Committee: United Nations Environmental Program (UNEP)

Issue: Tackling the issue of plastics in the marine environment

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INTRODUCTION

The production of commercial plastic has seen tremendous growth over the past two centuries. Plastic usage has increased in many industries making it the most used material in the world. This material is reasonably priced and easy to manufacture, thus making it an obvious choice for different industries to utilize it in the manufacturing process. Plastic has had a tremendous impact on our lives as it is used in everyday products and as part of he manufacturing process.

The overuse of plastic in manufacturing quickly had devastating short-term and long-term effects on the environment. For many years attempts have been made by the plastic industry to prevent the devastating effects of this material. Now our world is experiencing the alarming consequences of plastic pollution in the marine environment. It is projected that by 2050 there will be more plastic circulating in the ocean than fish. This fact has helped the world realize the severity of this issue, and now, many nations and organizations are acting toward eliminating plastic pollution. Plastic waste can harm or even annihilate natural habitats and marine animals, it can also harm humans from the contamination of the marine environment. Water contamination is a consequence of this issue, which leads to humans ingesting roughly 5 grams of plastic every day.

In conclusion, the issue of plastics in the marine environment is one of the biggest problems our society is facing. Its effects are massive to human, marine life, and the marine environment. An immediate change needs to be undertaken in order to solve this matter and help minimize its consequences. So, it is imperative to understand the importance of this issue and the steps that need to be taken in order to resolve it.

Delegates if you have any questions regarding the study guide and the topic please do not hesitate to contact me through an email at alambrianos1@gmail.com .

Important note from the chairs' team

In order for the chairs to fully understand the dynamics of the committee, discovering any misunderstanding prior to the debate and for the better preparation of the delegates you are asked to proceed as indicated below;

1) Conduct your chairs via email and informing them about your mun experience so that they can know what exactly to expect of you.

2) Prepare and send your chairs by 11:59 of the 6th of November one position papers for each of the topics you are going to discuss during the conference. You can conduct the expert chair, of each topic for further information concerning your country's policy if needed, and for general guidance when it comes to your position papers (word limit structure etc). You are going to receive general comments during the lobbying for your position papers as well as personal feedback and grades for your papers. The points you will receive will add up to your general score which is one of the factors that determine the best delegate award. **If you for any reason fail to send your papers before the final deadline you will not be eligible for any award.**

DEFINITION OF KEY TERMS

Plastic

Plastic is a material that is comprised of synthetic compounds that are moldable and flexible. Most commonly found plastics such as industrial/commercial plastics (plastic bags, straws, etc.) are created from petrochemicals, which can be harmful to the environment.

Biosphere

Biosphere or ecosphere is the combination of all of the ecosystems that exist in our world. It is also the region that allows life to exist and reproduce.

Marine Environment

The marine environment or the marine ecosystem is the combination of the seas, the oceans, and the marine life that exist.

Oceanic Currents

Oceanic Currents are continuous movements of water which are created from a vast number of forces.

Plastic Debris

Plastic debris is any manufactured material that is disposed of in the environment.

Ecosystem

An ecosystem is an area where specific species of organisms interact with the regional environment forming an ecosystem.

Microplastics

Microplastics or microbeads are fragments of plastics that are scattered in the environment. They are not created from a specific type of plastic but instead can be found in the environment from commercial plastic products.

Gyres

A gyre is a collection of circulating oceanic currents. The five significant gyres that exist have an immediate impact on plastic hot-zones.

Nano plastics

Nano plastics are similar to microplastics, but their scales vary. As the name states, Nano plastics are minimal plastic residue that can be found in the environment.

BACKGROUND INFORMATION

The first ever report on marine plastic was made by a scientist in the ‘70s. Since then, the issue of plastics in the marine environment has seen an enormous increase. Commercial plastics have seen a rise in their production, and the environmental impacts have become more drastic than ever. Roughly, 300 million tons of commercial plastic are produced every year, with only 10% being recycled. The rest of the plastic waste is disposed of or abandoned in the environment.

Originally the word plastic meant that an object was moldable and flexible but in modern terms plastic has become its own category of materials. Natural Plastics, which are chemically modified natural materials such as natural rubber, have existed for centuries.

These types of plastics were quickly recyclable since they were formed from bio-deprived materials. Many civilizations such as the Mesoamerican utilized this type of material in their everyday lives. In 1869, the first synthetic plastic was created by John Wesley Hyatt, and since then the use a synthetic plastic in manufacturing has steadily increased. Global industrialization heavily impacted the production of plastic. New products were introduced in the markets that were mostly comprised of this type of material. At the time, synthetic plastics were beneficial to the world as they helped minimize the use of natural resources such as wood and metal in the assembling process. In addition, since plastic is inexpensive to produce, it has helped reduce the economic burden of using natural resources. Plastics were perceived as a harmless material that could save the environment and different species from the destruction of their natural habitats.

Mass production of industrial plastics raised considerable concerns about waste in the 1970s and 1980s. Although plastics are fundamentally disposable and recyclable, it takes a significant amount of time for these processes to occur. The most significant concern regarding the multitude of plastics being produced every year is the enormous amount of time it requires to fully decompose. It can take up to 1000 years for this material to disintegrate. Plastic waste quickly became a world-renowned problem. In the 1980s, several campaigns were created in order to address the environmental risks from the disposal of plastic waste in the marine environment.

In recent year's plastic pollution has caught the eyes of the media, making this issue the most-talked-about environmental problem our world is facing. The focus is primarily on the marine environment as it is the region where most of the world's abandon plastic can be found. Marine plastic debris is comprised of many different types, such as industrial plastics, microplastics, and Nano plastics. Each type affects the marine environment differently, but the overall environmental damage is consequential. Every year around 12 million tons of plastics are dispatched in the seas and the oceans. This poses a high risk to marine life and the marine ecosystem. Even though most of the manufactured plastics are being disposed of from specific regions, they can be found in different parts of the world. This can happen due to constant ocean currents plastic. The Arctic is the most affected area from the oceanic currents carrying the plastic debris.

Short-term and long-term effects of plastics in the marine environment

Plastic objects most commonly known as bags, bottles and other items are incredibly harmful to the marine environment due to their size. Marine animals can get

entangled with the plastic debris or the plastic objects can be perceived as food leading to fatality or severe injury. Toxins that are released from the digestion of plastic debris have been found that it can bring imbalance to their digestion and immune system. This imbalance in marine animals can cause affliction in the breeding and reproduction of their species.

Microplastics, on the other hand, do not only affect marine life, but they can also harm the marine environment. This type of plastic is directly released to the environment and immediately affects marine species but also humans. It has been shown that microbeads in the marine environment lead to the disruption of the soil and small aquatic ecosystems such as coral reefs. Thus, microplastics can enter marine animals' digestion system effortlessly due to its size and can inflict death, injury, or significant discomfort to the animal. Also, microplastics cannot be removed from the city's water filter, therefore, making it extremely dangerous to humans. This leads to humans utilizing contaminated water in agriculture and their everyday life. The result of microplastics on humans is alarming as it is estimated that we consume about 5 grams of plastic each week.

Plastic waste from commercial use or industrial use is not the only factor that plays a role in plastic pollution. Fishing is strongly influencing the marine ecosystem as an abundance of fishing equipment is mostly made out of different types of plastic. Fishing nets and other equipment are abandoned in the sea from previous fishing sessions. This can provoke injury or death to marine life to the same extent as different plastic objects can.

Plastic debris Hot-Zones

Plastic debris hot-zones are extremely common. These are areas were regional plastic pollution, and transported plastic debris can be found. Localized plastic debris is usually created from tourism and local factories. Hot-zones can also be caused by illegal or poorly regulated waste-dumping.

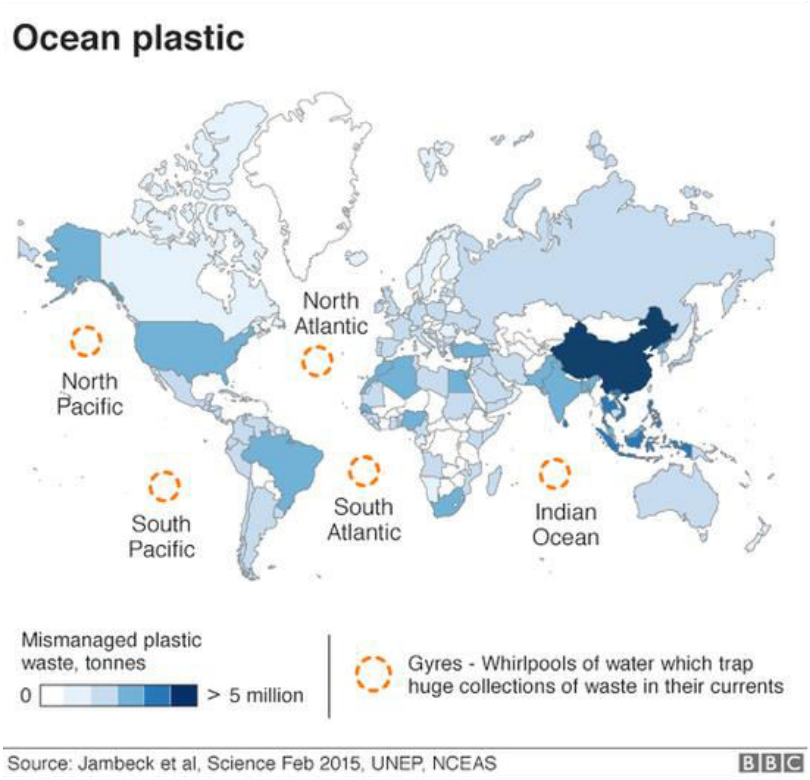
The Mediterranean is one of those hot-zones due to its enormous annual tourist population. The most affected areas in the Mediterranean are Barcelona, Marseilles and Venice. It is estimated that around 570.000 tones of plastic waste are disposed of in the sea. The reasons regarding the plastic pollution in the Mediterranean are mostly comprised of the waste that tourists create and weak waste regulation systems.

The Great Pacific Garbage Patch is the most prominent plastic waste patch that exists in the world. As the name states, it is a huge waste patch that is located in the North

Pacific Ocean between the two continents. Due to the oceanic currents the patch keeps growing as the eastern and western side of the patch circulates and adds more plastic waste to the patch. There are many such patches in the world such as in the Southern Pacific Ocean and the Indian Ocean but the Great Pacific Garbage Patch.

The Indian ocean is also a big plastic waste hot-zone. In this region, there are roughly 330 tonnes of plastic waste disposed of every day. The issue keeps growing in the region due to two factors. Firstly, gyres in the area trap plastic waste, not allowing it to leave the area. Also, gyres help bring in more plastic debris in the hot-zone from the coastal lines. Secondly, tourism in the area is at an all-time high, and studies have shown that this number is only bound to increase. Tourists in the area produce around 3.5 kilos of plastic, which increase the plastic waste that can be found in the hot-zone.

The Atlantic Ocean is also an ocean that is greatly affected by plastic pollution. This ocean is the most crucial trade route as it connects three main continents America, Europe, and Africa. It is one of the biggest trade routes in the world; therefore, many shipments are made annually. Great gyres in the area and instances were plastic waste disposed of from the ships have led to the increase of plastic pollution in the Atlantic Ocean.



MAJOR COUNTRIES AND ORGANISATIONS INVOLVED

United States of America (USA)

The United States of America is a country that is very important regarding plastic pollution. Although the USA is involved in many projects around the world in order to help minimize marine plastic pollution, it is facing an internal crisis with its plastic waste management system. Only 9% of plastic is being recycled while the rest is being disposed of, landfilled, or burned in factories. Therefore, the USA is facing problems with its regulation and its policy against plastic waste management.

People's Republic of China

China is the biggest plastic waste producer in the world as it produces roughly a third of the plastic waste that can be found in the ocean. Densely populated cities and factories influence greatly the amount of plastic pollution that can be found in the marine environment. Those coastal cities accumulate approximately 3.5 million tons of plastic waste in the ocean. China has no waste management regarding plastic pollution.

Indonesia

Indonesia is the second-biggest producer of plastic waste in the world right after China. It is estimated that Indonesia produces around 2.4 million tons of plastic waste that can be found in the ocean. It is one of the most polluted nations in the world as four of Indonesia's rivers rank among the 20 most contaminated rivers in the world. The water supply has been polluted to the extent that it is undrinkable as it contains many diseases, such as E. coli. Indonesia lacks a waste management system but has recently taken drastic measures in order to reduce the plastic pollution that can be found on land but also in the marine environment. The project that it has adopted will reduce around 70% of its current plastic waste in 8 years.

Japan

Japan uses around 40 billion plastic bags every year, making it one of the nations with the most plastic waste produced annually. The environmental and health effect of plastic waste is receiving considerable attention from the government. It has adopted several campaigns in order to increase awareness about the use of plastic. Japan has also changed its policy and approach to plastic waste as it has called for international cooperation between nations and organizations in order to find ways to counter this global issue. Japan has reached such drastic changes in its behavior because of the many hot-zones that exist around its coastal areas.

Philippines

The Philippines produce an enormous amount of plastic annually with that number reaching around 2.7 million tons. Around 20% of the plastic that is produced is disposed of in the ocean or other marine environments. There have been many previous attempts in order to solve or minimize the ongoing issue that is occurring, but the government has not fully implemented them.

Sri Lanka

Sri Lanka has been and is facing great risks from plastic pollution in its coastal lines. Sri Lanka is heavily dependent on fishing by most of its population. This industry has seen a severe impact on its exports with an immediate impact on its GDP. With water contamination levels being very high, fishing has been reduced. Sri Lanka has made many attempts in the past to solve the issue, but none of these measures have been fully integrated. The reason for the failure of these attempts is because of its weak legal enforcement system. Although Sri Lanka is facing difficulties in order to tackle the plastic pollution issue, it is facing, and there are many prosperous measures that will come into effect in resolving plastic pollution.

World Wildlife Fund (WWF)

The World Wildlife Fund is an extremely active non-governmental organization (NGO) on plastic pollution. WWF focuses on the protection of the environment but also wildlife. Since plastic pollution dramatically affects the marine ecosystem, WWF is trying to call for global cooperation on tackling this issue. It researches the effects of plastic waste on humans and the environment and is currently proposing measures in order to combat this issue.

Clear Blue Sea

Clear Blue Sea is a non-governmental organization that collects plastic from the ocean and re-uses it by recycling it. It has created Floating Robot for Eliminating Debris (FRED) a robot that collects plastic debris in the ocean. It operates with renewable solar energy; it also can rescue animals that may be trapped in the plastic debris or proximity from them.

Natural Resources Defense Council (NRDC)

This NGO is created for protecting the environment and the biosphere of our world as a whole. It is active upon the issue of plastics in the marine environment. It focuses on preventing plastic from reaching into the oceans or any body of water, as well as helps marine life from the influence of plastic debris. It has resolved many solutions that can be implemented on a national and local level.

TIMELINE OF EVENTS

Date	Description of Event
1869	First-ever synthetic plastic created
1970s	First report of marine plastic debris
1980s	First campaigns for responsible use of commercial plastic as it has started to become a big concern for the plastic industry
2006	A report was published which showed that around 267 different marine species are being influenced by plastic pollution
2006	United States Congress passed a law regarding reducing and collecting plastic debris from coastal lines and the surrounding oceans of the United States of America
May 28, 2018	United Kingdom, European Union, and India propose the prohibition of the ten most common plastic objects
July 1, 2019	Seattle becomes the first state to ban plastic objects and items such as straws and utensils
July 6, 2019	China bans the commercial use of plastic bans
October 26, 2018	European Union proposes legislation regarding single-use plastic prohibition in the continent
January 17, 2019	Peru limits single-use plastic in areas of cultural heritage
2019	G20 summit for international cooperation against plastic pollution in the marine environment

UN INVOLVEMENT: RELEVANT RESOLUTIONS, TREATIES, AND EVENTS

There has been a significant amount of UN involvement, especially in the recent years regarding marine plastic pollution. The United Nations, in cooperation with nations and organization, has created and is creating many regulations/resolutions against plastic use and its disposal.

-A/51/116: This resolution was created in 1996 and is intended on implementing the Law of the Seas in order to protect the marine environment from any land action that may cause harm or destruction to the ecosystem.

-UNEP/1/6: This resolution addresses ways to tackle macro and microplastic debris in the marine environment.

-UNEP/3/7: It refers to plastic pollution, and it provides solutions to the issue but also sets goals in order to improve the natural habitat of marine life and improve the conditions of the marine environment.

-UNEP/3/20: This resolution is set in order to help minimize the effect of having by 2050 more plastic than fish in the ocean. It is focused in order to prevent this phenomenon from happening.

-The 146th assembly organized by the United Nations Environmental Program: This assembly took place in order to analyze and implement the four previous resolutions proposed by UNEP.

-Honolulu Strategy: It is a framework created by the cooperation between UNEP and the National Oceanic and Atmospheric Administration (NOAA). It was created in order to propose efficient ways to tackle the prevention and the management of plastic debris in coastal areas and the oceans.

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

There have been many previous attempts in order to solve the issue of plastics in the marine environment. Those attempts are structured around specific measures, but due to their inefficiency, countries have failed to apply those measures in their policy, legal frameworks but also their everyday life. Plastic pollution is a relatively new problem our environment is facing; therefore, nations have not had the opportunity to create and enforce the appropriate measures to tackle this issue.

1. Many nations have tried to ban different types of components that make up plastic items, but none of those actions have been implemented or been effective so far. For example, Sri Lanka in 1994 tried to prohibit polythene, a material used for plastic bags and bottles, but it failed to be implemented in its legal framework.

2. Many countries have implemented new ideas such as the separation of the types of plastic in recycling. Such solutions are feasible, but their scale of effectiveness is very small due to the size of the issue.
3. Other attempts have taken place, such as the prohibition of single-use plastics in nations, but many countries have and are failing to adopt such a policy in their everyday life. Many factors play a significant role in the ineffectiveness of their legal systems, but countries are struggling to act accordingly.

POSSIBLE SOLUTIONS

Many solutions could be implemented on an international and a local level. Thus, collective global action needs to be taken in order to minimize and solve this international level issue.

- Treaties and agreements could be created that will include all of the aspects of this issue and will enforce nations to take immediate action. Therefore, a legal framework could be created in order to manage plastic production and waste produced by industries and everyday people.
- Another solution could be to provide the necessary aid to regions that hot-zones exist in order to tackle the issue and help with the reestablishment of marine life and the marine environment.
- Also, new plastic waste management programs should be created in order to tackle the disposal and abandonment of waste in the marine environment.
- Single-use plastic is currently the biggest factor regarding plastic pollution. As a result, the prohibition or regulation of single-use plastics is fundamental in tackling this issue.
- Moreover, it is a necessity to provide the appropriate aid to Lower Economically Developed Countries (LEDs) with the intent of tackling water contamination. Water pollution is a massive problem that many countries are facing, and actions need to be taken.
- Last but not least, new technologies should be implemented in order to address water impurities and plastic hot-zones.

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Lastly, I cannot help but stress the importance of your full comprehension of the topic and the study guide so if any question occur please contact me at alambrianos1@gmail.com.