



NAUTILOS – Citizen Science application for data collection

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New technology and data collection for improving our understanding of the marine environment

Filling the observational gaps of European Seas (Chem/Bio/DeepOcean Phy EOVs)

- By means of a new generation of cost-effective sensors and samplers
- To be integrated within observing platforms
- Long-term deployment in large-scale demonstrations in European seas
- Goals & achievements:
 - ✓ complement and expand current EU observation tools and services
 - ✓ obtain a collection of data at a much higher spatial resolution, temporal regularity and length than currently available at the EU scale
 - ✓ to further enable and democratise the monitoring of the marine environment to both traditional and non-traditional data users

NAUTILOS' solutions

13 types of cost-effective sensors & samples

70% biological & biogeochemical EOVs (Essential Ocean Variables) covered

GAPS & NEEDS

Need for preservation & sustainable exploitation of our ocean & seas

REQUIREMENTS

INTEGRATION

CALIBRATION, VALIDATION & SCENARIO TESTING

8 MSFD descriptors



Biodiversity



Populations of commercial species



Food web structure



Eutrophication



Contaminants



Sea-food contaminants



Marine litter



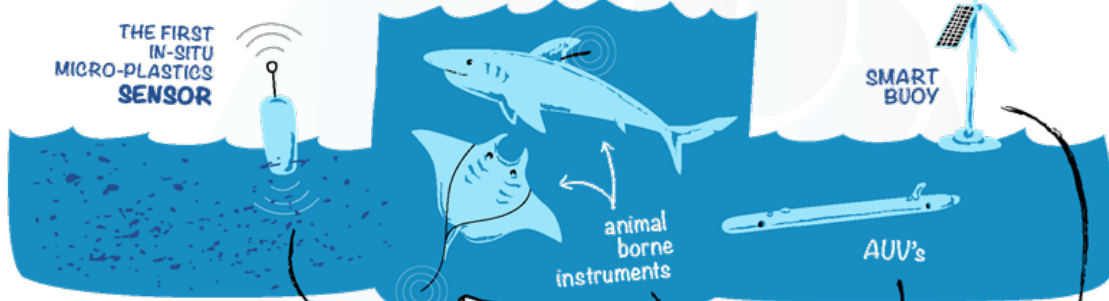
Energy and noise

NOVEL, COST-EFFECTIVE DEPLOYMENTS

THE FIRST IN-SITU MICRO-PLASTICS SENSOR



SMART BUOY



CITIZEN SCIENCE



Achieve TRL 6 for ocean observations systems & tools

Demonstrations

Data Management

Data Modelling

IMPACTS

Healthier



Oceans & seas

Enhanced European capacities for observations



Generated economic & social value for the blue economy



ESPCE synergies



Capacity Building



Policy

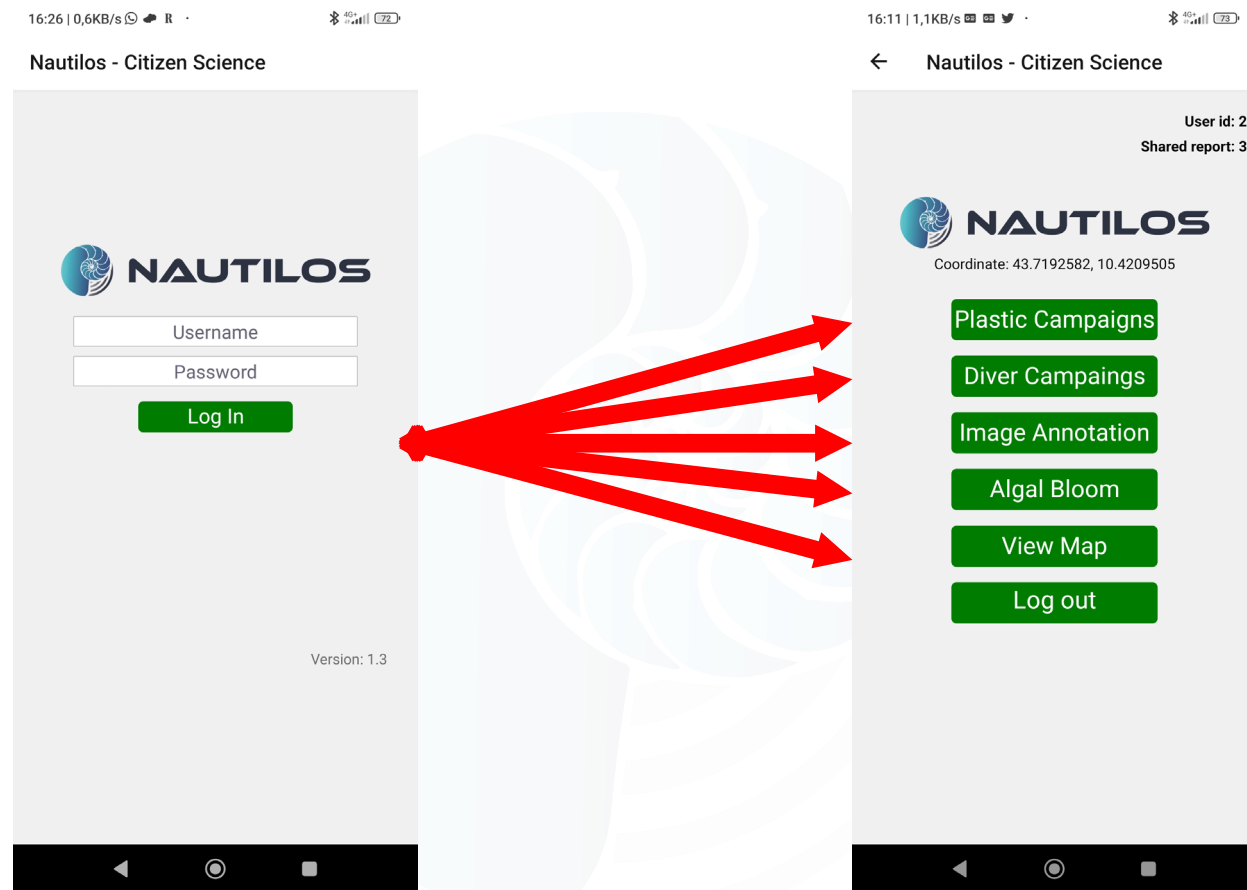


Citizen Engagement

Citizen Science for data democratisation

- Designed as a specific tool for the NAUTILOS project purpose.
Available for all: Research projects, NGOs, volunteers' organizations...
- Need to be compliant to predefined well-established frameworks and settings (e.g. EMODnet, SeaDataNet...)
- Not planned as *Yet-another demo App*
- Plastic litter data were organised according to the EMODnet Thematic Lot n°4 categories (J code List)
- Also used for other purposes: technology validation, image annotation, algal-bloom data...

The CS application – Main screen



The application – Different Use cases

Diver Campaign

← Nautilus - Citizen Science

Diver Campaign

Select measured paramet... ▾

Measured value*

2023-06-13 📅

Coordinates:

43.7192247 10.4209731

Pick coordinates


Location name

Depth

Select sea bottom type ▾

Select weather type ▾

Select sea status ▾




Pick an Image Take a Photo

Send data

Image Annotation

← Nautilus - Citizen Science

Image Annotation



Pick an Image Take a Photo

Species/taxom name*

Quantity*

2023-06-13 📅

Coordinates:

43.7192247 10.4209731

Pick coordinates

Location name

Depth

Select sea level ▾

Select sea bottom type ▾

Select weather type ▾

Send data

Plastic Campaign

← Nautilus - Citizen Science

Plastics

Bags: - 0 +

Bottles: - 0 +

ContainersAndBoxes: - 0 +

BottleCaps: - 0 +

PlasticCups: - 0 +

LidsForPlasticCups: - 0 +

BottleRings: - 0 +

Gloves: - 0 +

Lighters: - 0 +

Straws: - 0 +

CigaretteButts: - 3 +

Pens: - 0 +

FoodPackaging: - 8 +

SingleUseCutlery: - 0 +

SingleUseDishes: - 6 +

EarSwabs: - 0 +

NetsAndRopes: - 0 +


FishingLines: - 3 +

PlasticBucketsAndLargeContainers: - 0 +

Styrofoam: - 0 +

SurgicalMasks: - 0 +

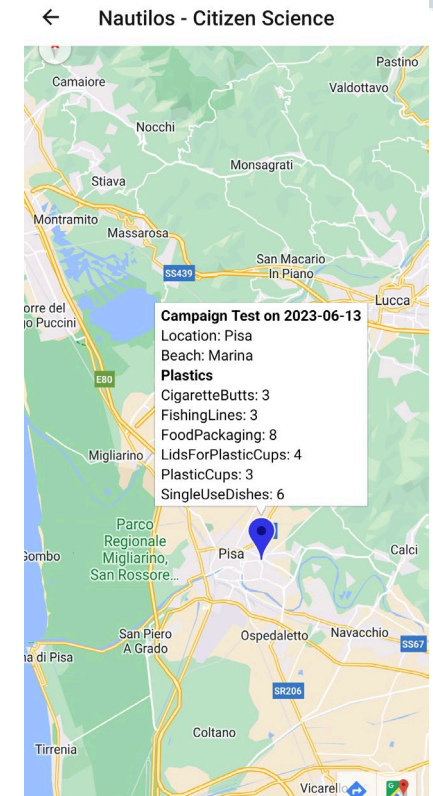
Other: - 0 +

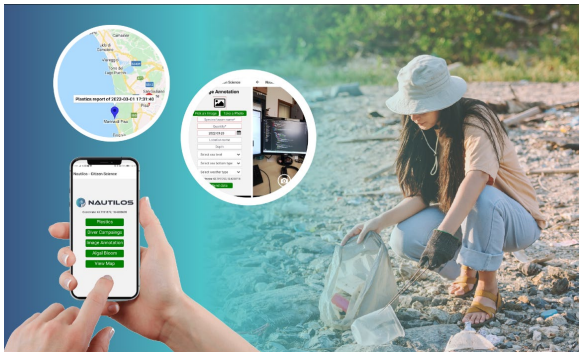


Pick an Image Take a Photo

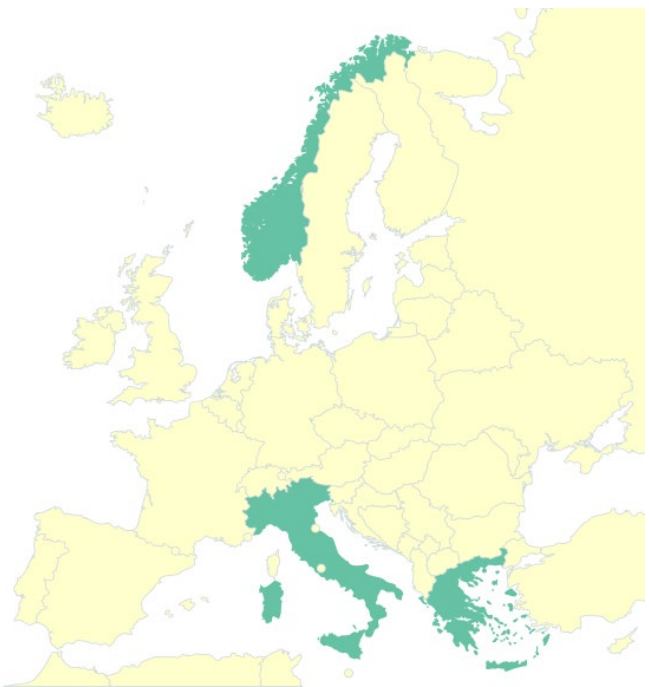
Send data

View Map





Citizen Science campaigns







NAUTILOS

THANK YOU!

www-nautilus-h2020.eu