

Spatio-Temporal Accumulation of Single-Use Plastics in the Central Mediterranean: The Role of Fishermen Over the Last Half Century

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Abstract

This study reveals how fishing contributes significantly to plastic pollution. We focused our attention on the central Mediterranean: frequented by both European and North African fishing fleets, it is one of the world's busiest seas.

In particular, we asked 15 veteran captains to tell us about life on board their fishing vessels (what they ate and drank, what they used as crockery, what they did during each meal) over the last four decades (1980-2020), a period in which plastic was widely used.

The processing of the fishermen's replies revealed that a standard offshore fishing vessel operating normally in the central Mediterranean (Strait of Sicily) would have discharged more than 20,000 plastic cups, 1400 plastic bottles (including those for hygiene products) and all the plastic foils and cardboard needed to package more than 10 tonnes of food and drinks each year.

Extrapolating the data for a single vessel to a fleet of 300 fishing boats operating on average in the area, the amount of plastic thrown into the sea exceeds 7.5 millions of items per year.

