

Environmental Victims with Specific Reference to Marine Pollution

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INTRODUCTION

According to the Preamble of the Constitution of India, 1950 “We the People of India, having solemnly resolved to constitute India into a Sovereign, Socialist, Secular, Democratic Republic and to secure to all its citizens: Justice social, political and economic....” Keeping in view the Socio-Economic Development of India, clause (b) of Article 39 provides that “the ownership and control of the material resources of the community are so distributed as best to sub serve the common good” . Oceans occupy an important place in the global ecosystem on this earth planet. Besides water these are rich treasure of sea food for human kind . More than 50% of the world’s population lived in coastal regions these numbers have increased as a consequence of immigration and the growth in prosperity of many coastal areas as a result of industrialisation and tourism. Today, about 60 percent of humanity (or nearly three billion people) live in the coastal zone, and two-thirds of the world cities with populations of 2.5 million are more are near estuaries causing marine pollution.

Marine pollution is every type of man made solid waste which deliberately or accidentally pollutes seas and coastlines. Marine pollution is an economic, environmental, human health and aesthetic problem posing a complex and multi-dimensional challenge to authorities and environmental groups.

MARINE POLLUTION

India is a country, which has rich history, not only of social and economic prosperity, but also of Environmental Richness . The seas around India constitute a natural frontier of the country. From time immemorial, the inhabitants of India used the sea for transportation and communication, for trade and

food. Therefore, as a result of these activities, quite a few interesting characteristics of the sea became known to our ancestors. There are also evidences available to suggest that the Mohenjodaros had adequate practical knowledge about the coastal regime of the ocean and used the knowledge in building the houses, sanitation and waste disposal near the sea.

Marine Pollution is the adding of toxins and harmful chemicals into the ocean, not only is it chemicals added to the ocean but things such as plastic etc. Marine pollution occurs when harmful effects, or potentially harmful effects, can result from the entry into the ocean of chemicals, particles, industrial, agricultural and residential waste, noise, or the spread of invasive organisms. Most sources of marine pollution are land based. The pollution often comes from nonpoint sources such as agricultural runoff and windblown debris. The term 'pollution' describes the occurrence and inputs of wastes and the impact of these wastes on the environment. Coastal ecosystems have key inbuilt features or functions. The ecosystems involving in primary and secondary production, sustain the flora and fauna, store sediments and organic carbon, essential to the maintenance of food chains. The coastal ecosystems provide foods (fish, oil, gas, minerals) and services (natural defence against storms and tidal waves, recreation and transportation). The coastal ecosystems provide habitat to genetically, ecologically and economically valuable biological organisms. The biological of our medicines contain active ingredients of natural origin. The compounds isolated from sponges have been used in the treatment of leukaemia, and coral fragments are used in bone transplants and dental repairs. The bioactive compounds from the shark fin have the feature of anti-infectious and are active on the circulatory system. There is growing concern about the state of

the world's oceans. The rapid growth of human populations in coastal regions has led to increasing dependence on marine resources. Beneficial features related to food supply and life style need to be balanced against the hazards presented by microbial pathogens, chemical pollutants, and toxic algal blooms. Pollution is generated where man's lives and works and therefore finds its way for the most part into the ocean areas that are closest to their activities. Consequently, the dilution factor is very small and the concentrations of these pollutions build up in coastal regions. They are increased to a much higher level than would be the case if the material were distributed throughout the entire oceanic volume. Chemicals also enter the sea from land-based activities. Chemicals can escape into water, soil, and air during their manufacture, use, or disposal, as well as from accidental leaks or fires in products containing these chemicals. Once in the environment, they can travel for long distances in air and water, including ocean currents. Some of the chemicals enter the sea through deliberate dumping. For centuries, the oceans have been a convenient dumping ground for waste generated on land, including toxic material such as pesticides, chemical weapons, and radioactive waste.

SOURCES OF MARINE POLLUTION

The causes of marine pollution may be similar to that of water pollution, the following are the major identified primary causes of marine pollution

- Sewage, run-off from forestry, farming and other land use, apart from air-borne nitrogen oxides from power plants, cars etc.
- Erosion from mining, forestry, and farming used other land use, coastal dredging and mining.
- Several thousand alien species per day transported in ballast water, pollution also spreads through canal linking bodies of water and fishery enhancement projects.
- Industrial discharge and waste water discharge from cities.
- Pesticides and fertilizers from agriculture, which are washed off the land by rain, enter water courses and eventually reach the sea.
- Petroleum and oils from cars, heavy machinery, industry and other land based sources washed off

from the roads normally enters the sewage system but storm water overflows carry these materials into the rivers and eventually into the sea; oil tanker operations and other shipping accidents at sea; also off-shore oil drilling and natural seepage.

- Plastic of fishing nets, cargo and cruise ships, beach litter, waste from plastics industry and landfills.
- Radioactive substances, discarded nuclear submarine and military waste, atmospheric fallout and industrial wastes.
- Cooling water from power plants and industrial sites.
- Noise from super tankers, other large vessels and machinery.

VICTIMS OF MARINE POLLUTION

Persons who individually or collectively have suffered harm including physical or mental injury, emotional suffering, economic loss or substantial impairment of their fundamental rights, through acts or omissions that do not yet constitute violations of national criminal laws but of internationally recognized norms relating to human right persons who suffers from some adverse circumstances are called victims.

Coastal areas are the most vulnerable and most abused zones of the oceans. They receive direct discharges from rivers, surface run-off and drainage from hinterland, domestic and industrial effluents through outfalls, and various contaminants from ships. Rivers have carried large amount of dissolved and particulate matter to the sea since ancient geological times. In many regions, discharged sediments formed deltas at the outlets of rivers.

The more important reason for being concerned about marine pollution stems from the fact that materials put into the oceans by man's activities is not evenly spread throughout the oceanic volume . Twenty percent of the total burden of disease in the developing world is due to environmental pollution. A large number of marine species is known to be harmed and/or killed by plastic debris, which could jeopardize their survival, especially since many are already endangered by other forms of anthropogenic activities.

Marine animals are mostly affected through entanglement in and ingestion of plastic litter. Other less known threats include the use of plastic debris by “invader” species and the absorption of polychlorinated biphenyls from ingested plastics. In the oceans, the threat to marine life comes in various forms, such as overexploitation and harvesting, dumping of waste, pollution, alien species, land reclamation, dredging and global climate change. One particular form of human impact constitutes a major threat to marine life: the pollution by plastic debris. The ingestion of plastic debris by small fish and seabirds for instance, can reduce food uptake, cause internal injury and death following blockage of intestinal tract. The harm from ingestion of plastics is nevertheless not restricted to seabirds. Polythene bags drifting in ocean currents look much like the prey items targeted by turtles. From plastic bags to pesticides most of the waste produced on land eventually reaches the oceans, either through deliberate dumping or from run-off through drains and rivers.

Oil spills cause huge damage to the marine environment. Fertilizer runoff from farms and lawns is a huge problem for coastal areas. The extra nutrients cause eutrophication flourishing of algal blooms that deplete the water's dissolved oxygen and suffocate other marine life. Spills of oil and the release of chemicals (i.e. lubricants) used during exploitation constitute an important source of chronic pollution to coastal seas. Accidental spills represent a relatively small source of oil, they directly affect birds and mammals. Spilled oil is very toxic. It can be lethal to adult animals even in relatively low concentrations. It may also cause physiological or behavioural disruptions of species. Oil spills also cause death through the prevention of normal feeding, respiration and movement functions not only of ocean wildlife, but also of marine life at the sea shore. Sometimes one can feel the consequences of the oil spills through the oily taste or smell to the seafood. An oil spill directly damages not only animals, plants and corals, fisheries, but also affects human activity in the area of fisheries through damaging of fishing boats, fishing gear, floating fishing equipment. Oil spills affect not only the ocean space around them, but also shorelines, open waters and the seabed; wetlands; corals. They also damage fisheries and coastal amenities. Especially vulnerable

for the potential damage is the area of shorelines. The impacts of oil pollution on marine ecosystem can be categorized into long term and short term effects. Suffocation cause by oil spills and oil poisoning are among the first group. Because oil floats on top of water, less light penetrates into the water, limiting the photosynthesis of marine plants and phytoplankton. Oil spills reduce oxygen absorption of the water, causing oxygen dissolution under oil spills to be even less than the deep sea levels. The oil penetrates and opens up the structure of the plumage of birds, reducing its insulating ability, and so making the birds more vulnerable to temperature fluctuations and much less buoyant in the water. It also impairs birds' flight abilities, making it difficult or impossible to forage and escape from predators. Suspended oil can gain weight by bonding with minerals and settle on the sea floor and harm the ecosystem there. Also causes sediments adherence to the sea floor, destabilizing plants. Usually it has been observed that sediments begin to move after oil settles on the sea floor.

An oil effect on coastal vegetation is also important. Algae and other local plants have been reported to be eradicated. Animals that come in touch with high concentrations of oil die of oil poisoning. Worms, microorganisms and young sea creatures are more sensitive. Humans and other animals living near the sea are also threatened. Among these compounds, cyclic (aromatic) hydrocarbons that low boiling point are more dangerous, such as benzene, toluene and xylene. Naphthalene and Phenanthrene are more poisonous for fishes than the mentioned compounds. Aromatic compounds are more soluble in water than saturated hydrocarbons; therefore creatures may become poisoned without direct contact with the oil by the polluted water. Fortunately these compounds are volatile; their harmful effects will decrease with time. Solid garbage also makes its way to the ocean. Plastic bags, balloons, glass bottles, shoes, and packaging material – if not disposed of correctly, almost everything thrown away can reach the sea. Plastic garbage, which decomposes very slowly, is often mistaken for food by marine animals. High concentrations of plastic material, particularly plastic bags, have been found blocking the breathing passages and stomachs of many marine species, including whales, dolphins, seals, puffins, and turtles.

Plastic pack rings for drink bottles can also choke marine animals.

The garbage thrown away can also come back to shore, where it pollutes beaches and other coastal habitats. In many parts of the world, sewage flows untreated, or under-treated, into the ocean. This sewage can also lead to eutrophication. In addition, it can cause human disease and lead to beach closures. Almost every marine organism, from the tiniest plankton to whales and polar bears, is contaminated with man-made chemicals, such as pesticides and chemicals used in common consumer products.

Tiny animals at the bottom of the food chain, such as plankton in the oceans, absorb the chemicals as they feed. Because they do not break down easily, the chemicals accumulate in these organisms, becoming much more concentrated in their bodies than in the surrounding water or soil. These organisms are eaten by small animals, and the concentration rises again. These animals are in turn eaten by larger animals, which can travel large distances with their even further increased chemical load. Animals higher up the food chain, such as seals, can have contamination levels millions of times higher than the water in which they live. And polar bears, which feed on seals, can have contamination levels up to 3 billion times higher than their environment.

LEGAL PROTECTION

Though there is no specific constitutional provision to protect the environment in general, four years after the Stockholm Conference, the forty-second amendment to the Constitution introduced certain significant provisions relating to environment. The constitution of India is not an inert but a living document which evolves and grows with time. The specific provisions on environment protection in the constitutions are also result of this evolving nature and growth potential of the fundamental law of the land. The preamble to our constitution ensures socialist pattern of the society and dignity of the individual. Decent standard of living and pollution free environment is inherent in this. The Constitution of India came into force on 26th January, 1950. Originally, the constitution contains no specific provisions for environmental protection. However, certain specific provisions have been incorporated by the Constitution (Forty Second Amendment) Act,

1976 and subsequent amendments. According to the Preamble of the Constitution of India, 1950 “We the People of India, having solemnly resolved to constitute India into a Sovereign, Socialist, Secular, Democratic Republic and to secure to all its citizens: Justice social, political and economic....” Keeping in view the Socio-Economic Development of India, clause (b) of Article 39 provides that “the ownership and control of the material resources of the community are so distributed as best to sub serves the common good” . There was growing concern over the toll taken on coastal fish stocks by long-distance fishing fleets and over the threat of pollution and wastes from transport ships and oil tankers carrying noxious cargoes that plied sea routes across the globe.

However, certain specific provisions have been incorporated by the Constitution (Forty Second Amendment) Act, 1976 and subsequent amendments. Indian Constitution is one of the very few constitutions in the world, which provides for specific provision for the protection and improvement of the Environment. The constitution, being the fundamental law of the land has a binding force on citizens, non – citizens as well as the State. The Fundamental Rights and the Directive Principles of the State Policy underline our national commitment to protect and improve the environment. The courts in India have also given a new interpretation to the constitutional provision relating to protection and improvement of the environment.

The Directive Principles of State Policy contained in Part IV of the Constitution set out the aims and objectives to be taken up by the States in the governance of the country. Though these principles are not justiciable, they enjoy the sanction of public opinion and are fundamental and policy prescriptions that guide the government .Articles 38 to 51 of the Constitution of India deals with Directive Principles of State Policy. Among them Articles 47, 48, 48A, 49 of the deals with State Policy relating with environmental protection. The Directive principles under the Indian constitution directed towards ideals of building welfare state. Article 47 provides that the State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties. The improvement of public health also includes the protection and improvement of

environment without which public health cannot be assured. Article 48 deals with organization of agriculture and animal husbandry. It directs the State to take steps to organize agriculture and animal husbandry on modern and scientific lines. Article 48-A of the constitution says that “the state shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country”.

INTERNATIONAL STRATEGIES FOR THE PREVENTION OF MARINE POLLUTION

The following are some of the international conventions on marine pollution

- International Convention for the Prevention of Pollution of the Sea by Oil, 1954
- International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (INTERVENTION), 1969
- London Convention, 1972
- Paris Convention for the Prevention of Marine Pollution from Land Based Sources, 1972
- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (LDC), 1972
- Oslo convention for the prevention of Marine Pollution from Ships and Aircrafts, 1972
- Stockholm Conference of 1972
- International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL73/78)
- Environment and the U.N Convention on Law of Sea, 1982
- Nairobi Declaration, 1982
- Basel Convention on the control of trans boundary movements of hazardous wastes and their disposal, 1989
- International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC), 1990
- Washington Declaration, 1995
- Brussels Convention relating to intervention on High Seas in case of oil pollution casualties
- Hong Kong International conference, 2009

International Law defines the legal responsibilities of States in their conduct with each other, and their

treatment of individuals within State boundaries Its domain encompasses a wide range of issues of international concern such as human rights, disarmament, international crime It also regulates the global commons, such as the environment, sustainable development, international waters, outer space, global communications and world trade.

CONCLUSION

People once assumed that the ocean was so large that all pollutants would be diluted and dispersed to safe levels. But in reality, they have not disappeared and some toxic man-made chemicals have even become more concentrated as they have entered the food chain. People become contaminated either directly from household products or by eating contaminated seafood and animal fats. Evidence is mounting that a number of man-made chemicals can cause serious health problems - including cancer, damage to the immune system, behavioural problems, and reduced fertility. Therefore, the activities of human beings are causing adverse effects not only to themselves but also to the whole environment including marine species making them very bad victims of the environment.

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