

## **Advanced Futuristic Topic Synopsis: Addressing Microplastics in the year 2030**

### **Sustainable Development Goal**

#### **Sustainable Development Goal #14**

Sustainable Development Goals (SDG) were introduced by the United Nations as a specific-solution agenda for 17 global goals. SDG 14 focuses on the international community's impact on the world's oceans by conserving and sustainably using the earth's oceans through limiting human activities such as fishing. Ocean acidification is also heavily emphasized by SDG 14 as a pressing issue, underscoring the detrimental consequences ocean acidification will have on Marine Life. Overall, SDG 14 remains committed to the overarching goal of oceanic conservation. In terms of microplastics, the United Nations Economic Programme believes that there are already more than 50 trillion pieces of microplastics in our surrounding waters. Therefore, SDG 14 is aimed to help with the plastic pollution threat by stopping the incorrect disposal of microplastics in numerous countries around the world. Not only this, but harm to SDG 14 directly affects SDG 3, put forth by the United Nations to promote a worldwide

improvement in health in order to ensure the well being of millions of citizens. This is because as Microplastics move through the food web and eventually reach the plates of seafood consumers, consumers would ingest hazardous chemicals. It would indirectly affect the progression towards larger economic growth put forth by SDG 8. The crippled marine ecosystem caused by the roaming microplastics will provide less revenue for fisheries.

### **Background**

Microplastics are minute plastic debris that have the potential to majorly affect our environment. As a new field of study, not much information or research is available concerning microplastics; however, organizations such as the National Oceanic and Atmospheric Administration Marine Debris program produce detailed research about the effects of Microplastics. Through such research, it has been discovered that Microplastics can come from a variety of sources: from large plastic objects that have been pulled apart to smaller resin beads used in packaging. These Microplastics are able to easily pass through filtration systems and harm aquatic life in the Great Lakes and oceans. They do this by not only killing aquatic life due to the hazardous chemicals like Dioxin associated with them, but they are also easy for ocean

animals to mistake for food and ingest. Although these Microplastics may seem to be an insignificant issue for humans, they have and will have a monumental impact on the environment and the human race. Animals that humans consider seafood will be ingesting this harmful plastic. Therefore, toxic materials could find their way to our own bodies. Nutritional authorities advise humans to double their seafood consumption, however, due to the effects of Microplastics, humans may end up more hurt than helped by the benefits of Microplastics. According to Sarah-Jeanne Royer, a researcher at the Scripps Institute of Oceanography, Microplastics have been found in virtually every place imaginable: from the North Pole to the tops of mountains. Furthermore, the amount of Microplastics found in the Pacific Ocean alone is expected to double by 2030. As reported by the United Nations Environment Programme, these Microplastics first surfaced in a variety of health and beauty products 50 years ago. As a result, there is a lack of consumer and brand awareness about Microplastics and regulation of the use of Microplastics. Since they were first introduced, Microplastics have begun to surpass the use of natural ingredients and are currently a 600 billion dollar industry. Recognizing this problem, world

leaders have taken action to regulate the use of Microplastics. For example, former US President Obama signed the Microbead Free-Waters Act of 2015, banning the use of Microplastics in cosmetic products. It is estimated that up to 75% of Microplastics found in oceans are from the breakdown of larger plastics such as water bottles. Because even larger plastics can become Microplastics, simply limiting the use of smaller plastics is not a viable option. Recently, fast fashion and the use of polyester and synthetic fabrics have been discovered to be a large contributor to the Microplastic uprise. According to researchers at Plymouth University, up to 700,000 microfibers can be released from a single load of laundry. In addition, microfibers on items like sweaters and shirts shed off easily and find their way to the ocean. Because Microplastics come from a variety of sources, it will be imperative for delegates in the Advanced Futuristic Committee to find an all-encompassing solution.

### **UN Involvement**

An effort spurred by the United Nations Environment occurred in 2017 when a large event, held by the Environment Committee from France, Italy, Sweden, and Norway, was held

with sponsors from multiple island-based countries such as the Maldives and Indonesia as well as the Global Partnership on Marine Litter (GPML). The point of the large conference was to inform other countries' environmental committees about the horrible, exponential growth of microplastics in the ocean. As a result of the conference's success, many countries have been active in campaigns such as the Clean Seas Campaign held by the UNEP. Not only this, but multiple countries have set goals to cut down the amount of litter they produce. Although a thorough plan has not been announced, by 2025, Indonesia has fully committed to cutting down the amount of litter it has in its surrounding seas. Adding on, Uruguay and Costa Rica have come closer towards reducing single-use plastics by better managing their waste. Unfortunately, the UNEP has even held research stating that if the growth of microplastics in the ocean continues at the rate that it is now, by 2050, there would be less living fish than microplastic particles in all oceans. Not only this, but the UNEP has worked with DELL, the computer company, to prove that the microplastics in the oceans may be reused if extracted correctly. This new system hasn't been internationally tested and presented in full detail to nations, but will soon be in the

upcoming meetings in June and December of 2020. They plan on presenting solely about cutting down the number of microplastics in the ecosystem we produce today and possibly reusing it.

Finally, other United Nations committees and sections are taking part in UNEP's Clean Seas campaign such as the UN General Assembly. The UN General Assembly has worked with countries and their teams to discuss the importance of sea life to this earth and how the reduction of single-use plastics is so vital to the continuation of life. In fact, we now see that there are more regulations on plastic bags in everyday life. For example, 127 countries have put regulations on the use of plastic bags, whether it is completely banning them or placing small fees when they are bought. Therefore, multiple countries have worked with UNEP to come closer and set goals towards reducing the number of microplastics we see today.

### **Possible Solutions**

Delegates must create solutions that address the variety of issues that Microplastics present. One example of a solution would be the use of regulations on the amount of plastic that can be used in products by manufacturers. In addition, manufacturers can be held responsible for

proper waste disposal. Members from the Frank G. Wells Environmental Law Clinic at UCLA recommend the banning of one-time use plastic products (plastic straws, plastic bags, etc.).

Although several suggestions such as this have been made, an extremely effective Microplastic pollution prevention regulation has yet to be implemented. Another way to combat this issue would be taxing manufacturing companies for the use of more plastic than a specified amount.

Delegates can also suggest the promotion of alternatives to plastic, such as bioplastic. Bioplastic can be created from agricultural by-products and can be made to be completely biodegradable.

Delegates, however; must understand and address the fact that companies need an incentive to use bioplastic instead of regular plastic. In addition, delegates must understand the fact that there is a debate about the efficacy of Microplastics. It is also imperative that more research is conducted on the subject of Microplastic pollution. Ways to implement this solution can include UN support for organizations such as the NOAA Marine Debris program. Encouraging existing research organizations that focus on this topic can motivate them to further their research on Microplastics. In addition, a UN body of scientists can be created to manage all of these research

projects and decide on which projects deserve more funding. Furthermore, a solution could be the promotion of consumer awareness. This would include UN support of campaigns such as the RRA or Recycle Across America campaign. These campaigns would work towards educating both students and adult consumers on the dangers Microplastic can cause to the environment and to the human body. Overall, we are looking for delegates who come up with specific and intricate ideas. This can include expanding on the ideas we have presented or generating new, creative solutions.

### **Questions to Consider**

1. How do Microplastics present a problem for our environment in 2030? How does this problem relate to the UN's Sustainable development goals?
2. How have efforts to limit the production and use of Microplastics been successful in the past? How have they failed?
3. How effective is bioplastic in combating the problem Microplastics pose? Is it a viable solution or is there another, more effective method that should be addressed?



4. What research has already been conducted regarding Microplastics? How can this research be furthered? What are some unanswered questions regarding Microplastics?
5. Are there any new scientific innovations in the fields of biotechnology and chemistry that have the potential to stop this problem?
6. How can awareness be more effectively spread about the detrimental effects Microplastics have on not only our environment but also ourselves?

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