HABITAT DEGRADATION

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DEGRADATION

Even when a habitat is unaffected by over destruction or fragmentation, the species in that habitat can be affected by human activities.

Frequent boating and diving among coral reefs degrade the community, as fragile species are crushed by divers, flippers boat hulls and anchors.

The trawling destroys the anemones and sponges and reduces species diversity, biomass and community structure.

The most universal form of environmental degradation is pollution, commonly caused by pesticides, sewage, fertilizers from agricultural fields, industrial chemicals and wastes, emissions from factories and automobiles and sediment deposits from eroded hill sides.

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Pesticide Pollution

- DDT – Dichloro Diphenyl Trichloroethane
- DDE – Dichloro Diphenyl Dichloro Ethane
- Dieldrin
- PCBs – Poly Chlorofluro Benzene
- CFC – Chloro Fleuro Carbon
- Birds such as the Osprey (*Pandion haliatus*) and the bald eagle (*Haliaetus leucocephalus*)

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Water Pollution

- By-pesticides, herbicides, oil products, heavy metals (mercury, lead & zinc), detergents and industrial wastes directly kill the organisms in the aquatic environment. 90% of the endangered fishes & freshwater mussels in the United States due to pollution.

- Eutrophication - Bloom

  Ex: In Gulf of Mexico, the Mediterranean sea, the north sea and the Baltic sea in Europe, seas of Japan.

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Sedimentation:

- Eroding sediments from farmed hill sides-sediment covers the submerged plant leaves
- Increasing water turbidity-Prevent animal species from seeing, feeding & living in the water
- Sediment loads are harmful to coral species that require crystal-clear waters to survive.

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Air Pollution:

- Cement factories
- Acid rain-wastes from coal & oil refineries released nitrogen & sulfur oxides combine with moisture produce nitric & sulfuric acid lower the pH & reduce the productivity in oceans.
- Acid rain is severe problem in eastern North America, China, Korea, with in next 50 years acid rain will also affect, western coastal India & South Central Africa
- In US only 40 million metric tones of compounds are released each year
- Increased acidity may fish fail to spawn, reduced the amphibian species-more acidity increase the eggs mortality and young animals.

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Ozone production & Nitrogen deposition:

- Automobiles, Power plants & industrial activities & release hydrocarbons & nitrogen oxides.

Toxic metals: Mining & smelting operations

Marine debris: Synthetic materials, plastics found in stomach of when animals that ingest debris that blocked the digestive track. 26 species of Cetacean died due to debris.

HAB's: produce potent toxins (Biotoxins)-cause mortalities of marine mammals, sea turtles, fish and shellfish.

- Eg: In 1987 humpback whale *Megaptera novaeangliae* died.

DEGRADATION

Oil Pollution:

- Seals & sea lions
- Birds
- In 1989, Exxon Valdez spill in Alaska, kill more marine mammals & birds.
- Bottle nose dolphins, beluga whales, manatees, polar bears threatened to industrial pollution.