**Abstract**

Oil pollution is the act of an oil spill, which is the release of liquid petroleum hydrocarbon. Events like this are extremely damaging to the environment, especially marine life at sea—where most of these polluting events take place. Oil spills are due to the releases of crude oil which come from tankers, rigs, and off shore platform wells, heavy fuels used by tanker ships. Oil pollution does occur on land as well from vehicles which leak oils, production from chemical products—in one way or another of this crude product ends down the storm drain where it makes it's way to sea. It is important that all of us become aware of oil pollution and the damaging ecological effects it has on the environment, how to reduce oil pollution from occurring, and an overall solution to the issue.

**Facts of Oil Pollution**

Yearly around the world, nearly 8.4 million tons of oil pollute our oceans on average through seepage, extraction, transportation and consumption. The earth naturally secretes oils and gases through the crust, on the other hand, man made resivours deep underground on land which leak oils, production from chemical products—in one way or another this crude product ends down the storm drain where it makes it's way to sea. It is important that all of us become aware of oil pollution and the damaging ecological effects it has on the environment, how to reduce oil pollution from occurring, and an overall solution to the issue.

**Effects of Oil Pollution on marine life**

The effects of oil pollution on marine life is quite depressing and this is an aspect of pollution that should really awaken the world of this global environmental problem. Crude oil severely damages the ability for fur bearing animals to insulate their body heat to keep warm and protected from the elements of nature. The oil can be non lethal but greatly damage the skin and eyes of marine animals, reducing the survival rates of species—and from here it only causes a chain reaction to the ecology of marine life. As for fish and shellfish, effects of pollution may not damage them immediately with most, but pollution has a severe effect on the growth, respiration, and reproductive health of these animals. Pollution can reach shore lines where nesting and sites are vital to the survival of these animals. The consumption of oil is a factor as well, finding uncontaminated food can be difficult if the spill is large scale. Once crude oil has contact with the environment, it poses various dimensions of threats to marine life.

**Weathering of Oil in the Ocean**

Various factors will damage biological, physical and chemical elements of marine ecology. The same components will occur with the process of degradation as well; such as the composition of oil, weather conditions, shoreline properties and even the time of year that the pollution takes place. Weathering, like waves and wind, will naturally disperse the pollutant and break it up over time. Where it then forms into a droplet and is redistributed into the water column. This process creates a "sheen" on the surface of the water. The moment oil spills into the ocean it spreads in all directions. This process happens rapidly, as it goes along with the currents, covering extensive areas of the ocean. Evaporation plays a role as well in the process of weathering, this is when lighter components of oil evaporate into the atmosphere. Dispersion is when oil or "slick" breaks up into small droplets. Varying in size, lighter droplets rise to the surface while larger fragments stay suspended in the water column. Biodegradation and dissolution proceed to take place among the weathering progression as well as sedimentation. Many more components are apart of this natural processes

**Solution for Oil Pollution?**

Though the time at which an oil pollution occurs, making clean up seemingly inevitable, there are solutions for this issue that all people can adhere to. Unfortunately, as nice and easy as it would be to halt oil tankers out at sea from doing their jobs or preventing oil tanks from rupturing, actions can be taken on a personal level--to reduce pollution. Things like educating others on the events of oil spills, or making a bigger move such as protests. Other actions include stopping the use of petroleum based house cleaning chemicals. Things can be done to at least reduce the damage of this global problem. Doing further research on a scientist by the name of Mike Chung has proposed what he calls the "complete solution", and states making clean up easier than ever... But how easy is easy, when there are many natural factors that act quickly upon oil pollution from the moment it happens? A super absorbent material that can hold nearly forty times it's own weight. "Corncobs, straw and other absorbents can only retain about five times it's own weight in oil. Those materials become industrial waste that must be disposed of or burned" (Chung--acs.org). The exact solution is a polymer material that turns an oil spill into a gel like compound one pound of polymer based material can retain 5 gallons of oil. Transportation and collection is not a difficult process, Mr. Chung states that from this material, crude oil can be recycled and recycled at a special facility. This equals less drilling and production of oil. "Overall this cost effective new poly olefin oil-- SAP technology shall dramatically reduce the environmental impacts from oil spills to help recover one of our most precious natural resources" (Chung--acs.org)

**Bibliography**


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