

# The Global Issue of Ocean Dumping



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The ocean plays a crucial role for survival of humans and maintaining a global ecological balance. Marine pollution that occurs in large scale through ocean dumping is a serious threat to mankind in today's world. Since the oceans are of great importance to mankind it seems unjustifiable that humans would exploit them, but dumping of waste into the ocean has been a regular occurrence since eons. The term **ocean dumping** does not only mean ocean but it includes all the waterbodies. Presently human activities have been the largest threat to these water bodies and greatly contributes to water pollution due to ocean mining, oil spills, sewage etc.



Source: marineinsight.com

Due to **population explosion** and **advent of industrial revolution**, the waste dumping quantities and concentrations have surpassed the assimilating capacity of ocean. With a steady increase of ocean dumping the oceans capacity to balance ecosystem has fallen significantly, marine organisms are dying and coastal beauty are in threat. Because of this accelerating contamination not only are the surface of water bodies being polluted but also the beds and other marine organisms living underwater have been severely

affected. Thus, the environment experiences an ecological disbalance. Since all living organisms are mutually dependent on each other even a minute deviation from the normal condition leads to a huge impact on the overall ecosystem of the planet.

The ocean constitutes two-thirds (70%) of the Earth (**blue planet**) and a rough estimation shows about 50-80% of the Oxygen production of Earth takes place in the ocean. The water bodies naturally possess a certain quantity of lead, mercury etc. Humans dumping wastes (chemical or biological, organic or inorganic) leads to the degradation of a number of aquatic species and doubling the quantities of such metals. The sources of these pollutants are municipalities, factories, agricultural run-off and worst of all plastic debris.

The main contributors to ocean dumping are:

1. **Sewage**, a form of wastewater comprising mainly of domestic wastes like dirty water from washing clothes and utensils, faecal wastes etc.
2. **Industrial Effluents** are released from various factories (fertilizers, detergents, pharmaceuticals, oils, grease etc.) and organic pollutants.
3. **Nuclear Waste** is a major ocean pollutant produced from medical, industrial, and scientific research that uses radioactive materials. The ocean gets contaminated due to illegal nuclear waste dumping, atomic bomb tests (In 1995 the French government conducted in Murarora atoll in

the Southern Pacific) or accidents at nuclear reactors near coastlines (In 2011 Fukushima Daiichi nuclear disaster an estimated total of radioactive waste ranging from  $340 \times 10^{15}$  to  $780 \times 10^{15}$  Bq with 80% falling into the Pacific Ocean.)

4. **Ocean Mining and Oil Spills** are the primary causes of ocean pollution. Ocean mining sites in the deep sea for drilling gold, cobalt, silver etc create sulphur deposits deep down in the ocean. In oil spillage, a layer of oil is formed on the surface of water that prevents the circulation of oxygen resulting in the destruction of marine ecosystems due to human activity. It also prevents sunlight from reaching marine plants thereby affecting photosynthesis and subsequently there is a disruption in the coral reef cycle.
5. **Plastic Pollution** is one of the major threats to our oceans. Careless use and disposal of plastic in gutters which in turn pollute the ocean are hazardous to the marine ecosystem. The accumulation of discarded plastic litter as a result of ocean currents forms gyres. Example: The North Pacific Gyre or the Great Pacific Garbage Patch.



Apart from the above-mentioned factors carbon dioxide and climate change also affects the oceans. The ecosystem and fish communities are primarily affected. Elevation in  $\text{CO}_2$  leads to ocean acidification. Wastes containing toxic substances that are dumped in the ocean soak in the oxygen eventually leading to the depletion of oxygen levels for marine life. This leads to the formation of dead zones. Every year according to estimates one million seabirds are killed by ocean pollution.

The enforcement of measures to limit ocean dumping in many countries expresses the global concern in the developing world to guard the environment quality and to stop the unsustainable exploitation of earth's resources. Thus, laws should be implemented and people should be made aware that "THE OCEAN IS NOT A DUMPING GROUND".