

## The Seas of Despair

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A drifting current, emerging white swells, the laughter of marine life; the beauty and value of the world's oceans transcend the comprehension of humans. Yet, completely absorbed in providing for the human realm, these magnificent bodies, though so vital, are wasted. Forgotten. Ignored. Spoiled. A culture has arisen adhering acceptance to these dangerous practices. Growing older, the developing consequences only continue to escalate in severity. Darkness has not completely fallen, but as transference of the responsibility of stewardship commences, the younger generation must meet the demands of the challenge, the challenge of plastic consumption.

The beauty of oceans is meant to be shared. Nothing humanly created can match the remarkable stability and organization within this irreplaceable ecosystem. Existing for several billion years, oceans have weathered many storms along the course of evolution ("History of the Ocean"). Yet no danger has threatened these glorious sources of life to the same extent as the impending crisis of humans. Nearly an estimated 750,000 species call the world's oceans home (Ocean Portal Team). Encompassing a vast 70% of the Earth's surface these bodies of water provide the foundation for all life upon Earth, especially for that of the human species ("History of the Ocean"). Within a healthy oceans' walls, hierarchies are well established. Food chains function and maintain proper balances between populations and food supplies. Life exists in such a serene environment, traveling through the water, a separate world, still mostly unknown and undiscovered. However, not many oceans currently exhibit the healthy traits expected of oceans that have survived billions of years. The world's oceans were, and still remain self-sufficient but

much of this beauty has been lost. Removed by the coming of humans, plastics have taken hold, threatening the continued proper existence of oceans and marine life.

Plastics, they're in homes, schools, workplaces, and now in nature. The perpetual, one-way creation of plastics has been fueled by the increasing demand of human consumerism. Since 1862, when Alexander Parkes revolutionized the world with this manmade creation, its utilization has expanded exponentially, touching nearly every aspect of human life (Bellis). Neither pure, natural, nor safe, plastics were not meant to integrate with the stability of nature. Yet they threaten its very foundation, constantly accumulating, poisoning its beauty and strength. Within this tedious life of plastics, biodegradation of a single plastic bag could take over a thousand years (Bellis). In perspective, nearly 50 generations of humans would pass before that single bag would dematerialize. Yet, the world does not function with just one single bag. At supermarkets, thousands pass between hands every day. All the while, customers remain blissfully unaware of the burdens they will leave on the future 50 generations. Not even recognizing the affliction posed on the most recent generation, their very offspring, this selfish attitude that has overridden society must be eliminated for there to be 50 more generations. The "throw-away" culture, the excessive ideal to obtain then discard, has plagued the surrounding waters. Conditioned to expect easy accessibility and disposal, modern society has embraced this consumer culture. Plastered upon plastic advertisements, the accumulative effects have transformed popular society into a spiraling dependence on plastics, a dependence that has plagued not only the oceans, but the accompanying industries, materials, and lifestyles that have relied on this foundation of life.

Below the divide between air and sea, a new world emerges; a world ruled by marine life. Yet, plastics have begun to blur the power reigning over the sea. Plastics, the warriors of man,

have begun destruction. Amassing into large pools formed by ocean gyres, the increasing size of these pools threaten to constrict the flourishing sea life below. Often entangled or ingesting harmful plastic products on mistake, many marine animals suffer painful reminders of the merge between humans and animals. Endangered marine species, already limited by other human activities, cannot overcome the struggles of ocean plastic pollution. Many turtle populations, such as the Loggerhead, face a great deal of interference from plastics. Often greatly entangled in nets or mistaking plastics bags as a passing jellyfish, Loggerheads along with most sea turtle species populations are threatened to near extinction ("Information about Sea Turtles"). In addition to the threatening conditions of many sea turtles, avian populations are also greatly and often impacted through the reckless disposal of plastics. Swooping, searching across the sea to feed their needy fledglings, Albatrosses are well-known for their attraction to plastic components ("Laysan Albatrosses' Plastic Problem"). Easily skimming their beaks upon the water's surface, what appears as a fortunate source of food ultimately becomes their unfortunate death. As the largest birds on the planet, even with stomachs proportional to their size, the growth of plastics within their hollow walls cause a slow demise. A demise of pain, starvation, and weakness. Traveling and accumulating within the stomach, small plastic fragments pile, pressing and protruding against the thin walls. Filling a large volume, the wastes create a sensation of fullness, a satisfying feeling for these instinctive birds ("Laysan Albatrosses' Plastic Problem"). Yet when no actual fuel is consumed, the effects of starvation eventually settle. Eventually choking from ingestion, drowning in a net, collapsing from poisoning, or simply being slaughtered as by-catch, the unenjoyable end of Albatrosses and of many marine birds is disconcerting. A simple bottle cap, equivalent in size to a quarter, yet a favorite of Albatrosses, this small weapon has contributed to more harm than some of the largest and most complex machinery. Negative

interactions such as these between the lives of men and animals demonstrate that within these clashing societies, although the ocean element operates independently from human society, human influence is too large to be unnoticed, so large as to threaten the existence of these oceans.

It is difficult to accept the occurrence of an event if it cannot be seen. However, off the Pacific coast, the accumulating effects of plastic consumption have become visible. Spanning across a space “twice the size of Texas,” the Pacific Garbage Patch has developed into a vortex for discarded plastics ("Ocean Trash Plaguing Our Sea"). A sample of the future for the emergence of garbage patches, the expansion of this mass has become uncontrollable. With layer upon layer of buoyant plastics, below, many concealed coats remain invisible. Partitioned into small beads of microplastics, plastics through photo-degradation have continued to remain as members of marine ecosystems ("Ocean Trash Plaguing Our Sea"). Yet the amassing size of the Pacific Garbage patch along with others within the Atlantic or the Mediterranean are only expected to continue ("Ocean Trash Plaguing Our Sea"). Gathering from the strong ocean gyres, these sites provide a visible warning of an uncertain future for precious marine bodies. Circulating throughout the world, plastic debris has even been found in Antarctica ("Ocean Trash Plaguing Our Sea"). Although comprised of mostly microscopic particles, the consequences of these garbage patches are just as great as their accumulating size and unbelievable reach.

Humans have only existed a mere 200,000 years, a minuscule period of time compared to the multibillion year legacy of oceans; yet, the most rapid change due to human interaction has occurred during this period, modifying oceans from their natural form ("History of the Ocean"). Styled to meet the pressing demands of man, ships, nets, and plastics have entered this placid body. Transforming a once vibrant and flourishing marine environment, into the oceans of today

which have become barren and filled with trash. Becoming the world's largest dump, the plastics that have accumulated within the oceans' spans are tangible indicators of the severity humans have caused within not only marine ecosystems, but also terrestrial ones. However, oceans will continue to follow this disturbing trend of negative change unless humans change their behavior, modifying themselves in order to protect the beauty of the oceans.

The answer to plastic consumption and pollution is neither small nor easy. Plastic pollution is a large problem, therefore requiring a solution sized for the task. Most importantly, a collaboration between the government and people is necessary in fostering an effective execution and continuance of protecting the world's oceans. At the federal level with collaboration with other foreign governments, legislation should be enacted to prevent excessive amounts of plastic from entering human society worldwide. By regulating plastics at its foundation prevents greater impacts of it later in the lifetime of a plastic. It is necessary to have this be a shared universal goal because plastics are a universal problem. Originating from every corner in the world, the growing debris patches contain plastics from numerous countries, making them a shared problem worldwide. Placing restrictions on the toxicity of plastics created, where plastics are distributed, how they are used, and how plastics are disposed should be key topics pressing world leaders. However, the passage of legislation is often a difficult and tedious process in itself. This places more importance on the work of the guardians of the ocean, citizens. Advocating and exposing the dangers of society's adoption of a "throw-away culture," citizens are the answer to pressing governments to act and prevent the expansion of plastic patches and their accompanying effects. The United States has always been an exemplary leader to the world, a force many countries follow. By leading through example in respect to legislation combatting plastic accumulation,

this powerful force can be used to combat the problem of plastic consumption, a worldwide issue.

Human society and its accompanying demands of plastic consumption threaten the continued existence of the world's oceans. As humans were those who caused the problem, it is meant to be their responsibility to fix it. Although initial movements have existed for quite some time, these aging movements, like their leaders, must adapt to meet the current issues of the world's oceans. The younger generation, rising into its own light, must be the leaders of this new revolution. The continuous problem of plastic pollution is a large problem that will need great lengths of time to heal. Prevention and then reconstruction of the world's oceans is at a priority. Will the next generation meet its demands?

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## Reflection

In continuance from my studies this year in Environmental Science, I was very surprised to realize how perilous the conditions of the world's oceans have become. Ignorance is one of the main elements of popular society's hindrance to change. In combination with the adoption of a "throw-away culture," these two elements have led to a great dependence upon plastics and their creation. However, very insignificant regard has been given to their disposal. This piece was written to address and expose the emerging problems arising from irresponsible plastic consumption along with possible solutions. Ultimately, as addressed in this piece, to make impactful and positive change of the world's oceans, it is now up to the next emerging bright young minds. The current youthful generation of emerging activists, scientists, citizens, and leaders has been given a great responsibility to protect and repair these foundations of life.