

Chapter 15

The impact of micro and nano plastics on the environment

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Abstract-

Plastic is marine debris found in our ocean and lakes it is most prevalent type of debris. It occurs in all shapes and sizes but when it has shown less than five millimeter in length occurs in sesame seed like size known as micro plastics. The plastic fragments with dimensions less than a millimeter invading all terrestrial and marine environments are called nano plastics. Generally micro plastic has 0.1 micron to five millimeter and nano plastic has 0.001-0.1 micron in size. The micro plastic and nano plastic also being contributors of marine and fresh water pollution, the study indicates that micro plastic debris distributed with different concentration in aquatic system around the world. It has shown effect on development, behavior, growth, mortality and reproduction of animals. In around the world people discard tons of plastic every year, these plastic bits break down into pieces no bigger than sesame seeds. The plastic found throughout the oceans and locked in Arctic ice and end in food chain so animals occur big and small in size. The vast majority 82 million tons of macro plastics and 40 million tons of micro plastics is washed up, buried or resurfaced along the world's shorelines.

The scientist also finds plastic bits in all kinds of animals from crustaceans to birds and whales. The small animals concentration is low on food chain eats them. When larger animals feed on the small animals, they can end up also consuming large amounts of plastic. In the world plastic use also increased day by day 368 million tons plastic production occur in 2019 year. The plastic produced not disposed in correct way it break down into smaller particles and also shows impact on human body and environment in global. The increase of micro and nano plastic waste in food chain creates a risk of animal and human deaths. The wide bioavailability and ubiquity in aquatic and terrestrial areas it is more probable that plastic are present in many food products. The majority of plastic debris land is littered or thrown into landfill without adequate safeguards shows its way into ocean. The dumping of plastic in environment is impossible to picture in even single day. The plastic bottle caps make up about one-third of all plastic trash because of in the time take you read this or in just few minutes about fifty thousand plastic bottles thrown away in environment.

Keywords- Degradation, Plastic, Pollution, Debris and Environment etc.