United Nations Environment Programme: Eliminating Plastic Pollution

December 2, 2023

Letters from the Co-Chairs

Hello, fine delegates! My name is David Lai, and I am currently a junior here at The Bishop's School. I've been doing MUN since ninth grade, and last year I was the vice chair of the UNOOSA committee on Cosmic Tensions. Plastic pollution has been around us for many decades, and only in the last few decades has the world seen the true harmful effects of this problem. As plastic pollution correlates with climate change, plastic pollution is an ever more pressing problem that needs to be not only mitigated but also eliminated. This problem is not only seen on land but this problem is also seen in the water. We've all seen images or videos of whales, fishes, turtles, or any other marine animal covered in plastic, or died because they ate too much plastic or their natural habitat was ruined because of our man-made plastic pollution problem.

As technology gets ever more impressive by the year, do not forget how big of a role technology could play in solving this crisis. As my favorite quote goes, solving plastic pollution is "one small step for man, one giant leap for mankind." Heads Up! I will only be chairing in the afternoon. If you have any questions, feel free to email me at david.lai.25@bishops.com.

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Hello delegates! I am Sofia Hayden, and I am a junior at The Bishop's School. I have participated in MUN since sixth grade and am thrilled to be co-chairing this committee on plastic pollution. You may have seen me as the vice chair for the UNODC Prison Reform committee last year or at TritonMUN, NCRC, or TnTMUN.

Plastic pollution is an issue that affects everyone, both as perpetrators of the problem and as its victims. It is the responsibility of you—the country you represent—to find solutions that will alleviate the consequences of plastic usage globally. I encourage you to be creative and work

closely and collaboratively with a diverse set of countries. The issue of plastic pollution could be addressed through various angles: single-use alternatives, waste management, sustainability, and production contamination. It is your responsibility to propose solutions that explore the nuance and complexity of the issue at hand.

Feel free to email me at sofia.hayden.25@bishops.com with any questions. For general position paper guidelines, please see the Position Paper tab on www.knightsmun.com.

I. Background

Belgian chemist Leo Baekeland created the first fully synthetic plastic in 1907. He combined two chemicals—formaldehyde and phenol—under heat and pressure to synthesize this new material.[1] Several years later in 1927, a British chemical company, Imperial Chemical Industries (ICI), discovered polyethylene: one of the most abundant plastics today.[2] Plastic eventually became mass-produced in the post-WWII era as it became cheaper, and even began replacing more expensive items such as paper, glass, and metal usually found in consumer packaging.[3] Eventually, even shopping bags, water bottles, food containers, and many other items were made out of plastic. Water bottles, specifically, became one of the most prominent

[1] "THE AGE OF PLASTIC: FROM PARKESINE TO POLLUTION," *sciencemuseumuk*, last modified October 11, 2019, https://www.sciencemuseum.org.uk/objects-and-stories/chemistry/age-plastic-parkesine-pollution#:~:text=Belgian%20chemist%20and%20clever%20marketeer,phenol%2C%20under%20heat%20and%20pressure.

[2] "THE AGE OF PLASTIC: FROM PARKESINE TO POLLUTION," *sciencemuseumuk*, last modified October 11, 2019, https://www.sciencemuseum.org.uk/objects-and-stories/chemistry/age-plastic-parkesine-pollution#:~:text=Belgian%20chemist%20and%20clever%20marketeer,phenol%2C%20under%20heat%20and%20pressure.

[3] "THE AGE OF PLASTIC: FROM PARKESINE TO POLLUTION," *sciencemuseumuk*, last modified October 11, 2019, https://www.sciencemuseum.org.uk/objects-and-stories/chemistry/age-plastic-parkesine-pollution#:~:text=Belgian%20chemist%20and%20clever%20marketeer,phenol%2C%20under%20heat%20and%20pressure.

products made from plastic; 500 billion bottles are sold every year as single-use, a large part of them eventually ending up in the oceans, ultimately degrading into harmful microplastics.[4]

Microplastics are plastics that are smaller than five millimeters in length, approximately the size of a sesame seed. Due to their miniature size, they can easily flow past strains, and water filtration systems and end up in our ocean, which harms marine life as many animals will mistake it for food. Moreover, microplastics come from a variety of sources, which means that there is a large amount of microplastics in our oceans today.[5]

Fast forward to the 1960s. People were becoming increasingly aware of the damage plastics were doing to their health and the environment. In the 60s, scientists from the National Academy of Sciences discovered that more than 100 million tonnes of waste had entered the ocean. The problem only became more evident in the ensuing decade as more plastic accumulated both in the ocean and on land. Issues with plastic waste management continued to grow, despite government efforts to recycle.[6] The 1970s and 1980s saw plastic waste triple and the consequences were only becoming starker as new research on the dangers of microplastics emerged. The effect plastic pollution had on the environment became increasingly visible as pictures of seals getting trapped by plastic nets, seabirds eating plastic trash, and other disturbing images spread in the public sphere.[7]

Today, up to 422 million tonnes of plastic are produced annually. Most either end up in the ocean, the landfill, or simply get carelessly thrown out as litter.[8] Additionally, concern over

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[4] "THE AGE OF PLASTIC: FROM PARKESINE TO POLLUTION," *sciencemuseumuk*, last modified October 11, 2019, https://www.sciencemuseum.org.uk/objects-and-stories/chemistry/age-plastic-parkesine-pollution#:~:text=Belgian%20chemist%20and%20clever%20marketeer,phenol%2C%20under%20heat%20and%20pressure.

[5] "What are microplastics?," *National Ocean Service*, https://oceanservice.noaa.gov/facts/microplastics.html.

[6] Storm Birch, "THE HISTORY OF PLASTIC POLLUTION," *oceangeneration*, last modified February 23, 2021, https://oceangeneration.org/history-plastic-pollution/.

[7] Birch, "THE HISTORY."

[8] Birch, "THE HISTORY."

its threat to human health and its effect on climate change has grown throughout recent years. Research has shown that chemicals present in products, such as bisphenol A (BPA), leach into human food, resulting in hormonal issues.[9]

Another way plastic is polluting the environment is through its production and disposal processes. The building blocks of plastic—oil, gas, and coal—are extracted by fracking: a technique that uses drilling into the ground until it hits a rock layer and then injecting sand, water, or chemicals that break up the rock and cause it to release oil and gas. Thus making fracking a carbon-intense activity.[10] At the end of the plastic's use cycle, it is disposed of using incineration. This technique emits a large amount of carbon dioxide into the atmosphere, making it a less-than-ideal method of disposal.[11] Though trash is often disposed of in this manner, still much of it ends up in nature. Every day, the equivalent of 2,000 garbage trucks full of plastic ends up in oceans, rivers, and lakes, harming their natural ecosystems.[12] These plastics remain for centuries, as they slowly break down into smaller and smaller pieces.

Delegates need to remember the short-term and long-term consequences and effects of plastic pollution. Solutions should address every stage where plastic is polluting the environment.

II. UN Actions

It was only March 2, 2022, when political leaders, UN member states, and ministers of the environment from all over the world convened in Nairobi to form a resolution to end plastic

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[9] "History and Future."

[10] Brooke Bauman, "How plastics contribute to climate change," *yaleclimateconnections*, last modified August 20, 2019, https://yaleclimateconnections.org/2019/08/how-plastics-contribute-to-climate-change/.

[11] Bauman, "How plastics."

[12] "Plastic Pollution," *UN Environment Programme*, https://www.unep.org/plastic-pollution#:~:text=Every%20day%2C%20the%20equivalent%20of,pollution%20is%20a%20global%20problem.

pollution.[13] The players involved focused on three main goals: improving the design of plastic, lowering contamination from its production, and managing its eventual disposal.[14]

Unfortunately, not all previous UN actions regarding plastic pollution have been successful. In 1989, the Basel Convention was held to stop high-income nations from sending toxic waste, such as plastics, to lower-income nations.[15] Although many nations agreed, the United States failed to ratify the agreement. As a result, exporting hazardous waste to low-income countries is still a trend today. This habit only aggravates the plastic pollution problem; by sending their waste elsewhere, higher-income nations, who have the resources to find ways to manage it, ensure that the waste will not be dealt with properly, ultimately leading to poorer and poorer conditions in these lower-income nations.[16]

Some initiatives, such as the UNEP's Clean Seas Campaign, have been more successful. The UNEP launched this initiative in 2017 to unite NGOs, governments, individuals, and industries towards the purpose of solving the plastic pollution crisis. Today, it is one of the largest global coalitions dedicated to eliminating plastic pollution. One of their programs includes Tide Turners Plastic Challenge Badge, created in 2019, which strives to educate youth globally about the consequences of plastic pollution and how to combat it successfully through their behaviors and those of the community.[17] It has reached 30 countries with a total of 362,000 participants.[18]

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[13] Environmental Rights and Governance, "Historic day in the campaign to beat plastic pollution: Nations commit to develop a legally binding agreement," UN Environmental Programme, last modified March 2, 2022, accessed October 29, 2023, https://www.unep.org/news-and-stories/press-release/historic-day-campaign-beat-plastic-pollution-nations-commit-develop.

[14] Environmental Rights and Governance, "Historic day in the campaign," UN Environmental Programme.

[15] Emily Lieberman, "Why the UN Is Taking on Plastic Pollution," Council on Foreign Relations, last modified August 16, 2022, accessed October 31, 2023, https://www.cfr.org/in-brief/why-un-taking-on-plastic-pollution.

[16] Lieberman, "Why the UN Is Taking," Council on Foreign Relations.

[17] UNEP, "Tide Turners Plastic Challenge Badge," Clean Seas, https://www.cleanseas.org/initiatives/tide-turners-plastic-challenge-badge.

[18] UNEP, "Tide Turners," Clean Seas.

III. Questions to Consider

1) What are the causes and effects of plastic pollution?
2) Are developing countries affected more gravely compared to developed countries?
3) What are the environmental and ecological impacts of plastic both on land and in the water?
4) How does plastic pollution affect people's health?
5) What can be done to prevent the consequences of plastic pollution from becoming worse?
6) What role does the UN play in the issue of plastic pollution?
7) What is the responsibility of your country in tackling plastic pollution? How does it uniquely affect your country?
8) What are the obligations of developed nations versus developing nations?

IV. Helpful Resources

- https://www.un.org/pga/73/plastics/
- https://wedocs.unep.org/xmlui/bitstream/handle/20.500.11822/39764/END%20PLASTIC%20POLLUTION%20-%20TOWARDS%20AN%20INTERNATIONAL%20LEGALLY%20BINDING%20INSTRUMENT%20-%20English.pdf?sequence=1&isAllowed=y
- https://www.cleanseas.org/
- https://www.unep.org/plastic-pollution#:~:text=Every%20day%2C%20the%20equivalent%20of,polluting%20lakes%2C%20rivers%20and%20seas.
- https://tos.org/oceanography/article/the-story-of-plastic-pollution-from-the-distant-ocean-gyres-to-the-global-policy-stage

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"Plastic Pollution." *UN Environment Programme*. https://www.unep.org/plastic-pollution.

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"What are microplastics?" *National Ocean Service*. https://oceanservice.noaa.gov/facts/microplastics.html.