Small plastic debris along the coast of Peru

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Abstract

Peru suffers from poor solid waste and coastal management, as well as evidenced plastic pollution in various forms. However, studies on small plastic debris (i.e., meso- and microplastics) are still limited and inconclusive. Thus, the present study investigated the abundance, characteristics, seasonality and distribution of small plastic debris along the coast of Peru. The analysis revealed that the abundance of small plastic debris is predominantly driven by specific locations, where a source of contamination is present, rather than presenting seasonal patterns. Fishing and culinary activities are regarded as some of the most important sources of plastic pollution, as identified by the morphological and polymeric analysis of the samples. Additionally, heavy metals (e.g., Cu, Pb) were found on the surface of some mesoplastics at low concentrations. Here, we aimed to provide a baseline on the multiple factors involving small plastic debris on the Peruvian coast and preliminarily identify associated contaminants.

Keywords: Peru, microplastics, mesoplastics, EDX

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