

# OCCURRENCE OF MICROPLASTICS IN THE GASTROINTESTINAL TRACTS OF *Chelon saliens* ALONG THE TURKISH COAST

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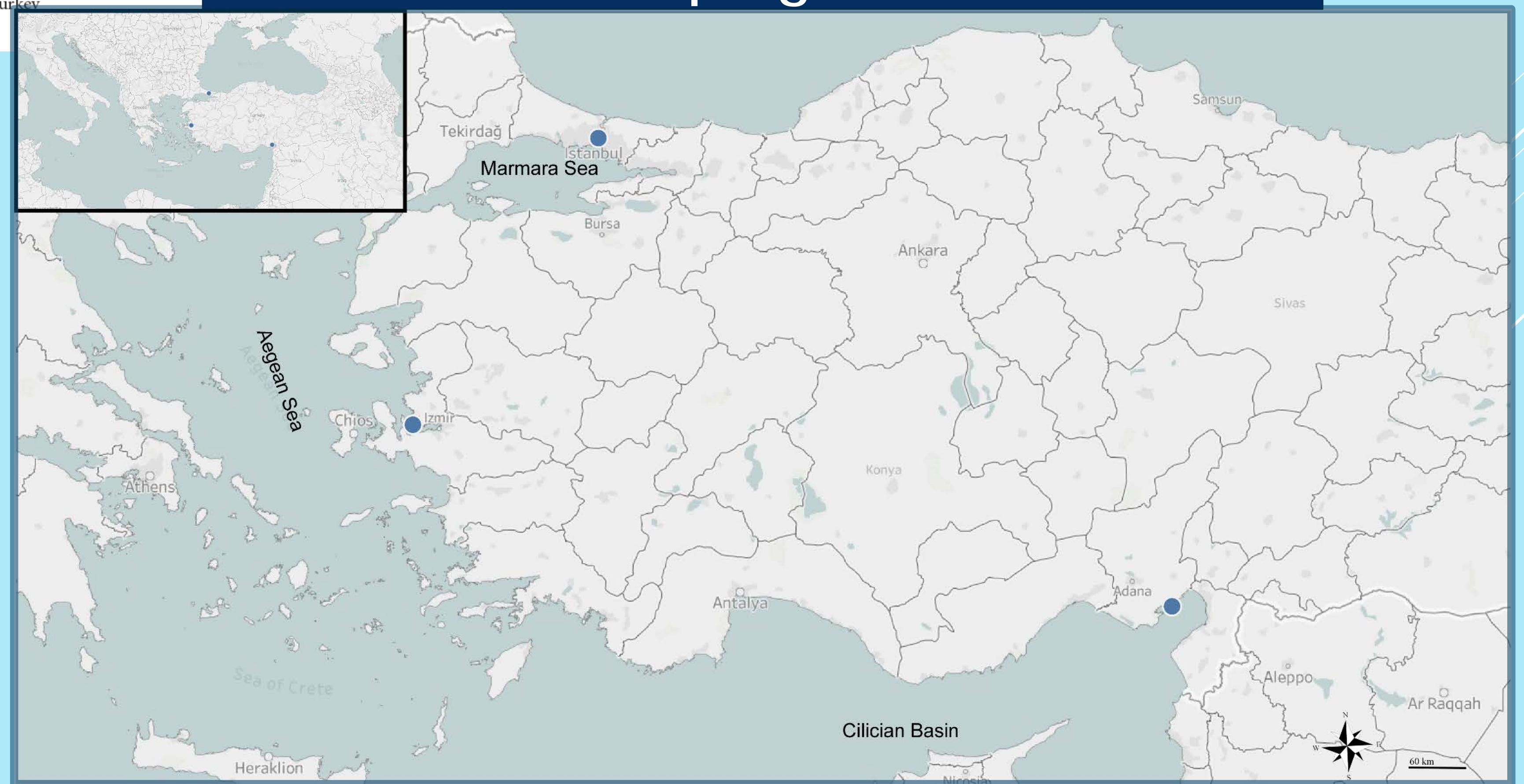
**Occurrence of microplastics in the gastrointestinal tracts of some edible fish species along the Turkish coast**

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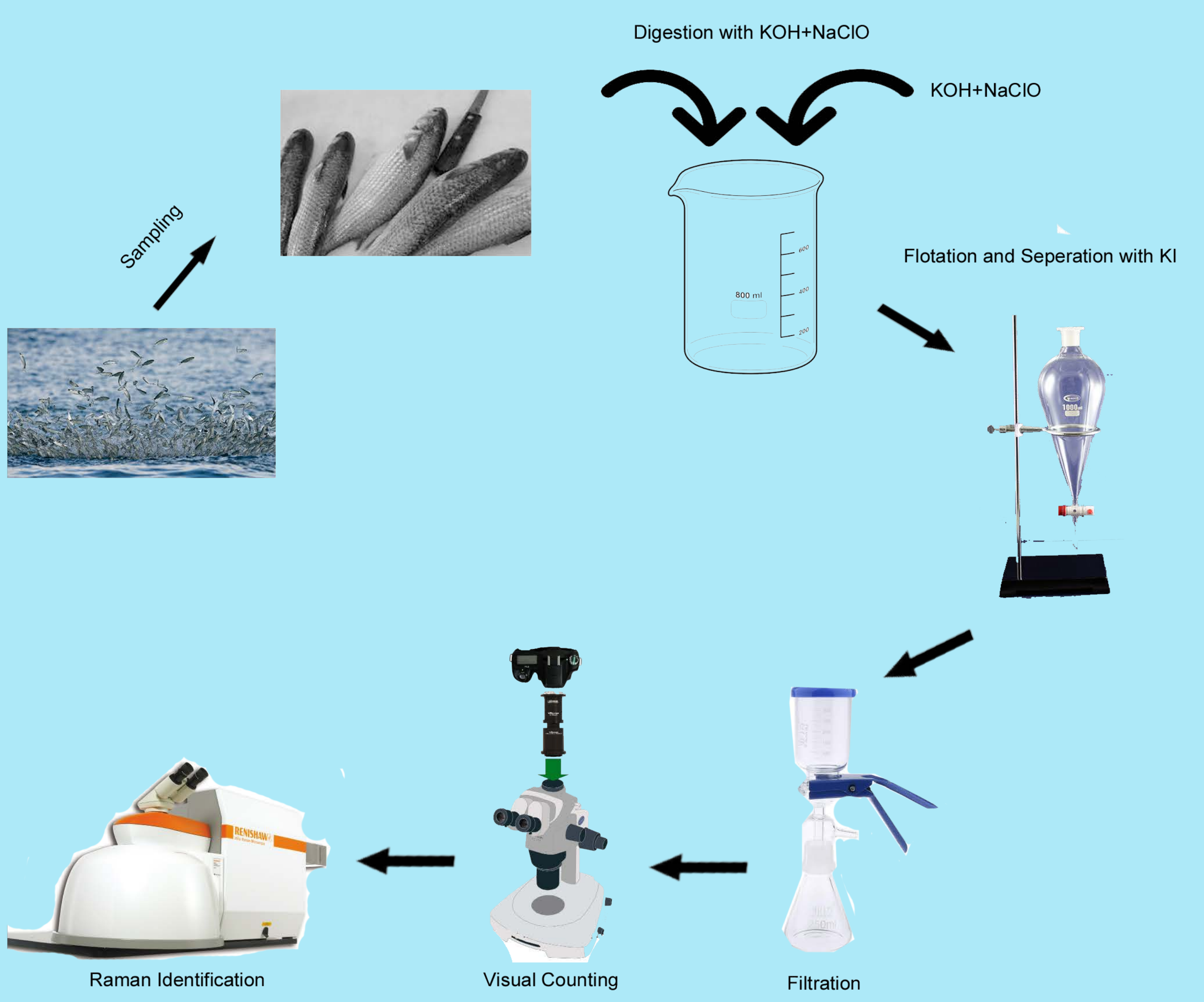
## Abstract

The manufacturing of plastics has increased rapidly since 1950, with annual plastic production reaching 359 million tons in 2018. It is estimated that 4.8–12.7 million tons of plastic end up in marine ecosystems every year. A total of 611 studies conducted at 4358 locations across the globe, as of September 2019, have revealed that 76.9% of marine litter consists of plastics. It is further estimated that 92% of marine plastic pollution is in the form of microplastics (MPs). Generally, plastic particles that are smaller than 5 mm are considered MPs. This high quantity of MPs in the sea poses a significant threat to marine life. In this study, the presence of microplastics (MPs) in the stomachs and digestive tracts of 62 individuals of leaping mullet (*Chelon saliens* (Risso, 1810)), collected along the Marmara, Aegean, and Mediterranean coasts of Turkey was examined microscopically and through  $\mu$ -Raman analysis.

## Sampling Area



## Material and methods



## Results and Discussion

A total of 159 MP particles were extracted. Among the examined fishes, the average MP concentration was 2.5 MP per fish (MPs fish<sup>-1</sup>). The size of the MPs ranged from 0.028 to 4.89 mm. To determine the polymer types of the MPs, a  $\mu$ -Raman analysis was conducted. The most frequently detected polymers were polyethylene (41.67%), polyethylene terephthalate/polyester (12.5%) and polypropylene (8.3%). The results of this study showed that MP pollution represents an emerging threat to the fish of Turkish marine waters.

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