

Generating fit-for-purpose Marine Litter data: Lessons learned from the 2018-2023 cycle

Christina Zeri
Research Director
Institute of Oceanography
chris@hcmr.gr



The IMAP EO10 Programme:

CI 22 Beach Macro –litter

CI 23 Seafloor Macro- litter

CI 23 Sea surface floating Micro-litter

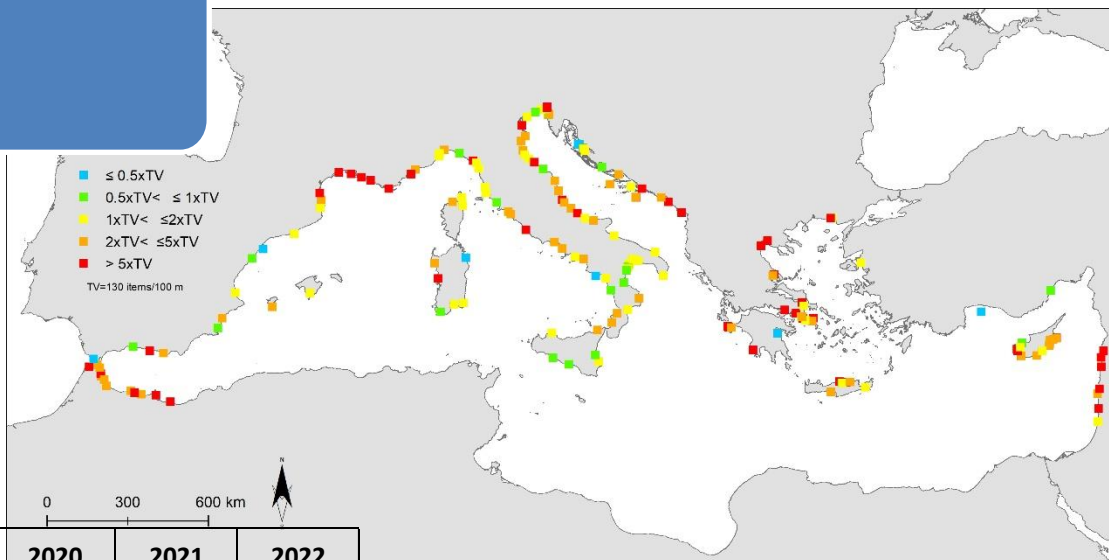
CI 24 Litter ingestion/entanglement by sea turtles

- ✓ Common methods are in place as well as common data dictionaries and standards DD/DS and are followed by the CPs
- ✗ Data gaps and inconsistencies still exist, making regional assessments incomplete

Highlight the problematic issues with concrete examples

CI22 Beach Macro –litter:

Based on QSR2023



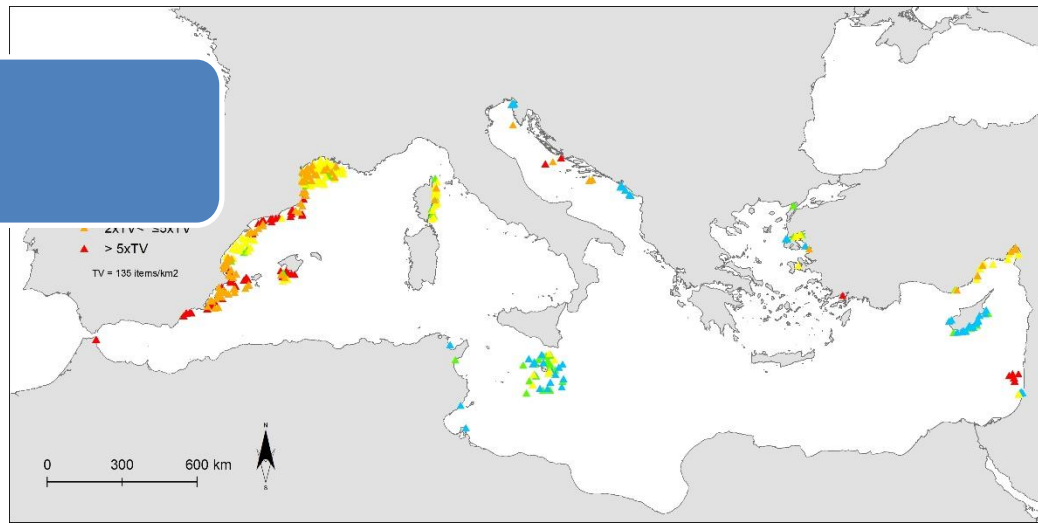
Countries

		2017	2018	2019	2020	2021	2022
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							

Out of the 21 Contracting parties, 13 have reported beach litter data, still not all on a regular basis.

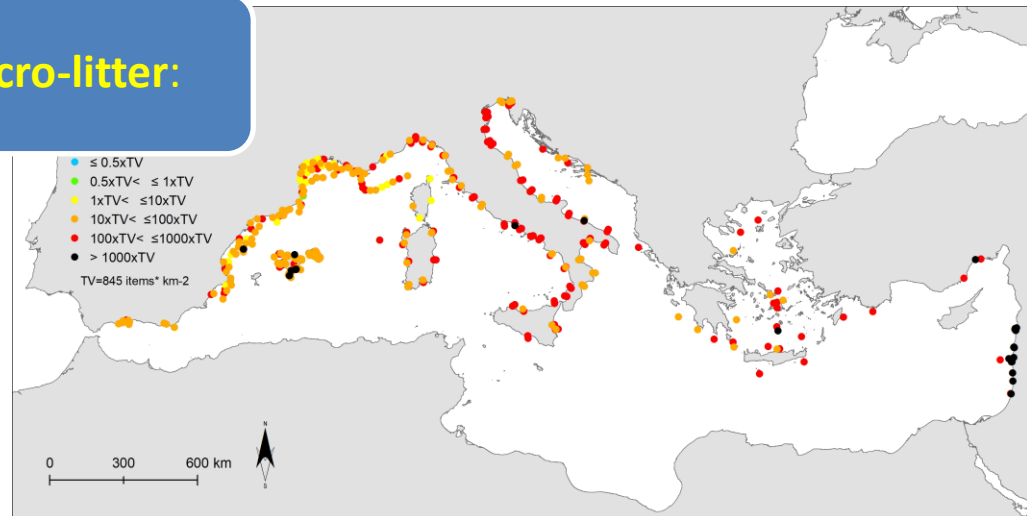
CI23 Seafloor Macro- litter:

Based on QSR2023



CI23 Sea surface floating Micro-litter:

Based on QSR2023



Worse picture for other CIs with many blank areas

CI22 Beach Macro –litter:

Based on QSR2023

Boundary limits	GES- nonGES classes	No of Beaches	% of Beaches	
$\leq 0.5xTV$	HIGH	10	5	16% GES
$0.5xTV < \leq 1xTV$	GOOD	23	11	
$1xTV < \leq 2xTV$	MODERATE	49	24	79 % nonGES
$2xTV < \leq 5xTV$	POOR	59	29	
$> 5xTV$	BAD	51	25	
		192 beaches		

Data inconsistencies affect the overall assessment.

Any sub regional/division assessments are impossible, let alone temporal trends

The QSR2023 is based mostly on northern European coasts.

Examples of barriers identified from the Greek Monitoring programme

Delays in implementation - **DATA GAPS**

Official MSFD 6-year cycle started on 2019 and not in 2018 due to delays in financing process. This also applies for the current 6-year cycle, producing a data gap for 2024.

Limited financial resources - **DATA GAPS**

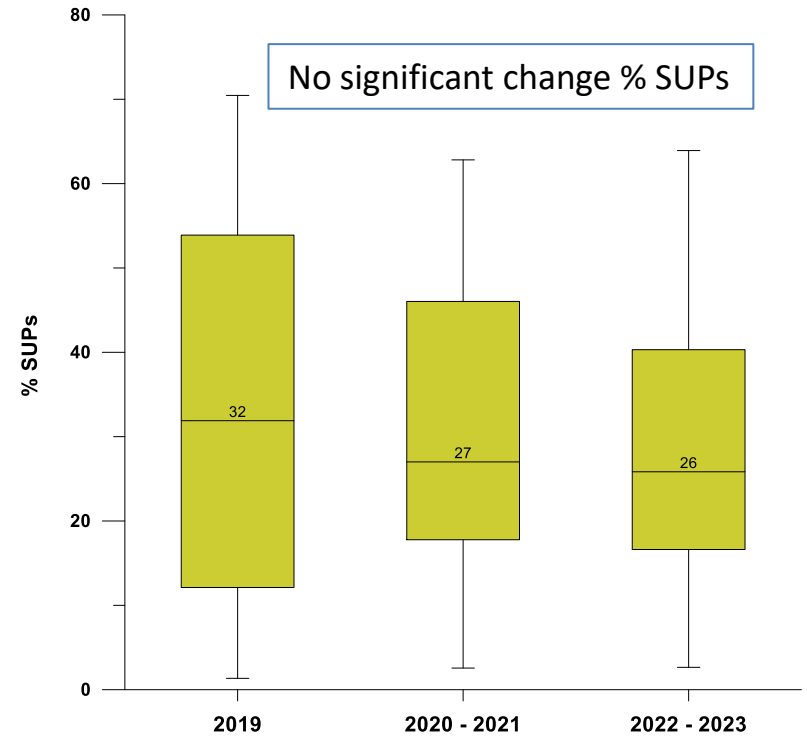
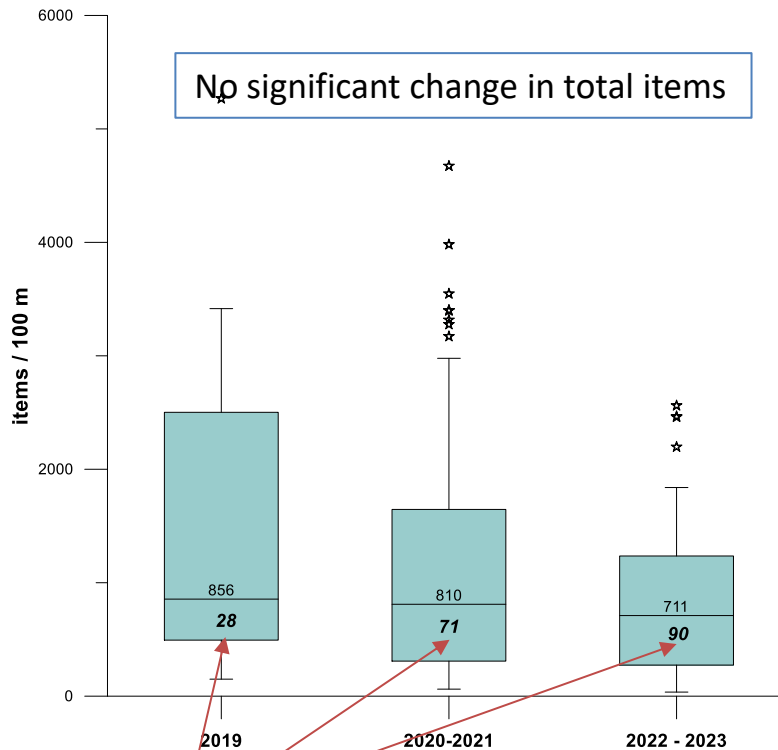
Result in only 17 beaches monitored for 2 times/year

Lack of coordination among authorities and data holders – **UNDER REPORTED DATA**

Seafloor litter monitoring is conducted as part of the MEDITS programme and is the most well represented from 2018 – 2023. Yet due to data restrictions from the MEDITS programme, detailed raw data are not reported in either the Emodnet or the INFO/RAC systems.

Data consistency is important for :

- Detecting temporal trends
- Minimize uncertainties



Number of samplings

Examples from the Greek Programme
Results from 2018-2023 cycle

- Evaluating the efficiency of measures
- Designing new measures

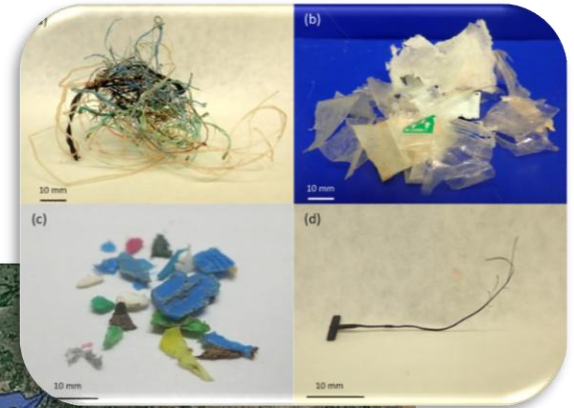
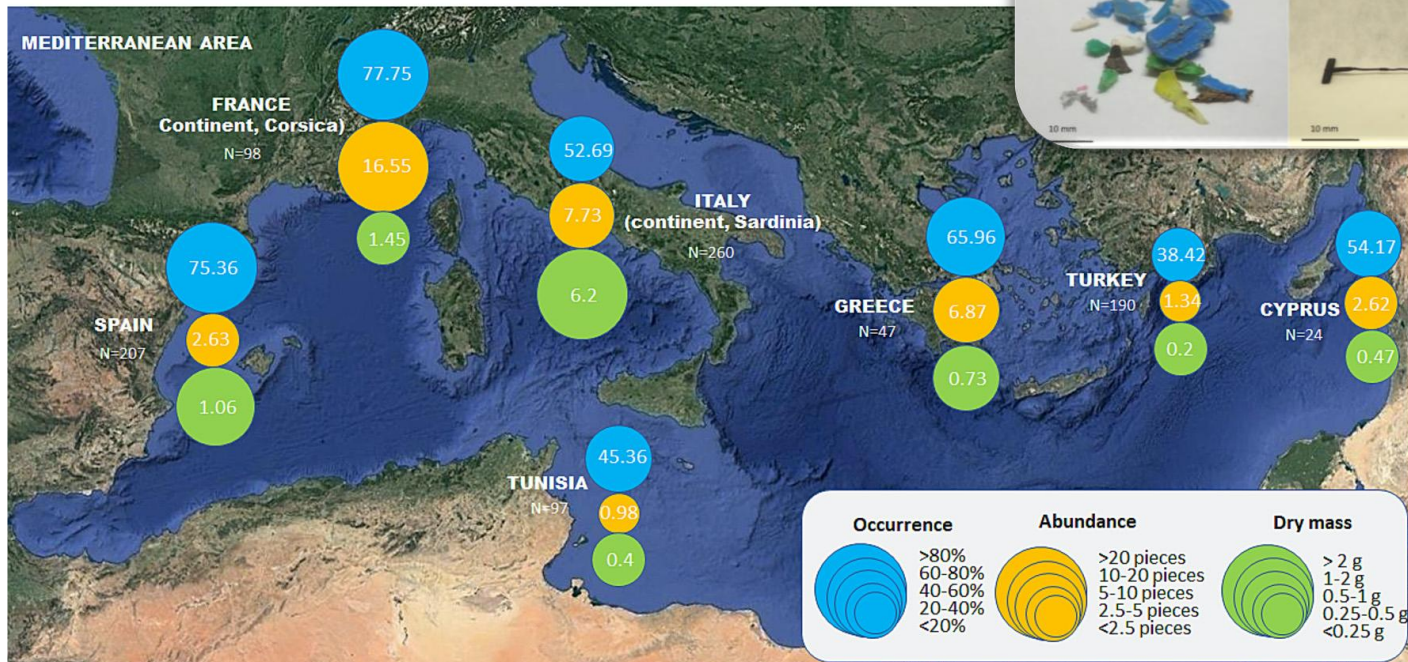
Some Suggestions

- To increase the data coverage, enforce synergies with NGOs with citizens science projects in place.
- Caution is needed for generating good data, according to IMAP methods. Experienced NGOs is crucial.
- Prioritize efforts: Reporting total beach litter items in many beaches with a consistent temporal coverage is still valuable. While keeping a small number for qualitative composition analysis of beach litter.
- Insert data to excel files and upload directly to Info Map System. Do not leave until the end of 6-year cycle, or when requested.

Monitoring starts in the field and ends when data reporting is complete.

CI 24 Litter ingestion/entanglement by sea turtles

- *Caretta caretta* is a useful indicator species for large scale assessments on the Regional level.
- Obtaining data from various areas is important



Digka et al. (2020) Environ. Pollut. 263, 114596;
 Darmon et al. (2022) Mar. Pollut. Bull. 185 B, 114364

Based on HCMR experience from INDICIT-I, -II projects

CI 24 Litter ingestion/entanglement by sea turtles

Set up a network of actors:



Port and coast authorities to document, recover, and transport the carcass.



Veterinarians to conduct the necropsy and extract the digestive system



Marine litter expert laboratories to receive the digestive system and analyze plastic ingestion, according to IMAP methodology



Ensure financial support to all involved actors and formalize roles and responsibilities through signed agreements (MoUs, ToRs).

Based on HCMR experience from INDICIT-I, -II projects



Thank you for your attention!

© Vicky Markolefa / Mind The Bump Productions