

WATER POLLUTION FROM VARIOUS SOURCES AND HUMAN INFRINGEMENTS: AN EDITORIAL

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ABSTRACT

Pollution from sewage and human waste introduce pathogens into the water sources resulting in pathogen city, infections and death of aquatic inhabitants.

Key Words: Pollution and Water

INTRODUCTION

Human activities are major responsible for water pollution. Water bodies get dirty due to pollution and are looked upon with disdain. Water pollution affects the fish severely and proves lethal to them. Water pollution imposes this adverse effect on all kinds of aquatic flora and fauna. Fishes are mainly affected from the human nuisances. So, it is the need of time to pay adequate attention to this issue and implement necessary corrective measures (Cruickilton & Duchrow, 1990).

Fishes die due to pollution of water from pesticides adjoining the cultivation fields. Pesticides flow off into the water proving fatal for the aquatic life (Kivi, 2010).

As a procedure during leather manufacturing in the industries, large quantity of wastes produced are discharged in natural water bodies directly or indirectly through open drains either without any treatment or with inappropriate and inadequate treatment processes causing pollution and leading to serious public health hazard (Ganguly, 2012).

WATER POLLUTION AND EFFECT ON AQUATIC FOOD CHAIN

Seals are very sensitive among the marine mammals that accumulate toxins in their blubber. Marine mammals that rely on blubber to regulate body temperatures accumulate higher level of toxins. As animals having blubber have high quantity of fat, high amount of toxins get accumulated in the blubber marine animals. Many toxins get stored in fat (Kivi, 2010).

The many sources of water pollution cause devastating consequences to marine life. Fish and marine mammals those are at the top of the aquatic food chain are exposed to higher levels of toxins directly from the polluted water and by feeding on other fishes who are already exposed to high levels of toxins in water (Kivi, 2010 & Sharma, 2008).

PRIMARY SOURCES OF WATER POLLUTION

Trash, especially plastic and litter cause adverse effect on fish. Plastics do not degrade easily in environment and therefore remain in the same stable / undegraded form in water bodies. Fish mistakenly confuse plastics as food materials and ingest them which causes blockage in the digestive system and kill the fish. There is also probability that fish and other marine life often get stuck in plastic items. Plastic often cause fish to starve to death by getting stuck around their mouth making them unable to eat. Plastic items can also cause slow choking of marine life to death by getting stuck around the neck of marine life. Plastic bags floating or submerged in water give the appearance like jellyfish. Fish when try to eat these plastic items generally die by getting trapped inside them. Apart from plastic, metal, rope, nets and 'styrofoam' are among other human made trash items which are disposed off in water bodies and harm marine life (Sharma, 2008).

Tannery effluents contain both organic and inorganic solids in high concentration in either suspended or dissolved forms which results to high oxygen demand in water including admixture of harmful elements like toxic metal salts and chromium metal ion in the water. Without proper treatment and discharge of untreated wastes in water bodies causes serious harm to both environment and life threatening for the aquatic flora and fauna. It has deleterious effect on the soil also adjacent to the water bodies are characterized by high contents of dissolved, suspended organic and inorganic solids giving rise to high oxygen demand and potentially toxic metal salts and chromium metal ion. The tannery effluent, if not treated properly, can cause serious damage to soil and water bodies resulting to increase in soil salinity, reduced fertility and soil infertility and reduces potentiality for growth of crops. In many underdeveloped countries, the harmful and climatic unfriendly effluents from the tanneries are discharged directly into large water bodies even without proper treatment which is a grave and serious issue of concern for the

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environmental, climatic and public health (Ganguly, 2012 & Bosnic, 2000). Oil spills from industrial sources runoff into the water sources which coat the skin of fish and kill them. Oil provides a source of toxins for fish that can cause disease, genetic defects/ alterations and death. The oil damages the surface protective activity of skin which keeps the marine mammal warm (Cruickilton & Duchrow, 1990 & Dewwling & Mccarthy, 1980).

Some sewage feed algae that also flow off in the ocean. These algae grow at a rapid rate and have a high nutrient concentration producing red tides. They are called red tides because of the red appearance of the foam of the ocean waves. Red tides kill fishes by releasing toxins (Kivi, 2010).

SECONDARY SOURCES OF AQUATIC POLLUTION

Excessive noise production from boats and drilling causes stress on fish and other marine life which make them sick and lethargic. This affects their mating behavior adversely.

Fluctuations in water temperature from power plants and factories kill off coral and cause marine life to migrate for relocation in an attempt to find waters with a more sustainable thermal condition (Gangult et al., 2011).

Radioactive waste generated from industrial and military wastes enter the water bodies and are absorbed by fish and can cause genetic, mutagenic and teratogenic defects in them (Kivi, 2010 & Sharma, 2008).

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