Study Guide

United Nations Environment Programme 1

Agenda:

Reducing the Negative Impact of Plastic on the Environment

Bureau:

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TOPIC **PAGE NO.**

LETTER FROM THE EXECUTIVE BOARD

Namaste, Dear Delegates!

It is our great privilege to welcome you all to the first MUN of the Shishukunj North Campus and the United Nations Environment Programme Committee. This guide aims to provide all the delegates with the foundations needed to have an informative and deliberative debate, but this is only the starting point of your work. We have broken down the larger agenda into smaller sub agendas and it is crucial for all delegates to know them well. Delegates need to research their country's stance on the agenda and about the subtopics. As such we want you to keep your research based on but not limited to this guide.

The agenda for the committee is 'Reducing the Negative Effects of Plastic on the Environment." It caters to the innumerable problems caused by plastic and the negative impacts it has on plants, animals, human beings and the environment. Such problems are a hindrance in achieving the sustainable development goals about proper production and consumption, climate change and life on water and land. This is a very serious issue, and the world needs effective solutions to this crisis formed on a global level and implemented with international co-operation.

Delegates are expected to know these problems and their past solutions which have been implemented to improvise upon them. Plagiarism and use of Chat GPT is strictly unacceptable, and we expect the delegates to be authentic and original in their research. Your task will be to represent your country's policies diligently and to negotiate for solutions that align best with your country's interests.

The delegates are supposed to lobby (persuade others), discuss, and ultimately form consensus in the conference. We would also like the delegates to keep in mind that the case studies mentioned throughout this guide are for better understanding of the problem and are not to be discussed as separate topics during the conference. We request each and every delegate to go through the questions a resolution must answer and prepare their solutions as answers to these questions.

We are very excited to meet all of you and are sure that this committee will be fun and successful. We hope this MUN experience will be enriching for you all.

All the best!

Regards,

Chairperson: Asmi Chaudhary

Vice Chairperson: Srijit Chattopadhyay

INTRODUCTION TO THE COMMITTEE

The United Nations Environment Programme (UNEP) is the leading global authority on the environment. UNEP's mission is to inspire, inform, and enable nations and people to improve their quality of life without compromising that of future generations. UNEP uses its expertise to strengthen environmental standards and practices while helping implement environmental obligations at regional, national and global levels. For over 50 years, UNEP has worked with governments, the private sector, non-governmental organizations and UN agencies to address humanity's most pressing environmental challenges – from restoring the ozone layer to protecting the world's seas, combating the crisis of climate change, conservation of natural biodiversity and curbing pollution.

UNEP is focused on promoting a green, inclusive economy through the use of cutting-edge science and technology, coordination and advocacy. UNEP supports its 193 Member States to achieve the Sustainable Development Goals and live in harmony with nature. As the part of the Economic and Social council of the UN, UNEP has the powers to recommend informed and evidence based solutions to the various environmental problems.

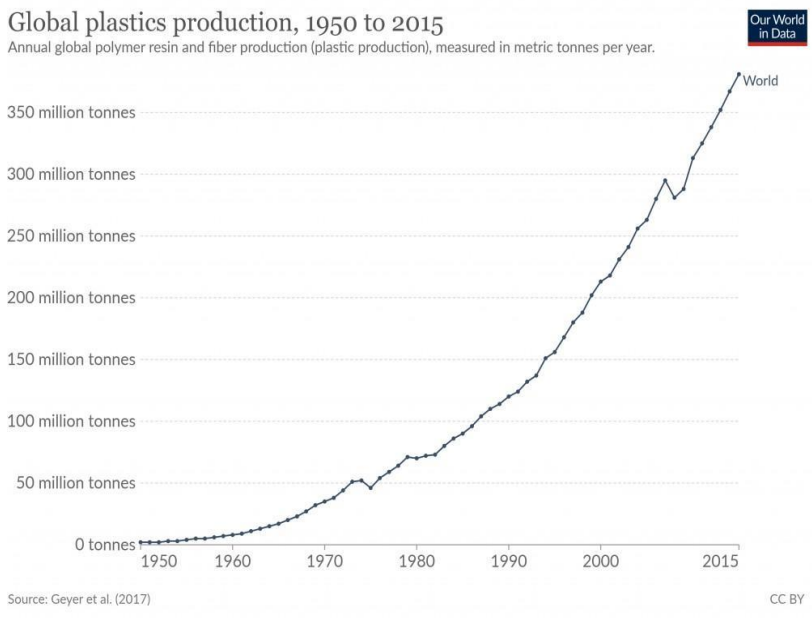
PAST RESOLUTIONS OF THE COMMITTEE

1. On March 2, 2022 in Nairobi a historic resolution was passed in the United Nations which aims to END PLASTIC POLLUTION and forge a legally binding agreement by 2024. It focuses on the full life cycle of plastic, including its production, design and disposal and is dependent on international cooperation for a better society for the future generations. It establishes an Intergovernmental Negotiating Committee (INC) which started its work in 2022 and is effective till the end of 2024. Through this committee, the UN wants to enhance international collaboration to facilitate access to technology, capacity building and scientific and technical cooperation.
2. The Paris Agreement: The Paris Agreement was an international agreement formed in 2015 and implemented in November 2016 to curb the greenhouse gasses that ultimately lead to increase in temperature, and since plastic is a major contributor to the greenhouse effect, plastic pollution was an important deliberation point.

INTRODUCTION TO THE AGENDA

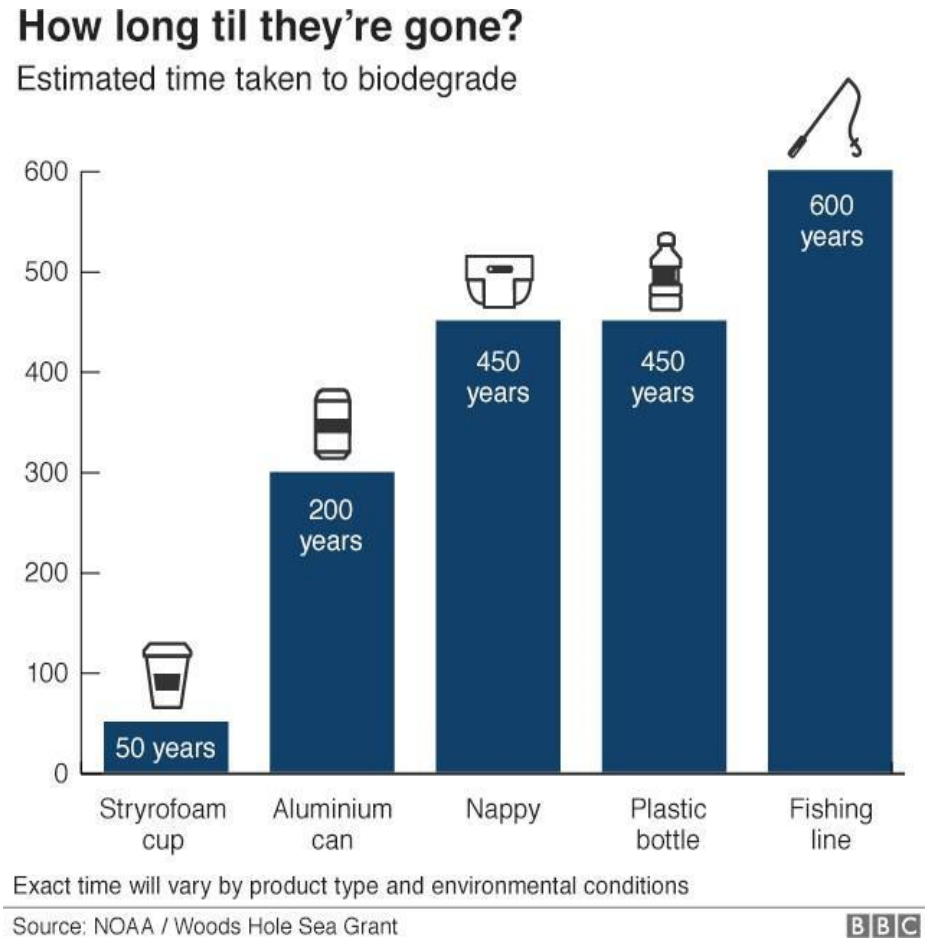
The United Nations Environment Programme is the global authority which deals with issues regarding pollution, nature, sustainable development, climate and more. Among the several problems faced by it, the one which needs immediate deliberation is the ongoing plastic crisis. Plastic is a synthetic material which is used practically everywhere around us, ranging from small food containers and bags to being used in spaceships. Globally till date about 8.3 billion tons of plastic has been produced and about 6.3 billion tons of that is waste, So the amount of plastic is equivalent to 55 million jumbo jets! The difficulty caused here is that about 25% of this plastic cannot be recycled, And our dependence on it is only ever- increasing.

Plastic harms the nature around us in multiple ways. The biggest disadvantage it poses is that it takes about 500 years to break down, and it never completely decomposes, it only gets smaller and smaller. Plastic therefore threatens the natural bio- diversity in a number of ways, it is often disposed of in water bodies which leads to suffocation and entanglement of marine animals, this plastic may enter the human bodies as well and cause diseases and hinder with the natural processes.



It is also responsible for 3.4% of global greenhouse gas emissions. It affects the balance of nature and needs to be properly dealt with, it has brought along several

severe environmental, social, economic and health consequences. While several countries have taken actions to curb the use of plastic, globally we have a long way to go. In accordance with United Nations provisions only 9% of plastic internationally is recycled and 22% is mismanaged. The agenda of the committee also talks about the same hope to find new and creative solutions for the same.



KEYWORDS

1. **Sustainable Development**: Sustainable development is the process of economic growth and technological advancement that meets the needs of the present, without compromising the ability of future generations to meet their own needs. That means that this process uses resources judiciously and does not waste natural resources.

2. **Synthetic Material**: A synthetic material is a commodity manufactured artificially by humans, by using chemicals.

3. **Decompose**: Decompose means to break something down into its smaller constituents by a chemical process.

4. **Biodiversity**: Biodiversity is the natural world around us, which includes plants, animals, humans and even microorganisms like bacteria and fungi. The variety of all of the different kinds of organisms interact with each other and work together in ecosystems to maintain and support life on earth, and exist in delicate balance.

5. **Oceanic Current**: Oceanic currents describe the movement or motion of the water in the ocean from one place to another. These currents are driven by forces like wind, water density differences and tides.

6. **North Pacific Subtropical Convergence Zone**: The North Pacific Subtropical Convergence Zone is the strong, large, circulating current in the North Pacific that is home to the Great Pacific Garbage Patch. When the cool currents from the arctic meet the warm currents from the south pacific (convergence), this current is formed. In this area, many open water species are known to live, feed and migrate. A lot of plastic waste is also accumulated here.

7. **North Pacific Subtropical Gyre**: A gyre is a circular ocean current formed by Earth's wind patterns and the forces created by the rotation of the planet. The North pacific subtropical gyre is the largest gyre in the world present in the convergence zone. It is the largest ecosystem on earth and contains a wide variety of aquatic life. It is also a means to transfer garbage from one end of the pacific to the other.

8. **Bioaccumulation**: When the organism which had ingested a harmful chemical substance is eaten by another organism, the chemical passes on to the consumer and increases in concentration. If this organism was eaten by another organism, the same process would occur and the concentration of the chemical would increase further. This buildup of chemicals is known as bio accumulation.

9. **Ghost Fishing**: Ghost fishing occurs when lost or discarded fishing gear that is no longer under a fisherman's control continues to trap and kill innocent marine animals. Ghost fishing gear is the deadliest form of plastic in the ocean as it catches wildlife, entangling marine mammals, seabirds, sea turtles, and sharks and gives them a slow and painful death through exhaustion and suffocation. It also damages underwater habitats such as coral reefs.

10. **Marine Debris**: Marine Debris is waste material which is any manufactured, indestructible solid matter that is disposed of into the water bodies.

11. **Autotrophs**: Autotrophs are organisms that can produce their own nutrients from carbon and sunlight and provide other animals food for survival. They are also known as producers.

12. **Landfills:** Landfills are sites designed to store garbage, basically solid waste. They are created to reduce the presence of waste in the open streets and to keep the environment clean.

13. **Environmentally sensitive areas:** places which are vital to the long-term maintenance of biological diversity, soil, water or other natural resources both on the site and in a regional context.

14. **Wetlands:** Wetlands are areas where water covers the soil or land, or is present either at or near the surface of the soil all year or for varying periods of time during the year. It is considered a type of water body.

15. **Fisheries:** A fishery is a place for catching fish or other sea animals that have high economic value. It deals with catching, processing and marketing these animals for earning money.

16. **Exclusive Economic Zones:** An Exclusive Economic Zone (EEZ) is an area of the sea near the coastline of a country, in which that nation has the special rights to explore and exploit (use) all the marine resources that can be extracted from it. This includes energy production using wind and water. It extends up to 200 nautical miles from the shore (1 nautical mile is 1852 meters).

17. **Food Chain**: A food chain outlines who eats whom. It is a network between organisms shown by a straight line, representing the transfer of energy from producers to herbivores to carnivores.

KEY ASPECTS RELATED TO THE AGENDA

1. Life Under Water

Plastic will make our end drastic

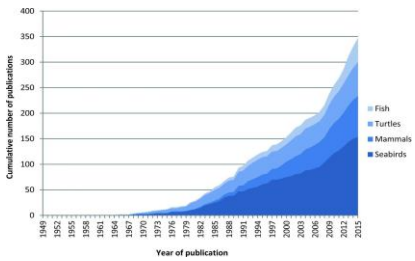
About 100 million marine animals die each year from plastic waste alone. Improper disposal of plastic has left a devastating impact on both human and marine life. It is a major threat to the health of marine life and overall ecosystems of oceans, rivers, and lakes since it takes 500-1000 years to degrade. When plastic is dumped in the ocean it accumulates in large patches that threaten the health of marine ecosystems. Reasons why life under water is destroyed due to improper disposal of plastic are as follows:

- Entanglement:

About 100,000 marine animals die from getting entangled in plastic yearly. 1 in every 3 marine species is found entangled in litter like fishing nets, plastic bags which suffocate them. Turtles often mistake plastic bags for jellyfish and ingest them which cause blockage in their digestive system.

- Ingestion of Plastic Debris:

12-14,000 tons of plastic are ingested by north pacific fish yearly. Animals like fish, birds, whales mistake small particles as food and ingest them. This cause a range of problems such as blockages in digestive system, malnutrition, suffocation, starvation, infections, reduced ability to swim, internal injuries, drowning



- Habitat Destruction:

In the past 10 years, the production of plastic has increased compared to last century. Our habitats will soon be exhausted or outnumbered because of the careless use of it. This mainly affects the coral reefs and seagrass beds, which are crucial breeding grounds for many species.

- Chemical Contamination:

Plastic present in water bodies releases harmful chemicals and toxins into water, which can poison and kill marine animals.

- Disruption of the Food Chain:

5.25 trillion pieces of plastic are ingested by smaller organisms which are then passed up the food chain to larger organisms, including fish that humans eat. This disrupts the food chain.

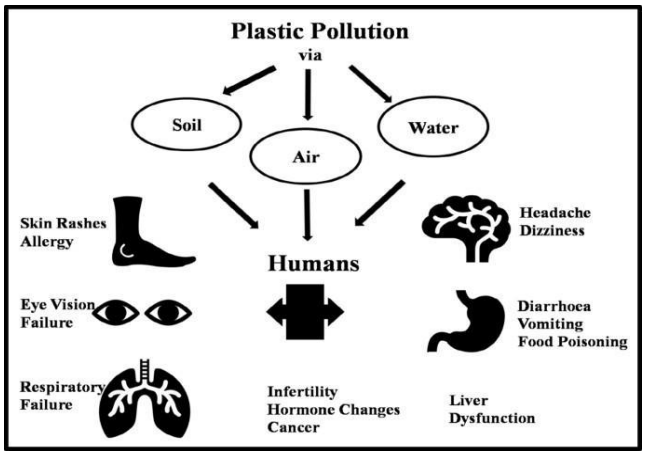
“It is the worst of the times but it is the best of times because we still have time”

It is time we take action for our past actions. About 500 marine locations are now recorded as dead zones. The largest trash site on the planet is the Great Pacific Garbage Patch which has left a devastating impact on the health of marine life. It is crucial we take action to reduce plastic waste and prevent it from reaching oceans.

2. Human Health Affected

Plastic has both a direct and indirect effect on human health. It has broadly two categories Macro plastics and Micro plastics. Macro-plastics are plastics that are approximately larger than 0.5 centimeters. This plastic is common in water bodies and soil with larger air spaces. Macroplastics can vary from trawl bags to ship wrecks, and may or may not be visible to the naked eye. While this does not directly enter the human body, macroplastics have a tendency to release toxic

chemicals in their environment after a specific time period which may vary according to the type of plastic. These toxic chemicals are absorbed by plants, This plastic may also enter marine animals(fish) and may or may not be detected depending on its size, with both of the above mentioned being consumed by humans. This may lead to an imbalance of hormones, obesity, stroke and more. This plastic may release its toxic chemicals directly into the water bodies as well, and if it comes in contact with human skin it may lead to burns and skin diseases. Therefore, while macroplastics do not affect human health directly they lead to several diseases and problems indirectly. In recent years the improper disposal of plastics in water bodies and land has only increased.



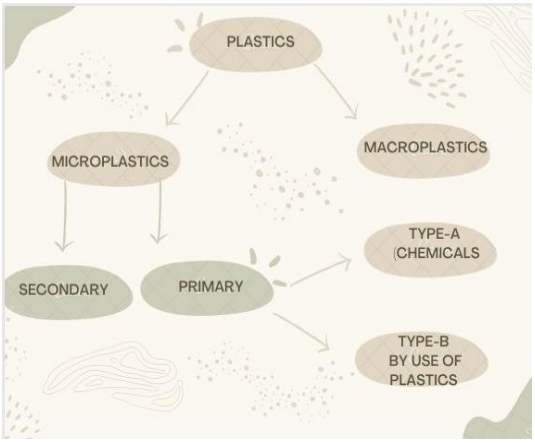
Microplastics on the other hand, describe the entirety of all synthetic plastics and their products, which are smaller than 5 mm in size and which are either released directly into the environment or formed indirectly in the environment.

Microplastics can further be bifurcated into two: Primary and Secondary Microplastics.

Primary Plastics have 2 types:

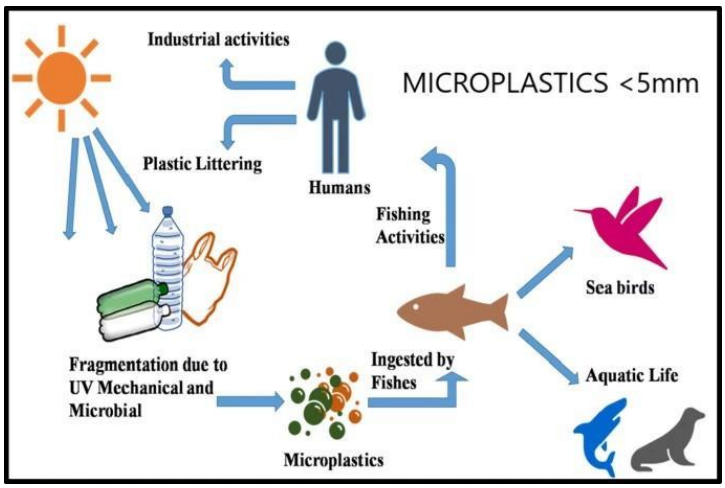
- Type A classifies plastic as a chemical which is directly used in products like paints, beauty products, cleaning agents, etc. This may again cause several eye and skin allergies if exposed to.

- Type B includes plastic which is released directly in the environment, as done in several industries. A lot of industries utilize plastic as a raw material and after its processing leaves behind very small pieces of plastic which are released into the environment.



- Secondary microplastics are formed by the action of natural agents on larger pieces of plastic.

Microplastics are more likely to enter our body than microplastics as it may enter through air, as it is released directly by industries in the atmosphere and may be used by us on our skins as beauty products. Due to the smaller size of microplastics they constitute a threat to the animals as well as the environment as they are widely accessible and available to all species. Microplastics are also transported or accumulated within the food chain. The consequences of this are still under research.



All in all both microplastics and macroplastics have a negative impact on the human body, recent studies have shown that between 400,000 to one million people die annually from illnesses and diseases linked to plastic pollution in developing countries. This is a grave issue and needs immediate attention, while countries have formed several norms and measures, it has been observed that they are often not adhered to. It has also been observed that the effect of plastics is particularly drastic in young children, this poses a threat to the future generation especially with the increased use of plastic in the recent past, in the US alone, on an average 25 children die every year due to suffocation caused by plastic, 73 deaths have been recorded in the past 7 years due to diseases caused by inhalation of plastic by young children living near industries globally.

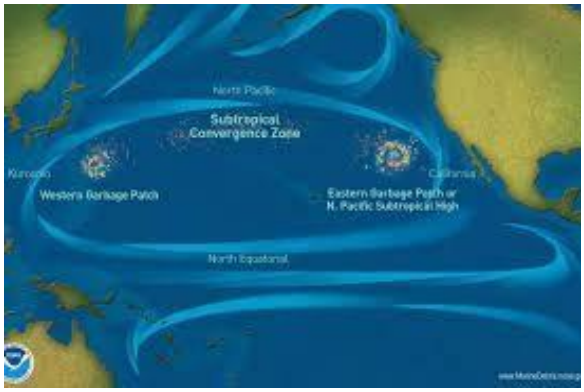
3. The Great Pacific Garbage Patch

The Great Pacific Garbage Patch is a collection of litter and waste material accumulated in the North Pacific Ocean. This patch covers the area of the Pacific Ocean from the west coast of North America to Japan. These two areas are linked together by the North Pacific Subtropical convergence zone which leads to the formation of the North Pacific Subtropical Gyre. The convergence zone is the area where the warm water winds from the South Pacific meet the cooler water winds from the Arctic region and form the oceanic currents. There are four major currents in the Great Pacific Garbage Patch. This keeps the waters in motion at all times and leads to the formation of the gyre, which is a large system of swirling ocean currents. It is like a whirlpool that keeps all the objects around it in motion.

The gyre acts as the route for the transfer of plastic from one part of the patch to another. So, the waste in this patch is constantly swirling and moving around, thus this garbage patch is also called the plastic vortex. To quote an example, when a plastic bottle is discarded off the coast of California into the Pacific Ocean, it will catch the current and move towards the coast of Mexico. Then it would catch another current and cross the vast Pacific Ocean to reach Japan. There it catches yet another current and moves further north. The waste is trapped in the ocean forever and causes countless problems to aquatic animals as well as humans.

Plastics make up the majority of the trash in the ocean for two reasons. First, plastic’s resilience, low cost, and flexibility mean that it’s being produced in more

and more numbers and thus the amount of waste is constantly increasing. Second, plastic goods do not biodegrade but instead, break down into smaller pieces and they stay in the ocean.



This marine debris can be very harmful to marine life in the gyre, and it also affects human life. For instance, sea turtles often mistake plastic bags for jellies, their favorite food, and choke on it. Birds that fly over the ocean mistake plastic pieces for fish eggs and feed them to chicks, which die of starvation or ruptured organs. Seals and other aquatic animals also get entangled in abandoned fishing nets and die, a process called ghost fishing. As a layer of plastic collects near the surface, it blocks the sunlight from reaching the marine plants and algae and disturbs the food web by killing the producers or the autotrophs.

Once plastic enters the marine food web, there is a possibility that it will contaminate the human food chain as well. Through a process called bioaccumulation, chemicals in plastics enter the body of the animal feeding on the plastic, and as this animal is eaten by other animals or humans, the chemicals pass to the consumer – making their way up the food web and affecting more animals including humans. Plastic is dangerous when in the body of organisms because they give out harmful pollutants and chemicals which cause cancer.

No one nation can or will take responsibility to clean up the entire patch as it touches international borders and would bankrupt the entire country which tried to clean it. Many international organizations and private organizations too are dedicated to prevent the patch from growing. Scientists and explorers agree that limiting or eliminating our use of plastics and increasing our use of biodegradable resources will be the best way to clean up the Great Pacific Garbage Patch. The

delegates of the UNEP are expected to come up with detailed, specific and innovative solutions to solving this major world crisis by intensive deliberation and collaboration.

4. Landfills

Landfills are sites designed to store solid waste. In the modern world, these landfills are well-engineered and managed carefully to ensure proper disposal of solid waste which includes plastic. Instead of having waste lying around in the environment, it is collected and the waste that does not reach recycling plants is transported to landfills. There, it is compressed into smaller sizes and dumped on the land. Laying there in the landfill, the waste decomposes, that is, it breaks down into smaller substances that make up the waste material. Even plastic wears down, though not entirely, due to the action of ultraviolet rays, and this decomposition leads to the release of harmful gasses and cancerous chemicals which causes serious harm to the welfare of living beings. On an average, landfills receive 27 million tons of plastic in a year. That's enough to fill over 15,000 Olympic-sized swimming pools! As population growth and urbanization increase, so does the demand for manufactured products, which also increases the need for more landfills. But the world is running out of space. More landfills is not preferred as landfills are a bad idea for the environment and all components in it.

Landfills are unsightly, smelly, and harmful to the environment. They hold many different types of waste including solid, agricultural, industrial, manufactured,

and construction. There are numerous contributors to the waste at landfills including homes, schools, restaurants, markets, public places, offices, farms, animal waste, oil refineries, power plants, pharmaceuticals and construction areas.

The structure of a landfill is simple as it is composed of three layers. The bottom most layer is the thin lining of clay and plastic on the ground. Then the layer of the liquid waste, the layer of compressed solid waste and the covering at the top, again of a thin layer of plastic. These measures are taken to ensure that waste does not seep into the ground or contaminate nearby water bodies. Landfills sometimes also contain hazardous waste so they cannot be built in environmentally sensitive areas such as wildlife habitats, wetlands, steep slopes and fertile agricultural lands. But the problem arises when these regulations are not followed and despite the protective linings, leaks occur.

The various reasons why landfills are harmful to the environment are as follows:

- Air pollution- when the garbage in landfills gets decomposed, several gasses are emitted, out of which methane is in the most volume. Methane is a greenhouse gas which is 25 times more potent than carbon dioxide at trapping heat in the atmosphere, and when this is released in huge quantities, global warming increases. Aside from the methane gas, other household and agricultural chemicals that find way to the landfills like generate toxic gasses and that negatively impacts the air quality in the areas around the landfill. Dust particles and other non-chemical matter is also expelled into the atmosphere, further reducing the air quality.

- Landfill fires- Methane gas and the waste in the landfill is very combustible (catches fire quickly) so landfills also burst up in flames. These uncontrollable fires are more common than we think because the fires occur inside the landfill and burn up a lot of the waste, including the lining preventing toxins from contaminating the surrounding environment. Such

- spontaneous fires pollute the atmosphere and harm plants and animals around.

- Contamination of soil and water- Landfill sites are often responsible for the contamination of soil and groundwater as the protective linings rupture and the chemicals as well as entire wastes spread to the soil and dirty the groundwater. This has a devastating effect on the environment as plastic waste in the soil makes it infertile, killing plants, and the groundwater also becomes unfit for consumption.
- Health effects on humans: Landfills reduce the value of the surrounding areas. Numerous studies have shown that the risk of particular cancers and birth defects is more in the people living near landfills. Many people in those areas also report symptoms such as sleepiness, headache and fatigue. Landfill toxic gas releases and water pollution are known to cause lung and heart diseases as well.
- Landfills alter the fauna: Many birds and small animals view the landfill sites as an endless supply of food and feed off of the waste there. They ingest harmful plastics and die.
- Accidents: Sometimes accidents also occur in landfills. Too much rain, spontaneous fires or excessive accumulation of waste sometimes turn landfill sites into unstable terrains where landslides and collapses are very dangerous for landfill workers and for people in the nearby areas. In March 2017, a landfill site in Ethiopia collapsed, causing an estimated 113 deaths. In the same year a landfill site in Sri Lanka suffered a landslide, leaving more than 30 people dead, dozens of people missing, and more than 140 houses destroyed. In February 2020, two workers were killed when a landfill in Spain collapsed.
- Economic costs: The economic and social cost of landfill management is very high. From the management of the gasses coming out of the landfills to groundwater contamination management, and ensuring compliance with environmental regulatory policies drains a lot of the municipalities and taxpayers money in terms of integrated waste management. Because most of the materials disposed of in the landfills take millions of years to decompose, designing effective strategies and facilities for managing

  landfills requires high capital investments with regards to management and recycling initiatives.

The best way to avoid the problems caused by landfills is to reduce our reliance on landfills and reduce the amount of waste we dispose of there. This can be done by increasing recycling of plastic and reducing the generation of plastic waste.

5. Improper Disposal of Plastic

Every year approximately 30 million tons of plastic is produced with around 8 million tons ending up somewhere they have a negative impact like in oceans as marco plastics. Several reports in the recent past have proved that 22% of the plastic is discarded in uncontrolled sites or the environment, all the demerits of plastic arise from this improper disposal of plastic in the biodiversity. This leftover plastic is either dumped or incinerated and this may directly or indirectly affect the food chain of organisms as well. This critical problem can be addressed with solutions at the very grassroot like recycling and reusing. Several countries like Germany, Austria, South Korea and Wales have recognized this and have taken steps to counter it and have been largely successful.

Germany, leading the way in waste management and recycling has taken measures like initiating public awareness programmes, special provisions for industrialists wherein they were rewarded if they contributed in environment conservation, a Green Dot Policy was also implemented in which all recycled products must be marked and approved. South Korea also had taken steps for the same in as early as 1986 and have their recycling rates from 2% in 1995 to an impressive 95% where almost everything is recycled varying from steel, fabric, TVs, Sofas, and styrofoam, Austria is also among the top countries in proper waste disposal with 96% of its population sorting waste into recyclable categories, annually every household in the country sorts of waste averaging a million tons and have banned plastic bags since 2020.

Switzerland is yet another country acting as a great promoter of the cause with placing around 12000 recycling points in a single city of Zurich, 50% waste is also utilized to produce energy and none of the waste ends up in landfills. The city of Singapore also has the lowest landfills, where companies producing plastic waste are fully responsible for their waste and its disposal.

While we see many countries have worked to curb the issue, there are innumerable countries who are yet to do it like Chile and Turkey which only treat only 1% of their entire waste and have witnessed about 33% and 78% decline in recycling rates over the past 23 years. Through the committee we hope to find new and creative solutions for a better future.

6. Alternatives to Plastic

The following are suggestions for the possible alternatives to plastic. The delegates are supposed to research more about this and formulate ways to implement these solutions.

1. Mushroom: The mountains of debris that people produce may be reduced if mushrooms were used in place of plastic. Fossil fuel-derived plastics are extremely hard to recycle and frequently end up clogging up landfills, natural areas, and waterways. On the other hand, materials manufactured from mushrooms would be biodegradable and could be recycled after a product's useful life to create more of the same. A strong, environmentally friendly substitute for plastic foams like polystyrene is mushroom. The plant's mycelium (thread - like roots of mushroom bound in plant material) packing degrades into beneficial nutrients for the soil rather than microbeads hazardous to animals and marine ecosystems.

2. Bamboo: Numerous environmentally beneficial products can be made from bamboo. Cutlery, stationery, serving trays, towels, planters, and other items are available. Bamboo groves, as opposed to tree forests, may regenerate within three to five years and survive without the use of pesticides. It has a number of innate qualities, including the capacity to

filter water and air and repel infections. Additionally, it is incredibly strong. Because they are biodegradable, easy to grow, and durable, bamboo products are a great choice for both you and the environment.

3. Glass: Glass is made from sand and doesn't contain chemicals that can leach into our food. There is a fifty percent reduction in water pollution and a twenty percent reduction in air pollution when glass is made from recycled glass, according to multiple studies. It serves as a secure, eco-friendly alternative to plastic bottles and is renewable. Utilizing glass bottles and containers instead of plastic ones can be a simple move that can have a big impact. For storage, glass containers are much safer. They do not contaminate the food they hold with dangerous substances like plastic containers do.

4. Seaweed: Seaweed extract is a jelly made from a fast growing plant. It is a renewable and extremely sustainable resource. It grows quickly and requires no extra resources like freshwater, fertilizer, or soil, making it an appealing packing alternative. Packaging made from seaweed is both biodegradable and compostable. Unlike plastic packaging, which may survive for hundreds of years, it degrades naturally in the environment without leaving behind toxic residues. It contributes to the fight against global challenges such as plastic pollution. Seaweed packaging has several applications, including food and beverage packaging, containers, disposable utensils, and more. It possesses properties like typical plastic packaging but without the related environmental disadvantages.

5. Natural Fibers:

- Hemp: Hemp is a biodegradable, natural substance. Unlike regular plastics, which may take hundreds of years to degrade, hemp-based polymers break down more swiftly and organically, lowering their environmental effect. It is a highly renewable material that can be grown in a short period of time. Packaging, automobile components, construction supplies, and other uses may all benefit from hemp-based polymers. They have properties comparable to ordinary plastics and can be molded into many shapes and forms.
- Jute: is quickly gaining popularity as a sustainable alternative to plastic because of its high tensile strength, long lifespan, and low cost. Jute is a

sustainable material that may be recycled, used again, and decay completely.

- Cotton: Cotton is frequently utilized in the production of reusable bags as an alternative to single-use plastic bags. Cotton bags are more durable and may be reused several times, eliminating the demand for plastic bags and lowering environmental effects. It is a renewable and biodegradable material, which means it degrades spontaneously over time.

6. Paper: Tree-free paper is manufactured from agricultural byproducts such as lemongrass, sugarcane, white cotton rag, etc. The plant resource used to make tree-free paper develops quickly and does not disrupt the natural ecology, one of the benefits of utilizing this type of paper.

CASE STUDY

1. Philippines:

A country in south-east Asia, Philippines is considered among the largest contributor of plastic waste in the world, it has often been accused of irresponsible waste management and is not only responsible for the plastic generated in the country but also is the only country in South-East Asia to receive illegal imports of plastic from developed countries, putting even several European countries in an undesirable position. The amount of plastic in the Philippines has been increasing at an alarming rate since the last 5 decades having a global impact. Even after more than 20 years of implementing a hallmark waste management act, the country has been unsuccessful in achieving many of the targets outlined in the 2001 act. Philippines is also the largest contributor of plastic waste into the oceans and along with China, Indonesia, Thailand and Vietnam accounts for up to 60% of the entire ocean waste, 74% of the plastic waste that leaked into water bodies was initially collected in order to curb the issue but it escaped from open landfills that were situated at vulnerable waterways.

The Philippines also has some of the lowest recycling rates, with it decreasing at an alarming rate each year. The high usage of single-use plastic has also been considered a key reason for the high levels of waste in the country with about 60 billion single-use plastics being used in a single year. In the year 2015 alone, the country accounted for 5 million metric tons of mismanaged plastic waste and is estimated to reach a humongous amount of 9 million metric tons by 2040 and 11 metric tons by 2060 if an intervention is not made immediately. There are several other countries who are also facing a similar crisis, laws and provisions have been enacted but none have shown satisfactory results.

2. Barbados:

Barbados, a small island nation in the Caribbean, known for its crystal-clear waters and rich marine life, faced increasing threats from too much plastic waste in the ocean. With plastic pollution adversely affecting its tourism industry and depleting its fisheries, the government of Barbados recognized the urgency of addressing the issue and actively combat it. The government, along with non-profit organizations and local communities, took various steps to manage and reduce ocean plastic waste. In 2019, the government implemented a ban on single-use plastic bags. This policy significantly reduced the usage and disposal of plastic bags, preventing them from entering the ocean and harming marine life.

The government and environmental organizations launched public awareness campaigns to educate citizens and tourists about the impact of plastic waste on marine ecosystems. They organized beach clean-up drives, school programs, and community workshops to promote responsible waste management practices and encourage recycling. The government also established a new plastic recycling infrastructure to divert plastic waste from landfills and oceans into the recycling plant. This was done through collaboration with local recycling companies to set up collection centers and improve waste management systems. Barbados actively engaged in international partnerships to reduce the plastic content in its Exclusive Economic Zone (EEZ). The country participated in regional and international initiatives like the Caribbean Challenge Initiative and the Clean Seas Campaign, exchanging best practices and receiving support to strengthen its waste management efforts. These measures have been successful in ocean plastic waste management. The case study of Barbados's ocean plastic waste management can serve as an inspiration for other nations facing similar environmental challenges.

3. Indore

The city that is known for being the cleanest was nearly choked by its plastic waste. According to the survey conducted by the Central Pollution Control Board (CPCB), Indore generates 63.40 tonnes of plastic everyday and is the 14th largest producer of plastic waste across the country. Environmentalists point out that more than 50% of plastic is not recycled in Indore. A sizable portion of the garbage can be separated and reused. However, because of insufficient collection, municipal waste and plastic are burned on the side of the road, greatly polluting the air. The city was nearly choked by haze generated by the burning of such massive amounts of plastic. This is when the Indore Municipal Corporation (IMC) made the decision to alter its approach in order to improve the awful condition of Indore's plastic garbage. In order to reuse and recycle the city's plastic garbage, they established a Plastic Collection Centre (PCC). The Indore Municipal Corporation (IMC), in collaboration with various non-governmental organizations, has developed scientific methods for recycling plastic trash. In addition to establishing a plastic collecting center, the IMC erected a plastic cleansing machine called a 'Phatka Machine.'The IMC has developed a smart model that is now being adopted by other cities, ranging from producing bins out of recovered plastic garbage to utilizing shredded plastic for building roads. The authorities used a total of 50 tonnes of plastic waste in the construction of 45 km of road. It has also prohibited the use of plastic carry bags with a thickness of less than 50 microns.

CONCLUSION

As stated throughout this guide, plastic management is not only a question for controlling the production and consumption of plastic items, but rather a complex situation characterized by environmental, social and economic problems. The international community has already taken steps, at least nominally, to handle this issue. But there is still room for a lot of improvement. Today, there are more strategies and management tools available than ever before. There are numerous individuals and organizations (both governmental and non governmental), including United Nations committees such as UNEP and the Intergovernmental Negotiating Committee (INC) on Plastic Pollution, who are determined to create a better world and reduce the problems caused by plastic. Technological innovations and scientific strategies are increasingly being utilized when handling plastic waste.

All the sub-agendas mentioned in the guide tackle the various aspects of plastic waste management and the implications of accumulation of plastic on the environment. We want the delegates to find substantial solutions to each of the problems discussed above and form consensus on each of them. We request delegates to critically analyze situations regarding the agenda, be thorough in their research and bring forward innovative, original and feasible ideas. We look forward to delegates being passionate about devising authentic, elaborate and original solutions for this cause.

As a part of the delegation of the United Nations Environment Programme, we hope each delegate acknowledges the severity of the crisis we deal with and understands the importance it holds in our everyday life. In the committee we hope to discuss and deliberate upon each of the key topics or factors that contribute to the ongoing crisis. Each delegate should be well versed with his/her stance on the topics and be well researched of their specific portfolio, delegates should also be aware of recent happenings or problems in regard to the agenda. Delegates can also refer to past resolutions and solutions which have been implemented for better understanding of the crisis, that said the bureau expects all delegates to have in-depth research and understanding so that they can critically analyze as well as creatively form new solutions to counter the issue.

To research your portfolio delegates must research their country, its relevance to the agenda, its significance and part played in sub-topics and other factors contributing to plastic pollution then formulate some new and creative solutions, one must also have knowledge of their countries' foreign policy. Its Delegates must ensure research from credible and reliable sources. In forming solutions all delegates are expected to refer to the SMART method that is,

S- specific, M- measurable, A- attainable, R- realistic, T- time bound

All solutions should include each component of the smart method. Discipline should also be maintained in the committee at all times for its smooth functioning. Lastly the bureau hopes that delegates from new and contemporary solutions that are fit in this world around us, for tomorrow and the generations to come.

QUESTIONS A RESOLUTION MUST ANSWER:

Q1. What are the ways through which the potential health risks associated with living near a landfill can be cured? How can landfill sites be selected and designed to minimize their impact on local communities?

Q2. What policies and regulations should be in place to ensure proper landfill management? How can the potential contamination of soil and groundwater from landfills be prevented or mitigated?

Q3. How can the accumulation of plastic waste in the Great Pacific Garbage Patch be effectively cleaned up or removed? How can the marine ecosystem including both flora and fauna in the Great Pacific Garbage Patch be protected and restored?

Q4. What measures can be taken to prevent more instances like the great garbage pacific patch?

Q5. How to reduce the production and consumption of macro-plastics? What can be done to Reduce the influence of micro-plastics in everyday consumption items?

Q6. What measures should be taken to increase recycling rates in countries? What can be done to ensure its proper implementation?

Q7. What immediate actions can be taken to witness positive results in the next decade with special emphasis on countries like the Philippines?

Q8. How has increased production of plastic taken the lives of innocent marine animals and proved to be harmful for our ecosystems? How can we prevent our ecosystems from plastic pollution?

Q9. How is improper disposal of plastic detrimental to our life? What measures can be taken to increase the rate of recycling plastic?

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