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[Micro- and macro-plastics in beach sediment of the Algerian western coast: First data
on distribution, characterization, and source.](#)

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Abstract: The accumulation of plastic debris in the Algerian coasts is due to inadequate solid waste management and the inhabitants' behavior. To quantify and characterize the plastic pollution, we collected plastic items (≥ 1 mm) in the sediment of nine beaches covering 124 km of the Algerian western coast. The plastic concentration varied between 7.6 ± 18.8 and 66 ± 107.28 items/m². With 83.27%, fragments were the predominant items as micro- and macro-plastics, whereas pellets were mainly present as microplastics (14.93%); films represented 1.03%. We recorded the highest values for the number of plastic items/m² in beaches located close to coastal villages. Regarding the number and the weight of the plastic debris, we registered significant differences between the locations. Although the plastic pollution is currently moderate in the study area, local authorities are compelled to be aware of its increase. Therefore, the improvement of the solid waste management is urgently needed.

Keywords: Plastic debris, Beach, Sediment, Algeria, Coastal management, Source