

Seas of Trash

There is a patch of garbage sitting somewhere between Los Angeles and China that is two times the size of Texas and weighs 3.5 million tons, and most people have never heard about it. I have a dream that one day everybody will know about the trash in our oceans and that it will be cleaned up. Something can be done about all of the garbage by simply informing people of it, helping animals affected by the trash, and finding ways to prevent trash from entering the oceans.

The Great Pacific Garbage Patch is a sea of trash that has been growing for ten years.¹ It is made up of 3.5 million tons of trash, eighty percent of which is plastic.² Garbage from the land floats into the Pacific Ocean between L.A. and China where the currents trap the garbage. The sea of trash is made up of everything from bottle caps, soap bottles, laundry baskets, and basketballs. The sand on some of the beaches in L.A. and Hawaii is made of small pieces of plastic, instead of broken down rock and coral. This sea of trash was discovered by Charles Moore in 1998 accidentally. As he was taking a shortcut home, in his yacht, from Hawaii to L.A., he ran into a sea of trash as far as he could see. He created the Algalita Marine Research Foundation dedicated to learning more about plastic dumps in the ocean. "The constituency of ocean water has been fundamentally altered," says Moore about the sea of trash.³ Eighty percent of the ocean's trash came originally from land and has doubled in the past two years. Plastic is one main cause of the trash and sixty billion pounds will be produced this year

¹ Justin Berton, "Continent-Size Toxic Stew of Plastic Trash Fouling Swath of Pacific Ocean," www.sfgate.com 19 October 2007.

² Darcy Bonfils and Imaeyen Ibanga, "Hidden, a 3.5 Million Trash Heap Lies in the Ocean," <http://abcnews.go.com> 6 August 2008.

³ Margaux Wexberg Sanchez, "Bobbing in Poison Soup," www.latimes.com 30 June 2008.

alone.⁴ There is already one-hundred million tons in the oceans right now.⁵ Four major currents come together clockwise where the trash gets trapped for years. Plastic is not biodegradable, instead it photo degrades. Plastic that photo degrades is broken down into smaller and smaller pieces, never going away. This creates small pieces of plastic that animals mistake for plankton and it also becomes sand disrupting the ocean's ecosystem. The plastic also creates non-water soluble toxins that harm the ocean's environment. One major problem with plastic is that it does not sink or float, it stays in below the surface where the sun and salt water breaks it into smaller and smaller pieces. In all, if more people knew about the Great Pacific Patch, we can prevent more from forming in other parts of the ocean.

Oceans filled with trash, like the Great Pacific Patch, are affecting ocean life. Marine life such as jellyfish, birds, sea turtles and millions of types of fish are just a few of the species harmed by garbage in the ocean. Fish and mammals like Albatross and sea turtles eat the small pieces of trash and it fills their stomachs. This means they have no room for real food, and they do not get any nutrients. The plastic is not digested, and the bird or fish dies. Jellyfish have been found caught in rope with baggies inside their stomach, birds mistake the trash for fish, and sea turtles have been found caught in rope. "The Great Pacific Garbage Patch is particularly dangerous for birds and marine life," said Warner Chabot, vice president of the Ocean Conservancy.⁶ Over 267 marine species are affected in some way by trash in the oceans each year, and 100,000 marine mammals are killed each year.⁷ Fish and filter-feeders eat the small pieces thinking they are plankton or algae. In some places plastics outweigh zooplankton

⁴ Margaux Wexberg Sanchez, "Bobbing in Poison Soup," www.latimes.com 30 June 2008.

⁵ Ibid.

⁶ Justin Berton, "Continent-Size Toxic Stew of Plastic Trash Fouling Swath of Pacific Ocean," www.sfgate.com 19 October 2007.

⁷ Ibid.

six to one, more trash than life.⁸ Much of our food comes from the ocean and soon we will be affected with the fish population decreasing. The toxins that leak into the waters from the plastics affect the animal's hormone levels, making them unable to reproduce. This means that there will be less fish and marine life, upsetting the whole food chain. The trash goes one-hundred meters deep in some places and makes it hard to swim and find food. Not only are animals harmed, coral reefs and underwater ecosystems are disturbed. The garbage is washed into the water and never goes away. A major concern is that the tiny pieces become dust and it disturbs the food web on a molecular level. Hence, the garbage in the ocean waters not only affects the 'ocean', it affects all of the marine life.

Most important is to find a way to get rid of the garbage in our oceans and to prevent it from ending up there in the future. There are many ways to help prevent trash from entering the ocean. A few great ways are to use canvas or recycled bags instead of plastic, or using metal, glass, or paper instead of plastic, and we could pick up trash off the street or on the beach. Also, installing screens over storm drains and purchasing foods that are not wrapped in plastic make a big difference in keeping trash out of the ocean. Charles Moore, the person credited with finding the Great Pacific Garbage Patch states, "The levels are increasing, the amount of packaging is increasing, the throwaway concept of living is proliferating and it's showing up in the ocean."⁹ Moore also believes that the best way to prevent plastic and trash from entering the ocean is to stop plastic at the source. There are many other materials better for the environment and the ocean than plastic, such as canvas, metal and glass. It is becoming more popular to use recycled materials instead of plastic and that is making an impact, but that is not enough. It is virtually impossible to clean up all the garbage in the oceans. It would cost

⁸ David Boston, "Plastic Soup in the Pacific Ocean," <http://international-environmental-affairs.suite101.com> 29 July 2008.

⁹ Brian Rooney, "Landfill in the Sea," <http://abcnews.go.com> 26 March 2008.

way too much for one country and might kill untold amounts of marine life along the way.¹⁰ The tiny dust can not be cleaned out of the ocean because it is too small to grab. Straining the ocean to rid it of plastic would be too much work and there is just too much plastic! The future for the ocean depends on how we, as humans, live our lives, the amount of trash we produce, and the way we dispose it. If nothing is done, at the rate plastic is being disposed into the oceans, in ten years, on the surface, there will be sixty more times plastic than plankton.¹¹ If people want to enjoy the ocean the way they do today, something needs to be done about the way they live their lives. Places like the Great Barrier Reef and beaches all around the world may one day be destroyed or affected by the garbage entering our oceans. Therefore, the major way to prevent seas of trash in the ocean is to stop plastic and garbage from entering the ocean in the first place.

Something needs to be done about trash in the ocean and places like the Great Pacific Garbage Patch that is affecting our ocean's ecosystem. We, as humans, can do something about all of the trash by informing others about what is happening, helping animals affected by trash, and finding ways to prevent trash from entering the oceans. Much of the plastic we carelessly throw away ends up in our oceans and never comes out. As Steve Fleischl, president of Waterkeeper Alliance put it, "The planet is a closed system. So everything that happens on Earth stays on Earth."¹²

¹⁰ Brian Rooney, "Landfill in the Sea," <http://abcnews.go.com> 26 March 2008.

¹¹ Charles Moore, "Great Pacific Garbage Patch," www.mindfully.org 25 October 2008.

¹² Darcy Bonfils and Imaeyen Ibanga, "Hidden, a 3.5 Million Trash Heap Lies in the Ocean," <http://abcnews.go.com> 6 August 2008.

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