize the true threat that plastic poses in the current world.

## II. UN Involvement

The United Nations has, especially in recent years, placed particular focus on mitigating the extent and damages of plastic pollution. Pollution and sustainability was addressed on a global scale in the 1992 UN Conference on Environment and Development (UNCED), followed by later forums, such as the more recent Agenda-17 Sustainable Development Goals (SDG's), which laid out a set of plans addressing current global problems, including plans to curb pollution and plastic pollution by 2030.<sup>33</sup>

The Ellen MacArthur Foundation has been especially active in mitigating plastic waste and its effects on the environment. In partnership with UNEP, the foundation initiated the New Plastic Economy Global Commitment in 2018, where global corporations pledged to contribute to the circularity of plastics.<sup>34</sup> Nearly 300 brands were part of this historical development, with financial contributions exceeding 10 billion USD. The groundwork laid by this commitment elicited the crucial steps towards plastics sustainability taken in events in the fifth session of the United Nations Environment Assembly (UNEA-5) in Nairobi in March of 2022. In this session, 175 member states supported an internationally binding agreement that would regulate plastics sustainability by 2024.<sup>35</sup> This will occur through the oversight of the Intergovernmental Negotiating Committee (INC), which will develop a draft for the international guidelines. Once

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<sup>33</sup> <https://www.plasticcollective.co/history-of-plastic-pollution/>

<sup>34</sup>

<https://www.unep.org/news-and-stories/story/un-ocean-conference-new-governments-commit-circular-economy-plastics>

<sup>35</sup> <https://news.un.org/en/story/2022/03/1113142>

the draft is finalized, the agreement will encourage a greater focus on international cooperation for implementing sustainable scientific and urban infrastructure in order to properly address the dangers of plastic production and the challenges of its disposal. With the actions that this agreement plans to impose, the UN expects the amount of plastic entering oceans to decrease by as much as 80% by 2040, decrease global greenhouse gas emissions by 25%, and even make available hundreds of thousands of new jobs.<sup>36</sup>

Despite the widespread eagerness of international bodies to mitigate plastic usage and waste, the effectiveness of actions taken may not be adequate. Beyond the sustainable goals the participating members of UNEA-5 hope to achieve by 2040, 100 million metric tons of plastic from personal and industrial use still remain, and will need to be properly disposed of with further measures.<sup>37</sup> Furthermore, the more time it takes to create a draft and enforce the implementation of the agreement's conditions, the more plastic will accumulate in marine environments and in the atmosphere. As small as a five year delay will generate 80 million more metric tons of plastic pollution to be prevalent by 2040.<sup>38</sup>

### **III. Topics to Consider**

#### **A. Limiting single-use plastic in the global supply chain**

Improving humanity's ecological footprint is a top priority for activists and policymakers alike. It is crucial to recognize plastic bag bans as an increasingly prevalent reality in plastic

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<sup>36</sup>

<https://www.unep.org/news-and-stories/press-release/historic-day-campaign-beat-plastic-pollution-nations-commit-develop>

<sup>37</sup>

[https://news.un.org/en/story/2023/05/1136702#:~:text=Plastic%20pollution%20could%20be%20slashed,UNEP\)%20report%20released%20on%20Tuesday](https://news.un.org/en/story/2023/05/1136702#:~:text=Plastic%20pollution%20could%20be%20slashed,UNEP)%20report%20released%20on%20Tuesday)

<sup>38</sup> [https://wedocs.unep.org/bitstream/handle/20.500.11822/42277/Plastic\\_pollution.pdf?sequence=4](https://wedocs.unep.org/bitstream/handle/20.500.11822/42277/Plastic_pollution.pdf?sequence=4)

reduction. Bangladesh was the first country to impose a ban on plastic bags, and as of 2018, UNEP announced that 127 countries have implemented some form of plastic bag restricting legislation.<sup>39</sup> For example, in 2021, China approached the daunting project of implementing plastic bag bans throughout major cities, as well as creating a five-year plan for phasing out similarly harmful plastic products.<sup>40</sup> However, much progress is still left to be made. Only 55 countries have implemented wholly effective restrictions on the use, production, and importation of plastic bags in all aspects of the industrial supply chain, and the rest either have too few restrictions or have legislature that is not properly enforced.<sup>41</sup> Other forms of single-use plastic remain detrimental to the environment and to society's recovery from the mass production of plastic products. Delegates should consider the effects of the production and usage of single-use plastic, and explore solutions on all levels of the supply chain, including manufacturing, marketing, and consumption in order to mitigate the current assimilation of single-use plastic into the global lifestyle.

## **B. Mitigating dangers to the marine environment**

While plastic pollution is detrimental to all environments, it is particularly dangerous to oceanic ecosystems, and the organisms that inhabit such areas. Delegates should consider the effects of plastic production, especially oil extraction. Fracking practices and technologies are known to cause ocean oil spills into the oceans. Additionally, chemicals used during offshore fracking are often not properly disposed of, leaking into ocean ecosystems and often, proving

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<sup>39</sup> <https://www.unep.org/news-and-stories/story/birth-ban-history-plastic-shopping-bag>

<sup>40</sup>

<https://www.loc.gov/item/global-legal-monitor/2021-03-23/china-single-use-plastic-straw-and-bag-ban-takes-effect/>

<sup>41</sup> <https://www.wri.org/insights/127-countries-now-regulate-plastic-bags-why-arent-we-seeing-less-pollution>

near fatal to aquatic organisms as large as blue whales.<sup>42</sup> Beyond oil production, physical plastic debris cannot be overlooked when seeking global solutions to the issue at hand. Visible plastic debris, found near shorelines, offshore, or in garbage clusters such as the Great Pacific Garbage Patch, can pose a serious risk for surface-dwelling marine life. Considering common risks such as asphyxiation through choking, as well as irreversible internal damage following the misinterpretation of plastic as food, is crucial in discussions regarding plastic mitigation. The fish industry is a large proponent of plastic pollution through abandoned plastic fishing nets, among many other unsustainable practices. Countries and fishing industries around the world must address their role in plastic pollution and mass fish endangerment immediately in order to flatten the disease that is growing exponentially in marine environments - plastic.

### **C. Effects of anthropogenic plastic pollution on humanity**

Furthermore, countries must consider the organ and tissue damage that results from bioaccumulation and biomagnification of microplastic pollution in fish - damage that is transferred directly to humans upon fish consumption. In this way, delegates must also consider the repercussions of anthropogenic plastic pollution on humanity itself. Plastic pollution causes negative human health effects through limiting and damaging food supply, not only within the seafood industry, but within terrestrial livestock and produce as well. Humans are not exempt from being harmed by the plastic they were responsible for initially circulating. Furthermore, plastic pollution harms economic activities, including, but not limited to, leisure and tourism industries. Tourism dependent communities have seen a noticeable decline in visitors as plastic

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<sup>42</sup> [https://www.biologicaldiversity.org/campaigns/offshore\\_fracking/index.html](https://www.biologicaldiversity.org/campaigns/offshore_fracking/index.html)



debris on beaches and tourism sites continues to increase. Plastic pollution also causes a detrimental decline in the perceived value of a certain beach or tourist destination, leading to decreased tourist-related revenue for the near 80% of tourism-dependent communities that rely on their pristine beaches to attract beachgoers.<sup>43</sup>

#### **D. Efforts to limit plastic circulation and address immediate clean-up concerns**

Delegates should consider current and past attempts to both clear and measure the extent of plastic pollution, and take care to provide innovative solutions that do not share the same shortcomings as any unsuccessful efforts. Nations and intergovernmental organizations, such as the UN and its affiliated bodies, as well as research groups and non-governmental organizations have been crucial in catalyzing plans to address plastic pollution. One such effort is the Ocean Cleanup system. This plan, overseen by a Denmark-based nonprofit organization, has already cleared over 220,000 pounds of plastic debris from the Great Pacific Garbage Patch.<sup>44</sup> However, attempts such as this are often in vain, or at the very least, produce unintended consequences that may be seen by some critics as parallel to the original problem at hand. The Ocean Cleanup plan, for example, uses fossil fuels to power its machinery and ships, causing 660 tons of carbon emissions for each month it is used to clear plastic from the oceans. Furthermore, plastic clean-up technology is often harmful, or even fatal, to surface dwelling marine life, from worms to large fish, that may get caught in the machinery. Delegates must consider the controversial ramifications of existing methods to decrease plastic pollution, and acknowledge the complexities of solving plastic pollution when proposing their innovative solutions.

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<sup>43</sup> <https://marinedebris.noaa.gov/research/economic-impacts-marine-debris-tourism-dependent-communities>

<sup>44</sup> <https://news.climate.columbia.edu/2022/10/13/how-do-we-clean-up-all-that-ocean-plastic/>

## IV. Case Study: The Great Pacific Garbage Patch (GPGP)

Located in the North Pacific Ocean between California and Hawaii, the Great Pacific Garbage Patch is a vortex of swirling plastic debris. The North Equatorial, California, North Pacific, and Kuroshio ocean currents make up the North Pacific Subtropical Gyre, which traps approximately 1.8 trillion pieces of plastic debris in its center. The patch is estimated to be 1.6 million square kilometers and is rapidly expanding each year, having increased in size 100 times in the last four decades.<sup>45</sup> Roughly 75% of the mass of the garbage patch is made up of debris 5 cm long, and 46% of the mass is composed of fishing nets alone. Microplastics, accounting for 8% mass, also comprised 94% of the physical 1.8 trillion pieces.<sup>46</sup> There are approximately 5.1 trillion particles of microplastics in global oceans.<sup>47</sup>

Plastic waste that ends up in the garbage patch can circulate in the global waters for as long as 6 years before reaching its destination in the Pacific, affecting marine life internationally.<sup>48</sup> When this broken down plastic debris is consumed by fish, the microplastics bioaccumulate in the organism. With such a great volume of plastic and microplastic in the oceans microplastic biomagnification is another extreme concern for marine life around the GPGP. Biomagnification ensures that the plastic one organism consumes will continue to be transferred up the food chain

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<sup>45</sup>

[https://www.maxwell.syr.edu/docs/default-source/research/parcc/e-parcc/the-great-pacific-garbage-patch-khaldoun-a-bousssi-and-tina-nabatchi-simulation.pdf?sfvrsn=d1873919\\_2](https://www.maxwell.syr.edu/docs/default-source/research/parcc/e-parcc/the-great-pacific-garbage-patch-khaldoun-a-bousssi-and-tina-nabatchi-simulation.pdf?sfvrsn=d1873919_2)

<sup>46</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5864935/>

<sup>47</sup> <https://wwf.org.au/blogs/plastic-fish-and-the-great-pacific-garbage-patch/>

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[https://www.maxwell.syr.edu/docs/default-source/research/parcc/e-parcc/the-great-pacific-garbage-patch-khaldoun-a-bousssi-and-tina-nabatchi-simulation.pdf?sfvrsn=d1873919\\_2](https://www.maxwell.syr.edu/docs/default-source/research/parcc/e-parcc/the-great-pacific-garbage-patch-khaldoun-a-bousssi-and-tina-nabatchi-simulation.pdf?sfvrsn=d1873919_2)

to animals that prey on the original organism. The plastic, unable to decompose, gathers in the tissues of the predatory animal, leading to extreme negative health effects.<sup>49</sup>

Buoyant plastic, which makes up roughly 60% of all plastic produced, poses a particularly worrying problem within the GPGP. Plastic is categorized as buoyant when it is less dense than the water it is submerged in, allowing the plastic to float to the surface. Once on the surface, buoyant plastic is more easily moved by air and ocean currents, spreading the extent of the pollution and allowing the plastic accumulated in the garbage patch to be distributed around the world. Buoyant plastic harms marine life both on the surface, and blocks sunlight from reaching autotrophic photosynthesizers.<sup>50</sup> In marine life populations, over one million seabirds and 100,000 marine mammals perish per year because of plastic debris.

A large source of plastic overconsumption and waste is tourism, especially in tourism magnets such as Hawaii, in close geographic proximity to the Great Pacific Garbage Patch. Hotel chains in Hawaii, including Marriott and Hyatt, have been considering imposing bans on complimentary single-use plastic products, so as to decrease the effect of tourism on the exacerbation of plastic pollution in the GPGP. Banning single use plastic, whether in island tourism industries or on a larger scale, with bans for single use plastic bottles and bags being implemented worldwide, Unfortunately, Hawaii has announced its economic inability to continue to recycle plastics, instead placing plastic waste in landfills or incineration. Not only does

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<sup>49</sup> <https://savethewater.org/the-ugly-truth-about-single-use-plastics-a-garbage-patch-and-their-effect-on-our-oceans/>

<sup>50</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5864935/>

incinerating plastic cause a host of respiratory diseases and contributes to atmospheric pollution, improper landfill usage so close to the ocean poses the risk of further expansion of the GPGP.<sup>51</sup>

While some efforts have been made to halt the expansion of the patch, the GPGP is too far from the shores of any country for any government to be willing to take responsibility for fully clearing the debris - a project that would require an unfathomable amount of monetary contribution. It is in fact estimated to require a total of 67 vessels working for one year to be able to clean a mere 1% of plastic debris in the garbage patch.<sup>52</sup>

## V. Guided Questions

- A. How has your country been personally affected by plastic pollution?
- B. In what ways does plastic production and consumption create negative consequences in unexpected ways, such as in various sectors of the economy?
- C. How can the harmful health effects of plastic pollution on animals, marine life, humans, and the global community as a whole be addressed?
- D. How can plastic debris be properly disposed of without causing further strain on landfills or other harmful waste disposal methods
- E. How can recycling be improved and/or expanded to limit plastic pollution, especially for variations of plastic that cannot be easily recycled (i.e. thin plastic bags)? Similarly, how can “reusing” programs be made more effective and enforceable?

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<sup>51</sup> <https://earth.org/plastic-pollution-in-hawaii/>

<sup>52</sup> <https://education.nationalgeographic.org/resource/great-pacific-garbage-patch/>

- F. What are some ways the size and environmental repercussions correlated with the Great Pacific Garbage Patch can be decreased?
- G. In what ways has your country contributed towards the development of plastic pollution, and in what ways can your country diminish these negative effects?
- H. How can corporations that continue to exacerbate plastic pollution without considering long-term repercussions be motivated to participate in sustainable practices?
- I. Are there any ways to utilize plastic in a way that is beneficial? What are they?

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