MICROPLASTIC HUNTERS PROJECT

Roberta MINETTI[1]*, Elisa COSTA[1], Arianna LICONTI[2], Luca TIXI[2], Michelangelo LATEGOLA[3], Umberto VERNA[5], Carmen di PENTA[4], Sauro GENOCCHIO[4], Maria Chiara CATTA[1], Marco FAIMALI[1], Francesca GARAVENTA[1]

[1] Institute for the study of anthropogenic impacts and sustainability in the marine environment, of the National Research Council of Italy, via De Marini 16 16149 (GE), Italy
[2] Outdoor Portofino, Via Cesarea 8/23 16121 (Ge), Italy
[3] AUXILIARY COAST GUARD, Via Milano 71 16149 (GE), Italy
[4] Marevivo Onlus, via Lungotevere Arnaldo da Brescia Scalo de Pinedo (RO), Italy
[5] Lega Navale Italiana sez. Genova, via Molo Giano (GE), Italy

JPI OCEANS

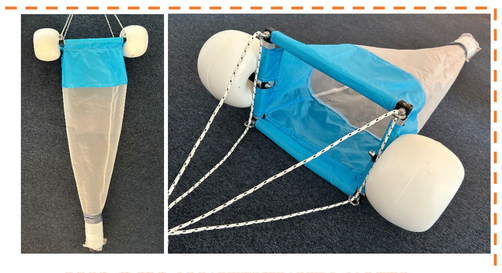
CNR IAS ISTITUTO PER LO STUDIO DEGLI IMPATTI ANTROPICI E SOSTENIBILITÀ IN AMBIENTE MARINO

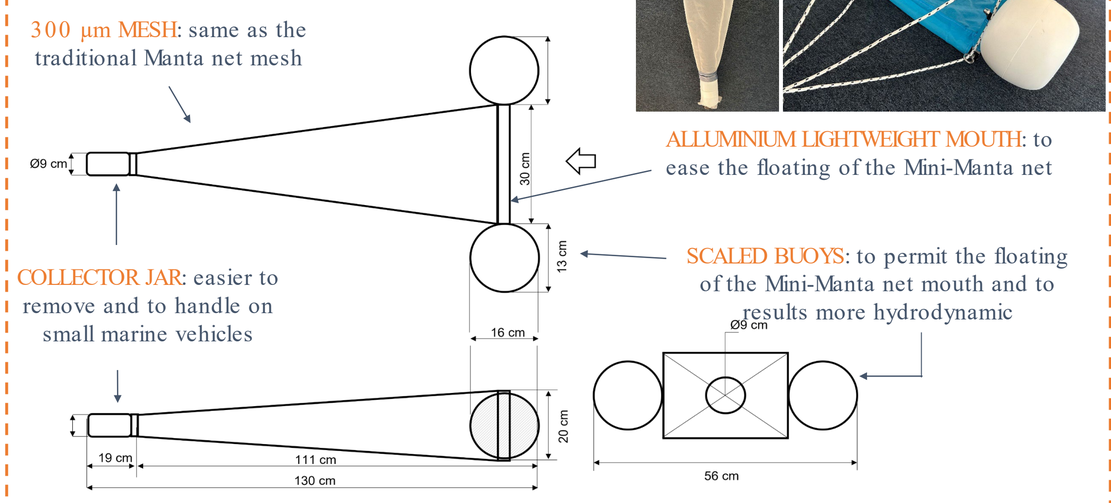
outdoor PORTOFINO

Project video, Take a look!

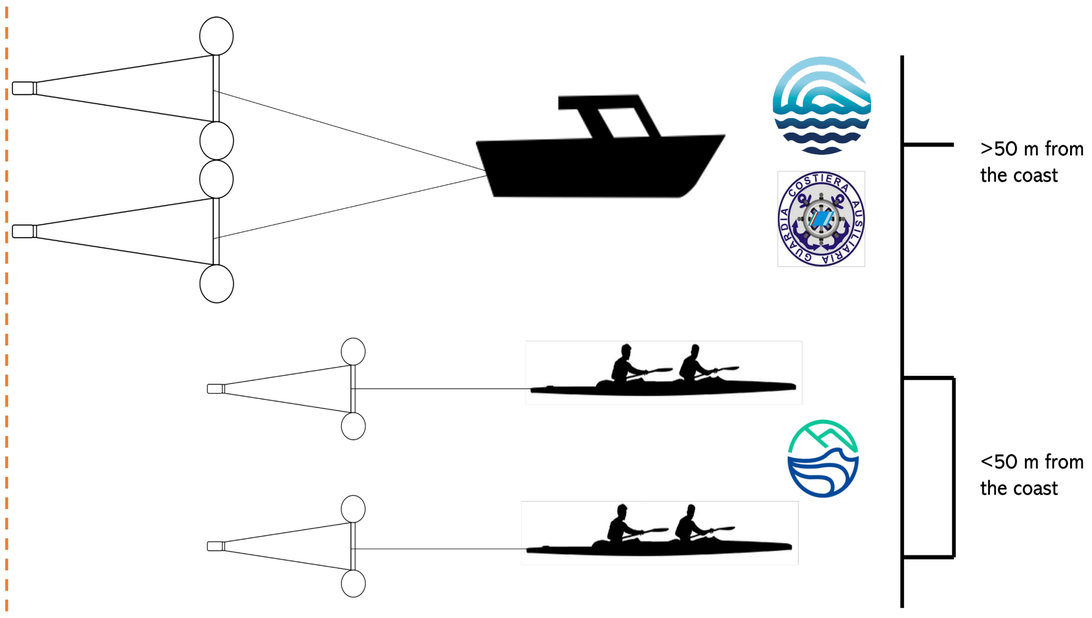
MicroPlastic Hunter is a Project resulting from a collaboration between the **Institute for the Study of Anthropogenic Impacts and Sustainability in the Marine Environment of the National Research Council** (CNR-IAS), the outdoor activity leader **Outdoor Portofino**, and the **Auxiliary Coast Guard** (GCA) of the Genoa section. The project aims to **engage citizens** and raise awareness towards the health status of the marine environment through a sampling activity to monitor **microplastics** in coastal surface waters, testing a new sampling tool: the **Minimanta**.

The Minimanta

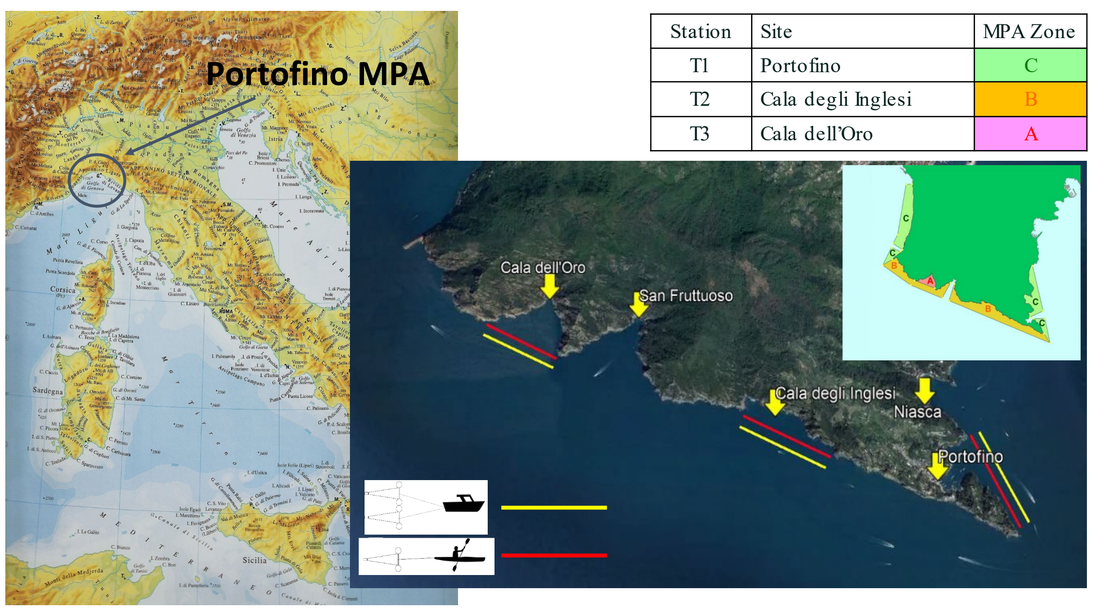




The Sampling Strategy

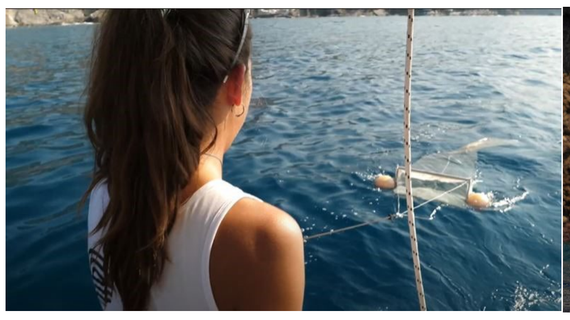


The Sampling Area

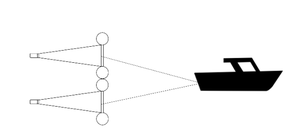


Station	Site	MPA Zone
T1	Portofino	C
T2	Cala degli Inglesi	B
T3	Cala dell'Oro	A

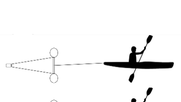
The Team



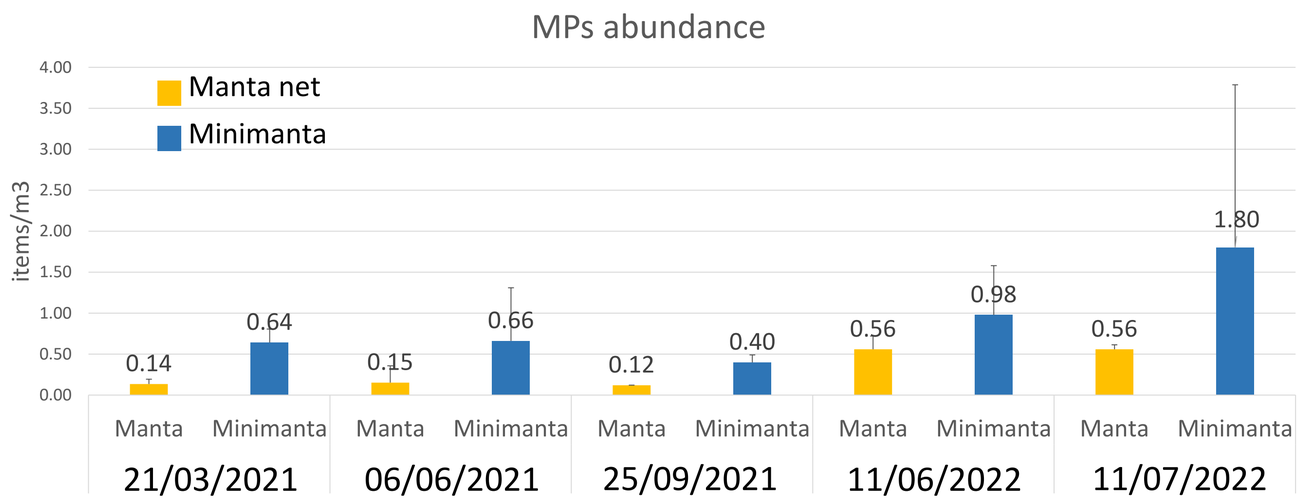
The Results



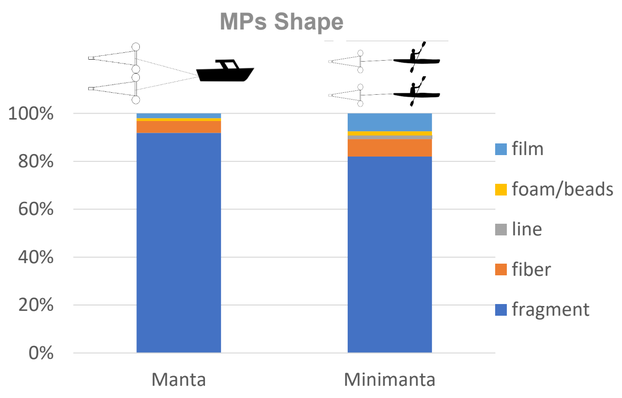
0,28±0,20 items/m³

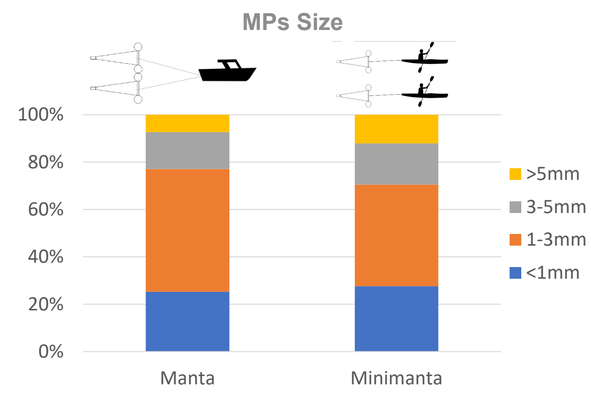


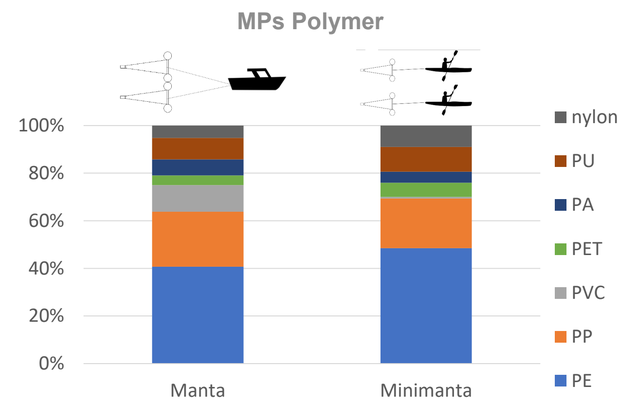
0,90±0,55 items/m³



- **Higher average abundance** of particles per cubic meter was found in samples collected with the **Minimanta** instead of those collected with the traditional **Manta net.** This difference is considered with **two hypotheses**, **an underestimation of the traditional Manta net** in sampling or the **prevalent accumulation of plastic particles in coastal areas.**
- The **distribution of the mean abundances** of the replicates suggest a similar trend between the two sampling methodologies, **confirming the effective operation of the Minimanta.**
- A **general increase of plastic particles** is observed between **2021** and **2022.**
- In terms of **shapes, sizes and polymers** comparable results were observed between Manta and Minimanta, promoting the use of Minimanta for MPs monitoring in coastal areas.







Conclusions

Data obtained are **in line with** data reported in **literature** for the Tyrrhenian basin (Baini et al., 2018; Pittura et al., 2022). The results obtained suggest that **Minimanta nets** represent an **innovative** and **promising** sampling method for monitoring "nearby" coastal areas. In addition, by involving the **local community**, the project serves as a **means of communication** between **science** and **citizens** with the goal of **raising awareness** and sensitivity to the issue of microplastic pollution in the marine environment.

RESPONSE