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### Essay

“SDG #14: Conserve and sustainably use the oceans, seas and marine resources”

*“14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution”(un.org)*

For thousands of years, marine wildlife has provided sources of food, materials for building, and essentially been vital for the development of civilizations. The oceans function as a vital source of oxygen and regulate the climate. With that being said, protection and development of the Ocean (and marine wildlife conditions) must be humanity's first priority, especially when the climate all over the globe is rapidly changing, causing deadly disasters. However, that is not the case and right now we have to face the problem of the ocean's pollution and its crucial outcomes. Unfortunately, the majority of the population is either unaware of the issues concerning the pollution, or simply arrogant enough to not be alarmed by it. Hence, I would like to bring those issues up and, what's more important, talk about the solution to the problem.

Approximately 70000 years ago Homo sapiens went through the cognitive revolution and started their way to what we now call “culture”(Sapiens: A Brief History of Humankind, Yuval Noah Harari). Throughout the course of our history humanity has been changing its ways of living to find the most comfortable one. That is why at some point in time we've come up with plastic. In everyday life, it is something that we use on a regular basis and can't imagine our lives without: we use plastic bags for shopping, plastic bottles to store water, plastic utensils and tableware, and all of it mostly comes to our hands for single use. But as we are done with it, where does it go? What is plastic's afterlife like?

Well, sadly, we have all the answers. It is stated that annually 300 million tons of plastic are produced globally and up to 10% of it ends up in the sea(epa.gov). Also, according to the United States Environmental Protection Agency [EPA] “unregulated disposal of wastes and other materials into the ocean degrades marine and natural

resources and poses human health risks.” Digging into it a bit more, people find terrifying facts. For example, according to the World Animal Protection organization, there are a lot of sea animals who accidentally eat plastic and sadly it affects their reproduction system and may cause death. But before dying they can suffer for months or even years. According to the official EPA website, “for over 45 years, EPA’s Ocean Dumping Management Program has stopped many harmful materials from being ocean dumped, worked to limit ocean dumping generally, and worked to prevent adverse impacts to human health, the marine environment, and other legitimate uses of the ocean... from pollution caused by ocean dumping”. But there is still a lot to do. For example, BBC’s Blue Planet shared that “people watch wildlife documentaries and think the oceans are still pristine but they aren’t. I’ve known film crews spend two hours cleaning up beaches before they can take shots of turtles.” And that is only the tip of the iceberg, so imagine how many more issues there are. But for now, I would like to speak more about the things that we can do to save what we’ve almost destroyed.

Firstly, some of the global measures. Some people argue that making The Marine Protection, Research, and Sanctuaries Act [MPRSA] regulations more strict would be the most efficient way to fight plastic pollution in the sea. Why is it so important to have strict regulations? The Marine Protection, Research, and Sanctuaries Act (also known as the Ocean Dumping Act) “prohibits the dumping of material into the ocean that would unreasonably degrade or endanger human health, welfare, or amenities, or the marine environment, ecological systems, or economic potentialities”(epa.gov). MPRSA requires to have permission for dumping wastes into the sea prior to the action. It regulates and controls what goes to the ocean. However, it is impossible to control everything because there are over 200000 ships worldwide and this is only a number for the registered ones(marinetraffic.org). So, many ships violate the restrictions because the crews are well aware that they will get away with that, because “who will ever know?”. That is exactly why people are trying to put more responsibility on sailors in order to prevent plastic from getting to the ocean without EPA even knowing about that. “The basic provisions of the act have remained virtually unchanged since 1972 when it was enacted to establish a comprehensive waste management system to regulate disposal or dumping of all materials into marine waters that are within U.S. jurisdiction, although a number of new

authorities have been added” (The Common Reporting Standard). It still is efficient, no doubt, but there must be some adjustments in control systems in order to indicate violations quickly and strictly punish for them. It must be just a matter of control since human nature cannot follow the rules while there is a hole in the controlling system.

Also, a great way to reduce plastic pollution in the oceans is to recycle the plastic right on board. For example, The Telegraph article states that “the US Navy and even some cruise ships already operate recycling systems, which take the waste of crew and passengers and heat it to temperatures of more than 5,000C to turn it back into a reusable form. The plasma torch technology is powerful enough to convert plastics, metals, and glass into granules or gas”. It is a great solution, indeed, but not every ship has a capacity and enough workers to perform such actions. That’s where it becomes very interesting and the Ocean Phoenix project comes into play. Ocean Phoenix 360 is a huge vessel that is designed to collect tons of plastic from water and recycle it. Launching this kind of machinery seems to be a very efficient solution for plastic pollution in the sea. There is a possibility that if there would be a few of those ships launched in every body of water on Earth in some years the oceans and seas could be completely cleaned of plastic waste. “Cleaning the oceans is clearly a vital and urgent priority. It will be expensive, but a persistent worsening of the situation would lead to an irreversible and insoluble global catastrophe. The Ocean Phoenix is capable of recovering plastic waste located 30 meters below the surface. It is the only solution designed to effectively recover plastic waste at such depth in the oceans.” - says Serge Menard, an inventor, mechanical engineer and naval enthusiast who started the project in 2012.

But not only government organizations or huge projects can help. You can help. I can, my friends can, each and every one of us can invest in saving the oceans and animals. And I’m not talking about money but the effort. Nowadays, the “Zero Waste” policy gains a lot of popularity, and that is the kind of mainstream movement that should be greatly supported by people and governments. “We support the transition from a throw-away society to a zero-waste world through policies and best practice of waste reduction at source, repair, re-use and recycling”(zerowasteeurope.eu). So let me dig a bit deeper and explain each part. The first one is “reduction at source” which basically means finding alternatives for unnecessary waste: shoppers (or shopping bags, medium-

sized bags, typically around 10–20 litres (2.5–5 gallons) in volume (though much larger versions exist, especially for non-grocery shopping), that are used by shoppers to carry home their purchases.(wikipedia.org) ), instead of the plastic bag at the store; metal, wooden or glass straws for drinks, instead of the plastic ones; metal or wooden utensils, also regular glass tableware. The second point is “repair”, so that’s simple, for example: your shirt got a little hole in it but it still is wearable - repair it and continue wearing, instead of buying a new one. Then “re-use” - reusable water bottles, bags for food or food containers, again, utensils and tableware. And, last but not least, “recycle”. Unfortunately, it is not developed in Russia, but many other countries are stepping to the game to save the environment and make strict rules for recycling. And following these small steps would eventually be one huge step for us as a society to a better, cleaner future.

In conclusion, I would like to say that there are many possibilities to make the environment better. But people mostly focus on recycling and fighting against plastic pollution on the land. But there is a rising issue of plastic pollution in the sea and people should have more knowledge on it in order to make a change. Bringing the issue to the spotlight would be the first step to success. There are many ways to reduce plastic pollution in the sea, but the most efficient to bring people to the awareness and make them step up to fight the issue. All in all, I hope that in the upcoming years the process of cleaning the Ocean will start and will be successful.