

Coastal Pollution

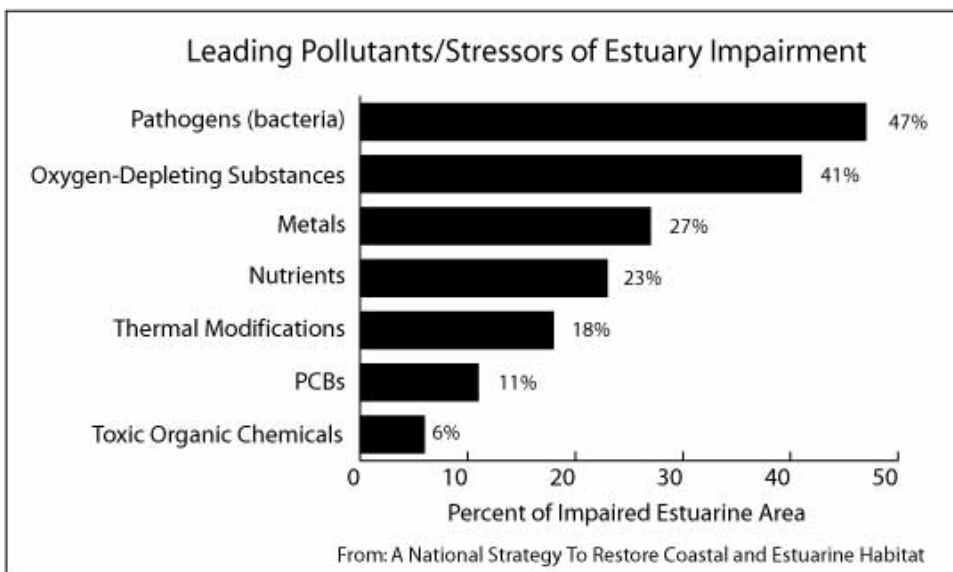
Term Paper
Madison Morris
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Coastal pollution is when polluting and harmful substances enter oceans, lakes, streams, and rivers along the shoreline. The sources of pollution vary from people throwing their trash away in the ocean to waste dumping from companies. Many people do not think much about coastal pollution and the impact it has on the environment. Tourists that come to the beach have no regard for what they do with their trash. Why should they? They do not live there; all they care about is having a fun vacation at the beach. Living at the beach, I see a lot of coastal pollution first hand. A majority of the pollution I see is trash and plastic rings from cans floating along the shoreline. Most people just leave it floating there rather than dropping it off at the trashcan on their way back to their towel or on the way back to the boardwalk.

Naval ships and cargo ships also play a big role in coastal pollution. There are hundreds of ships docked at Naval Station Norfolk and they add a lot to the pollution to Willoughby Bay and the Chesapeake Bay. There are fuel leaks and different things fall off the ships, like parts and personal belongings. Cargo ships have a huge problem with ballast water pollution. They bring water, pollution, and sometimes other organisms from where they are traveling. This is called biofouling and it is when marine organisms attach and grow on parts of the ships like hulls, anchors, and pretty much anything that comes in contact with the water. This not only affects the ship, but it increases the spreading of invasive species from one continent to another.

About half of the coastal waters in America are closed to fishing and swimming because the waters are too polluted. There are many harmful invasive species and disease-causing bacteria. There is also a huge problem with hypoxia and eutrophication. This affects the seafood supply, which affects the fishing community and the fisher's

ability to make a decent income. The pollution can also affect the livelihood if it gets really bad and nothing is done about it. Toxic chemicals play a huge role in coastal pollution. The top toxic chemicals are Arsenic, Copper, Cadmium, Cobalt, Lead, and Mercury. There are also seven pollutants that are the leading pollutants in coastal waters. They are pathogens, oxygen-depleting substances, metals, nutrients, thermal modifications, PCB's, and toxic organic chemicals. The following chart depicts the percent of damage each pollutant produces.



These types of pollution are extremely dangerous to shellfish. Eating shellfish that has been contaminated with any of these substances can be very harmful and cause serious illnesses. The concentration of the pollutant in the fish is what is important, not how much of it is in the animal. When the seafood becomes infected with pollutants like these, it takes a huge toll on the seafood restaurants, especially in tourist's areas like Virginia Beach where the restaurants have good business all year round.

For the past two years CSIRO, the Commonwealth Scientific and Industrial Research Organization has surveying the Australian coastline and they found out that the

remote and hard to find beaches had the most pollution. The researchers were able to find out that the pollution came from Australians. Dr. Denise Hardesty, lead researcher, says that the causes are from illegal dumping, irresponsible mariners, and careless beachgoers. Plastic was the most common item found and Dr. Hardesty says, “More the three-quarters of what we find in terms of rubbish is plastic.” This had a terrible affect on the animals that consumed the plastic as food. Dr. Hardesty says they open animals that have died and that they are full of plastic, over 200 pieces in one bird. There are groups forming all over the country to work on cleaning up the beaches. Many people see it as a duty because this is there homeland and they need to clean and protect the beaches and marine life that live there.

The Chesapeake Bay has had many pollution problems spanning decades. The problems became so bad that in 1975, the Chesapeake Bay became the first estuary to be targeted for protection and restoration after the EPA’s Office of Research and Development started studying the causes of environmental declines in the Bay. The Bay was becoming nutrient enriched by increases in population growth, agricultural development, and sewage treatment plant discharge into the Bay. The nutrients in the Bay are from point sources, nonpoint sources, and air pollution. One of the largest sources of pollution in the Bay is agricultural runoff. Conservationist and researchers are trying to find ways to reduce or stop the agricultural runoff. The biggest priority is to restore the Bay’s living resources. The water quality needs to be improved and this needs to be done through nutrient reduction. This will help improve water clarity, enhance conditions, and increase dissolved oxygen. All of these things will help improve the habitats for the organisms that live in the Bay.

My analysis is that people not throwing away trash, runoff into bodies of water, and illegal dumping, cause coastal pollution. People need love going to the beach, but they do not feel the need to take care of it. More people need to be made aware of the ongoing problems coasts are facing in regards to pollution. They also need to be made aware of the effect the pollution can have on the environment and possibly themselves. There are many good things being done to decrease coastal pollution all over the world, but there are not enough people that are involved or that care enough about the issue to really make an outstanding difference. People are selfish and only care about themselves. People do not care if they leave trash on the beach or that the trash they leave could harm animals. They just care about having a good time at the beach, but they get upset when they see pictures of animals with plastic stuck around their neck. There is a huge double standard because people do not want to do anything to help and they do not want to be held responsible, but they expect other people to clean the beaches and make it cleaner and safer for the animals living there.

In conclusion, there are many factors that contribute to coastal pollution. The main causes are dumping, hypoxia, eutrophication, chemicals leaking into the water, invasive species, and people not throwing away their trash. All of these forms of pollution can and do have severe effects on the coasts and the marine life living there. When the marine life becomes affected, so does the fish market. People can also get sick from eating contaminated fish without knowing it is contaminated. People can get sick from swimming in the contaminated beach or lake waters. Action needs to be taken in order to save and to continue to protect the coasts. High schools should offer extra credit to students who participate in a river or beach clean up. They should also go on a field

trip to the local aquarium to learn about the effects of coastal pollution. Education about coastal pollution should start young because growing up learning about the effect coastal pollution can have can lead to them being more inclined to get involved in organizations working to help save the coasts. If everyone were to clean up a small part of a beach or riverbed, there would be a huge improvement in coastal pollution. Some of the effects of coastal pollution may not be reversible, but we can clean up the coasts and prevent some coasts and beaches from getting to that irreversible state by getting involved and picking up trash.



The Chesapeake Bay from the Chesapeake Bay Bridge Tunnel (personal picture)

Citations

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