



Plastics to be Banned for Nature's Resilience

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All of us astonished at the news of the presence of plastic waste and sweet wrappers in the Challenger Deep of Mariana Trench of the Pacific Ocean at the depth of 10,928 m where it is subjected to some 100 million pascals, almost 16000 pounds per square inch of pressure and freezing temperatures ranging between 1°-4°C at the bottom of the ocean - reported by Victor Vescovo. Victor Vescovo, an American explorer, who descended 10928 m to the deepest place in the ocean - the Pacific Ocean's Mariana Trench for the 7th time found plastic waste and sweet wrappers on the sea floor including enormous bottom dwelling marine creatures. Victor Vescovo has completed 7th time to the bottom at Challenger deep of Mariana Trench on 23rd June, 2020. Plastic wastes in the surface of the oceans are more dangerous that is reported by a study covered by Marcus Erikson, an environmental scientist. In his report, nearly 269000 tonnes of plastic comprising an estimated 5.25 trillion plastic particles are floating in the world's oceans, including the Bay of Bengal. If plastic wastes discarded in the land causes several problems including death of cattle due to plastic ingestion, the outcome is worse in the case of marine organisms. Plastic debris found in oceans has greater potential to degrade into smaller particles through the wave action, light and weathering processes and spread from the point of origin. Marine organisms, sea turtles, whales, dolphins and sea birds consume the small particles. The

amount of microplastic in the oceans is estimated to be nearly 36000 tonnes. This could be either from direct ingestion by the invertebrates that lead to the bioaccumulation of plastic pieces in bigger marine animals and sea birds - reported The Hindu.

Other than the world's oceans surfaces, in the mountain region, a seasoned trekker surveyed plastic trash in a mound found plastic plates and cups, chocolate wrappers, juice and chips packets, beer bottles and cans and this booty - all non-biodegradable items, left by trekkers in such a nice place of scenic beauty. In mountain areas, plastic bags is one of the causes for the landslides. Town in the hilly region facing landslides along with huge water rush of the criss-cross *jhoras* (rivulets) washed away mountain slopes and bring urban life to a standstill. That's why the Chief Minister of Sikkim passed a law banning the use of plastic bags in Gangtok. Owners of the shops of Gangtok town continued to use paper bags since then. Paper bags would be alternative to the plastic bags only when channelising has been successful in convincing even the illiterate masses that the plastic bags are responsible for landslides in the mountain regions. In the terrestrial areas, along with heavy rains, plastic bags within the garbage pile gave the mountain of trash a low friction coefficient, that means the material within the landslide is particularly slippery. Drains, canals and domestic sewage are clogged with the plastic bags and other

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plastic wastes with sewage sludge and domestic waste waters particularly in the metropolitan and municipal areas. In our home town, in the City of Joy, Kolkata Municipal Corporation has implemented no-plastic rule on and from 2nd October, 2019 for both buyers and sellers using plastic bags with a thickness of less than 50 micron (0.05 mm) with a warning but no fine as the civic body has sought some clarification from the government's state environment department as taking a spot fine has always been a contentious matter. A lot of plastic wastes are generated from households, industries and commercial activities. Most of these plastic wastes find their way to illegal recyclers or municipal dumps or open drains. It means that not only the plastics of thickness of less than 50 microns (0.05 mm), but all types of plastics should be banned immediately. Intact or broken plastic pieces find its way from drain to canals, and accordingly from canal to the rivers and rivers to the seas and oceans that lead to the hazards to the marine animals. Plastic wastes, broken to fragments and microscopic particles cause blockages to the feeding apparatus of the tiny invertebrates among the marine creatures. Biocides and toxic materials used for manufacturing of plastics transferred to the marine animals during feeding may cause even death in large numbers. Plastic fragments absorb toxic chemicals from pesticides used for the agricultural purposes mixed with the river waters thrown from the farming land and ultimately mixed with the sea water that lead

to harmful interference with the reproductive, developmental and immune systems of the marine biota. Turtles, dolphins and whales feed on waterlogged plastic packets and bags look like jellyfish. These plastics, non-biodegradable in nature, can be fatal when these are lodged in the digestive tract of these animals. In a dissected turtle's guts, more than 800 pieces of plastics are found and a pilot whale that normally feeds on squid and jellyfish died after swallowing 80 pieces of plastics bags in Thailand; a sperm whale washed up on the shore of Spain with 64 pounds of plastics wastes are found in its stomach.

Worldwide, the law of banning plastic bags are quite difficult for its implementation. A few developing countries for minimising plastic wastes, is tackling waste generation at the household level. Household waste - a major challenge especially for developing countries - a particularly difficult since not only is the quantity of waste generated increasing rapidly, but the composition of that waste is changing rapidly as well. All these mechanical fragmentation of plastics are to be immediately stopped. In order to make plastic-free environment a success, only diligence by the inhabitants of the earth is the mother of achieving all goals. Only the people can make a balance so calm and sedate as to exclude rapture of world's scenario and return back resilient nature in the plastic-free planet earth.
