

Causes and Effects of Oil Spills

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Introduction

Accidents involving tankers, barges, pipelines, refineries, drilling rigs, and storage facilities are the most common causes of oil spills in rivers, bays, and the ocean, although they can happen from leisure boats and in marines. The majority of oils float in saltwater from the oceans or freshwater from rivers and lakes. A thin oil slick forms when oil spreads quickly across the water's surface. As the oil spreads, the slick becomes thinner and thinner, eventually reducing to a very thin sheen that resembles a rainbow. Oil spills can be extremely dangerous to marine birds, sea turtles, and mammals, as well as fish and shellfish, depending on the circumstances. Fur-bearing mammals, such as sea otters, and the water-repelling qualities of a bird's feathers are both destroyed by oil, leaving them vulnerable to the elements.

Description

When birds and animals try to clean themselves or eat oiled prey, they swallow oil and become poisoned. Oil can be digested by fish and shellfish, causing changes in reproduction, growth rates, and even death. Commercially significant species including oysters, shrimp, mahi-mahi, grouper, swordfish, and tuna could all see population losses or become too contaminated to be collected and consumed properly. Hundreds or thousands of birds, fish, mammals, reptiles, corals, and other animals and plants might be killed or harmed depending on where and when a spill occurs. A spill of petroleum onto the surface of a big body of water is known as an oil spill. In the 1960s, oil spills in the ocean became a serious environmental issue, owing to increased petroleum exploration and production on continental shelves, as well as the usage of supertankers capable of transporting more than 500,000 metric tons of oil. Because of strict maritime and environmental laws, spectacular oil spills from wrecked or damaged supertankers are now unusual. Despite this, each year hundreds of minor and significant oil spills involving well discharges and tanker operations are reported, with the total amount of oil discharged into the world's oceans topping one million metric tons [1,2].

Industries and individuals releasing used gasoline solvents and crankcase lubricants unintentionally or negligently exacerbates the overall environmental problem. These sources, when combined with natural seepage from the ocean floor, add 3.5 million to 6 million metric tons of oil to the world's waterways each year. Oil spills have significant economic and environmental consequences. Many types of aquatic life are harmed by oil on ocean surfaces because it inhibits sufficient amounts of sunlight from accessing the surface and diminishes the level of dissolved oxygen. Crude oil damages the insulating and

waterproofing properties of feathers and fur, causing hypothermia in oil-coated birds and marine mammals. Furthermore, ingested oil can be hazardous to animals, and damage to their habitat and reproductive rate may hinder the long-term recovery of animal populations from the spill's short-term effects. Oil spills can also cause significant damage to plant life; saltwater marshes and mangroves are two major shore habitats that are regularly affected. Tourism and commerce, as well as power plants and other utilities that draw on or discharge into seawater at the shore, may be severely harmed if beaches and populous shorelines are contaminated. Fishing is one of the businesses most affected by oil spills [3-5].

Conclusion

Major oil spills typically result in the immediate cessation of commercial fishing, not only to protect vessels and equipment, but also to avoid the catch and sale of polluted fish and shellfish. Oil spills have obvious immediate environmental consequences but determining their long-term impact on an impacted area's ecological system is more complex. The cost of compensating individuals and communities harmed by oil spills has been a major motivator to lessen the likelihood of such incidents occurring again. Marine animals rely heavily on sea plants for their survival. There would be no life in the sea without it. There will be no oxygen in the sea if there is an oil leak. Sea plants will perish as a result of a lack of oxygen. There will also be no photosynthesis due to the lack of oxygen. When an oil leak occurs, aquatic animals are the ones who suffer the most. They will perish in the sea due to a lack of oxygen. They normally hunger for a while before they die. For example, certain seabirds use scent to identify their young, and when an oil spill occurs, they will be unable to discover their young, causing them to perish.

References

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Received: 05-February-2022, Manuscript No: jeh-22-64590; Editor assigned: 07-February-2022, PreQC No. P-64590; Reviewed: 12-February-2022, QC No. Q-64590; Revised: 17-February-2022, Manuscript No. R-64590; Published: 22-February-2022, DOI: 10.37421/2684-4923.22.06.164.

How to cite this article: Ana, Laurent. "Causes and Effects of Oil Spills." *J Environ Hazard* 6 (2022): 164.