Small size, but big issue: Microplastics in the environment

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Plastic is an extraordinary material that has penetrated almost every aspect of modern life. However, the downside of this success story of a versatile material is the generation of large amounts of plastic waste, which often ends up in the environment. In recent years, research interest in plastic pollution has expanded to focus on smaller plastic particles, known as microplastics. Microplastics have been found all over the world — in water, on land, in the air, in organisms and even in human diet. Microplastics are generated during fragmentation of discarded plastic that enters aquatic ecosystems. A large amount of microplastics is also created through the abrasion of plastic coatings and the use of car tires or enter the environment via wastewater effluents. In the environment, microplastics interact with other pollutants, which increases their hazard for organisms. In addition, they also affect water quality and alter the properties of sediments, such as an increase in production of greenhouse gasses. Environmental pollution from microplastics is a serious problem that does not have simple solutions. The most effective approaches to reducing microplastic pollution are to prevent its formation and transport, which can be achieved through efficient waste management and responsible use of plastics.