Microplastics in the Beaches of Western Puerto Rico

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Microplastics are very small pieces of plastic that pollute the environment. According to the National Oceanic and Atmosphere Administration, it is estimated that between 2% and 5% of all plastics end up in the ocean, some of them in the form of microplastics. In this research, microplastics were studied on the beaches of western Puerto Rico. The problem selected to investigate was: What are the microplastics in the water and sand of the beaches of western Puerto Rico? It was hypothesized that the existing microplastics in the water and sand of the beaches of western Puerto Rico come mainly from plastic waste. Three beaches in the western area were selected and two samples were taken from each beach, one of water and one of sand. Sampling was carried out at Playa Escalera in Mayaguez, Playa El Maní in Rincón and Playa Crashboat in Aguadilla. It was found that in all the samples there were microplastics, this means that the three beaches are contaminated. On El Maní and Escalera beach, more plastic particles were found in the sand. Instead, in Crashboat more was found in the water. The hypothesis was true, this was verified with the laboratory results. Finally, a contribution is made to the mitigation of the problem through awareness, prevention and reduction of the indiscriminate use of plastics and the consequent contamination by microplastics, through a comprehensive approach considering the different actors of society.

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