

Ocean pollution assignment



**ASSIGN
BUSTER**

Ocean Pollution “ Over 80% of marine pollution comes from land-based activities” (WWF, May 4, 2006, p. 1). The rest comes from ocean-based activities. Different types of pollution enter the ocean each year. The major pollutants are oil, toxic materials, and debris. These materials not only pollute the ocean, but they also affect the marine life. Before the 1970s there were no laws to prevent and stop people from dumping pollutants into the ocean. Since the early 1970s many laws and regulations have been passed to help protect the ocean.

People have set up organizations. These organizations go as far to have beach clean ups and offer several tips for people to do their homes that will help keep the ocean clean. Ocean pollution is something that could be easily avoidable if people just take time to dispose of trash properly. Oil pollution is one of the sources of ocean pollution. According to New Internationalist magazine the annual average worldwide input of oil into the oceans was about 1, 269, 000 tons in 2003. This was a big difference compared to 3, 250, 000 tons in 1983. here are three types of oil that pollute the ocean. The first type of oil that pollutes the ocean is crude oil. It comes from natural seeps. Natural seeps are cracks in the ocean floor that leaks oil into the ocean. The oil seeps slowly into the ocean. Because it seeps slowly the marine life can adapt to it. In North America the Gulf of Mexico and off the southern shores of California is where the natural seeps are located. Ocean Pollution 4 The second type of oil that pollutes the ocean is oil spills. Oil spills occur during the extraction and transporting of oil. Oil spills cause huge damage to the marine environment-but in fact are only responsible for only around 12% of the oil entering the seas each year” (WWF, 2006, p. 1).

Extraction takes place near or on shores and this can cause risks for the coastal environment if there is a spill or leak. During extraction oil can get into the ocean through accidental spills, surface spills, and slow leaks from disposal of water with oil in it. There have been recent decreases in the amount of oil released into the ocean through extraction, but a minor spill in a coastal area could be major.

During the transportation process the oil leaked into the ocean is not major unless there is a major oil spill. While during extraction the oil released into the ocean is in concentrated areas, but during transportation the spills can happen anywhere. When oil gets spilled in the ocean it only lasts weeks or months. The problem is when the oil gets into marshes or lagoons and mixes with the mud. It then becomes part of sediment on the bottom of these marshes and lagoons. Oil pollution can affect the marine life and its ecosystem. Oil spills threaten birdlife, fisheries, and marine life. From experiments and field measurements, we know that certain types and concentrations of petroleum chemicals can harm marine life. Long-term effects of oil exposure can alter the physiological and ecology of populations of marine organisms, especially those found in sensitive habitats”

(Farrington, n. d, p. 3). When the source of pollution is stop or when the oil is removed from the water marine animal and plant life can return to normal. But Ocean Pollution 5 this can take months or even years depending how bad the environment was affected. The last and major source of oil pollution in the ocean each year is consumption.

Consumption of oil is from vehicles, boats, non tank vessels, and run-off from land. Boats and non tank vessels leak the oil directly into the ocean. Most of

<https://assignbuster.com/ocean-pollution-assignment/>

the oil though comes from land run off. The everyday use of vehicles drips oil onto the ground which goes to the ocean through run off. From 30 to 50 years people disposed of oil from cars down the drain which would end up in the ocean. There have been laws and regulations passed since then but cars still leak oil when they are parked in driveways and parking lots. When it rains the water carries the oil into the storm drains which carries it to the ocean.

This happens all the time. Exhaust from all vehicles goes into the atmosphere. It comes back down as rain or snow and is washed out to the ocean. Another major source of transportation of oil pollution is small boats and jet skis. According to Farrington these account for 2. 2% of oil pollution in North American oceans. Toxic materials are another source of ocean pollution. The first types of toxic chemicals that end up in the ocean are fertilizers, pesticides, and manure. Fertilizers that are used for farm and lawn care are a problem for coastal areas.

The fertilizer gets to the ocean from runoff. Eutrophication is caused when the nutrients from the fertilizer gets into the ocean. It is the flourishing of algal blooms that deplete the water's dissolved oxygen and suffocate marine life. This Ocean Pollution 6 has created spots in the ocean where there is no animal life. Pesticides are another problem for the ocean. It enters the ocean the same way that the fertilizers do, through run off. It also comes from farms and lawns. They can also reach the ocean when a plane flies to apply the pesticides to fields. This is known as spray drift.

Pesticides are used to kill insects, but it is also toxic for fish and birds. According to NOAA today's pesticides do not build up in the tissues of animals to the extent that older compounds like DDT did. This is the bioaccumulation. Today the compounds used are toxic at very low concentrations. Another problem that can come from runoff of farms is manure. This can be a source of bacteria and viruses. This can be a problem for people according to NOAA's article Pollutants from Nonpoint Sources: Bacteria, Viruses and Trash: The Norwalk virus has recently caused illness in a number of locations in the United States.

This virus causes intestinal illness, and infects people when they come into contact with contaminated food or water. Eating raw shellfish contaminated with the virus is another way people contract the illness. Nonpoint source runoff from urban areas, or discharges from improperly maintained sanitary systems on boats, are also sources of the virus. The second source of toxic material that ends up in the ocean is chemicals. Everything that occupies the ocean is contaminated by chemicals Ocean Pollution 7 that have been dumped into the ocean. Some of the chemicals in the ocean came from people dumping them into the ocean before the 1970s.

They viewed the ocean as a dumping area because they thought the chemicals would be diluted into the water. This stopped when the London Dumping Convention took place and a treaty was amended in 1996. But according to WWF chemicals can also enter the ocean through land based activities. These chemicals can escape into the environment while they are being made, during their use, or the disposal of the chemicals. They can also escape into the environment from accidental leaks or fires in products

<https://assignbuster.com/ocean-pollution-assignment/>

containing these chemicals. When these chemicals are in the air and water they can travel very long distances.

Examples of chemicals that can pollute the ocean are solvents, paints, cleaning products that come from marinas, boating activities, and land based activities. The last source of ocean pollution is debris. Trash that enters the ocean either from ships or boats and different types of runoff is known as marine debris. There are two types of debris that enters the ocean. The first type is plastic, glass, rubber, and metal. “ As society has developed new uses for plastics, the variety and quantity of plastic items found in the marine environment has increased dramatically” (NOAA, July 6, 2006, p.). This is also true for glass, rubber, and metals. Everything that we throw away can reach the ocean. Plastics, glass, metal, and rubber enter the ocean from ocean based sources and land based sources. The ocean based sources can be from fishing vessels, stationary platforms, and cargo ships or other vessels. Fishing gear can be lost Ocean Pollution 8 or thrown into the ocean from fishing vessels. Debris that comes from platforms is machine equipment and safety equipment that the people wear when they are working on them. Cargo ships and other vessels can lose packages or luggage.

Boats that carry merchandise can lose it during bad weather. The land based sources are littering, dumping, poor waste management, storm water discharges, and extreme natural events. Litter can enter the ocean through runoff. When it rains it carries the debris to streams and rivers which carry it to the ocean. Some people throw their garbage into the streams, rivers, and oceans directly. Another way the debris reaches the ocean is through storm

drains. The trash that gets thrown down the drain or thrown on the ground gets washed out to the ocean when it rains. When natural events occur they can damage peoples homes and belongings.

These belongings can either be blown into a body of water directly or washed into streams, rivers, and storm drains by rain. Plastic takes a long time to decompose. Because of this marine animals eat it thinking that its food and the animals can choke on it or get sick and die from trying to digest the plastic. Animals can also get stuck in six pack rings and old fishing nets. This prevents the animals from being able to swim or move. According to New Internationalist plastic litter kills more than two million seabirds and 100, 000 marine animals every year. Glass, metal, and rubber are used just as much as plastic.

These however are not completely biodegradable. Marine also eat these thinking that it is food. Ocean Pollution 9 The next type of debris is abandoned ships. Ships can sink or run aground anywhere in the ocean. It is particularly a problem in bays and harbors. “ In protected harbors and bays these vessels may persist for years, while in the open, exposed coastal environments the debris from disintegrating vessels may be widespread along shorelines and across underwater habitats” (NOAA, July 6, 2006, p. 1). The parts that come off the sunken ships are what pollute the ocean.

For abandoned ships the parts that fall off can also be eaten by animals and stay in the oceans for long periods of time depending what kind of material it is. There are many organizations that help to protect the environment. The one agency that everyone knows in the Environmental Protection Agency.

The Federal Water Pollution Control Act Amendments of 1972 were put together because of people who were learning about water pollution and its effects. This is known as the Clean Water Act. The Act states: The Act established the basic structure for regulating discharges of pollutants into the waters of the United States.

It gave the EPA the authority to implement pollution control programs such as setting wastewater standards for industry, the Clean Water Act also continued requirements to set water quality standards for all contaminants in surface waters. The Act made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions. It also funded the construction of sewage treatment plants under the construction grants program and recognized Ocean Pollution 10 the need for planning to address the critical problems posed by nonpoint source pollution.

Another organization that helps spread awareness about ocean pollution is See-The-Sea organization. This is a charitable organization that helps to persevere and protect the ocean. They offer many tips on how people can help stop the pollution that goes into the ocean. Their major tip is reduce, reuse, and recycle. They say to buy items with less packaging so there is less trash. They also say that when you shop you should use reusable bags. Many stores now sell reusable bags for their customers to use. The second tip is to dispose of trash correctly.

They say to recycle whenever possible, discard trash in closed containers, cut up six pack rings, do not throw cigarette butts in the water, on the

beaches, or any area they may end up in the water. If you find any litter pick it up and dispose of it properly. They also state on their website not to pour any oil or other chemicals down the drain or on the ground. Also if you keep your vehicle maintained it will help prevent oil from leaking from your car. They suggest buying efficient showerheads, faucets, and toilets that will use less water. They also encourage people to participate in beach clean up programs.

If people would try to follow the tips from organizations that fight against ocean pollution, the ocean would be a cleaner place. It is important to keep the ocean clean. According to See the Sea organization the ocean provides the following necessities 1) most of the oxygen we need to breath, 2) a reservoir for soaking up almost half of the globe's gaseous carbon pollution, 3) it's a food Ocean Pollution 11 source that can be managed to help feed the world, 4) it's the ingredients for many of today's and tomorrow's medicines, 5) making our weather, and 6) it is an essential part of the global economy.

If we keep destroying the ocean the ocean will not be able to do these things. Ocean Pollution 12 Reference Page Environmental Literacy Council. (n. d) Oil in the Ocean. Retrieved March 24, 2007 from <http://www.enviroliteracy.org/article.php?id=540&print=1> Environmental Protection Agency. (7/14/06) Clean Water Act. Retrieved March 13, 2007 from <http://www.epa.gov/region5/water/cwa.htm> Farrington, J. W, & McDowell, J. E. (n. d) Mixing Oil and Water. Tracking the sources and impacts of oil pollution in the marine environment. Retrieved March 13, 2007 from <http://whoi.edu/institutes/coi/printArticle.o?aid=2493> Mulvaney, K. <https://assignbuster.com/ocean-pollution-assignment/>

(1/1/1998) A sea of troubles: in the International Year of the Ocean, are we reaching the limits? Retrieved March 13, 2007 from <http://www.encyclopedia.com> National Academy of Sciences. (2003) Oil in the Sea III: Inputs, Facts, and Effects. (pp 2-4) Washington, DC: The National Academies Press NOAA. (10/19/2005a) Pollutants from Nonpoint Sources: Bacteria, Viruses and Trash. Retrieved March 25, 2007 from <http://oceanservices.noaa.gov/education/kits/pollution/013bacteria.html> NOAA. (10/19/2005b) Pollutants from Nonpoint Sources: Pesticides and Toxic Chemicals. Retrieved March 25, 2007 from <http://oceanservices.noaa.gov/education/kits/pollution/012chemicals.html> What is Marine Debris? (7/6/2006) Retrieved March 20, 2007 from <http://marinedebris.noaa.gov/whatis/welcome.html> Ocean Pollution 13 What people are doing to the ocean??? the facts. (water pollution). (1/1/2007) New Internationalist. Retrieved March 13, 2007 from High Beam Encyclopedia database. WWF- for a living planet. (5/2/2006) Problems: Ocean Pollution. Retrieved March 13, 2007 from http://www.panda.org/about_wwf/what_we_do/marine/problems/pollution/index.cfm.