



Pollution

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Pollution – The addition of any substance which has a harmful or poisonous affect on the environment.

- Oil Pollution – Pollution caused by a leak or spill of oil usually into large bodies of water.
- Water Pollution – The contamination of water bodies usually as a result of human activities.



What causes oil pollution?



Oil spills are the lead cause of oil pollution and this can happen due to many reasons. These include: spills of crude oil from tankers or off-shore platforms, drilling rigs and wells, and also the spilling of refined products and their by products.



Oil spills can happen due to a number of reasons, such as an equipment malfunction, human error, natural disasters or they can be done deliberately.



When the oil spills into water, it sits on top of the water and forms a layer above it harming both the marine life and wildlife on land.



Pollution due to oil refineries

- ▶ A refinery is where crude oil, coal or natural gases are changed into fuel that can be used (petroleum and diesel).
- ▶ Air pollution is a big issue due to refineries as they emit toxic chemicals, energy and gases into the atmosphere. Although in recent years, they have tried to tackle this issue there is still large amounts of Methane and CO₂ being emitted.
- ▶ Water pollution can also happen due to refineries, as the water used in the refining process can sometimes be disposed of incorrectly without the correct treatment or cleaning taking place.
- ▶ Soil Pollution can occur when waste products are disposed of incorrectly, such as in landfills, or when an oil spill occurs on land.

(Hazardous Substance Research Centers / South & Southwest Outreach Program, 2003)



The effects of oil spills

- ▶ Oil pollution can have huge effects on the economy and ecosystems. If an oil spill occurs it does not take much time for the oil to spread over a large area of land or water.

Economic effects:

- ▶ Local economies can be effected if recreational areas are destroyed. They become unappealing to tourists and this can be a disaster for towns and cities that depend on tourists.
- ▶ Property values may drop after an oil spill.
- ▶ Fishermen may not be able to fish if the sea is contaminated with oil.
- ▶ The clean-up activities that have to be implemented after a spillage are costly.



Environmental Effects

- ▶ Oil spills can have a huge affect on wildlife. All marine life is impacted, from the smallest plankton to the largest whale.
- ▶ Common problems include behavioural changes, blindness, damage to internal organs, sores, stress and unfortunately death.
- ▶ Oil spills from oceans can be washed onto shore, affecting plant and animal life in these areas.
- ▶ Areas of vegetation can be destroyed.
- ▶ Wildlife can be affected, such as birds being unable to fly and regulate their body temperature.

How can we prevent oil pollution?

- The advanced technologies and equipment prevent oil from spreading far and can clean it up quicker.
- To reduce the amount of oil and gas being used replaced with other renewable sources.
- To capture the carbon and store it where won't go into the atmosphere.
- Make sure tanks are sealed properly.

