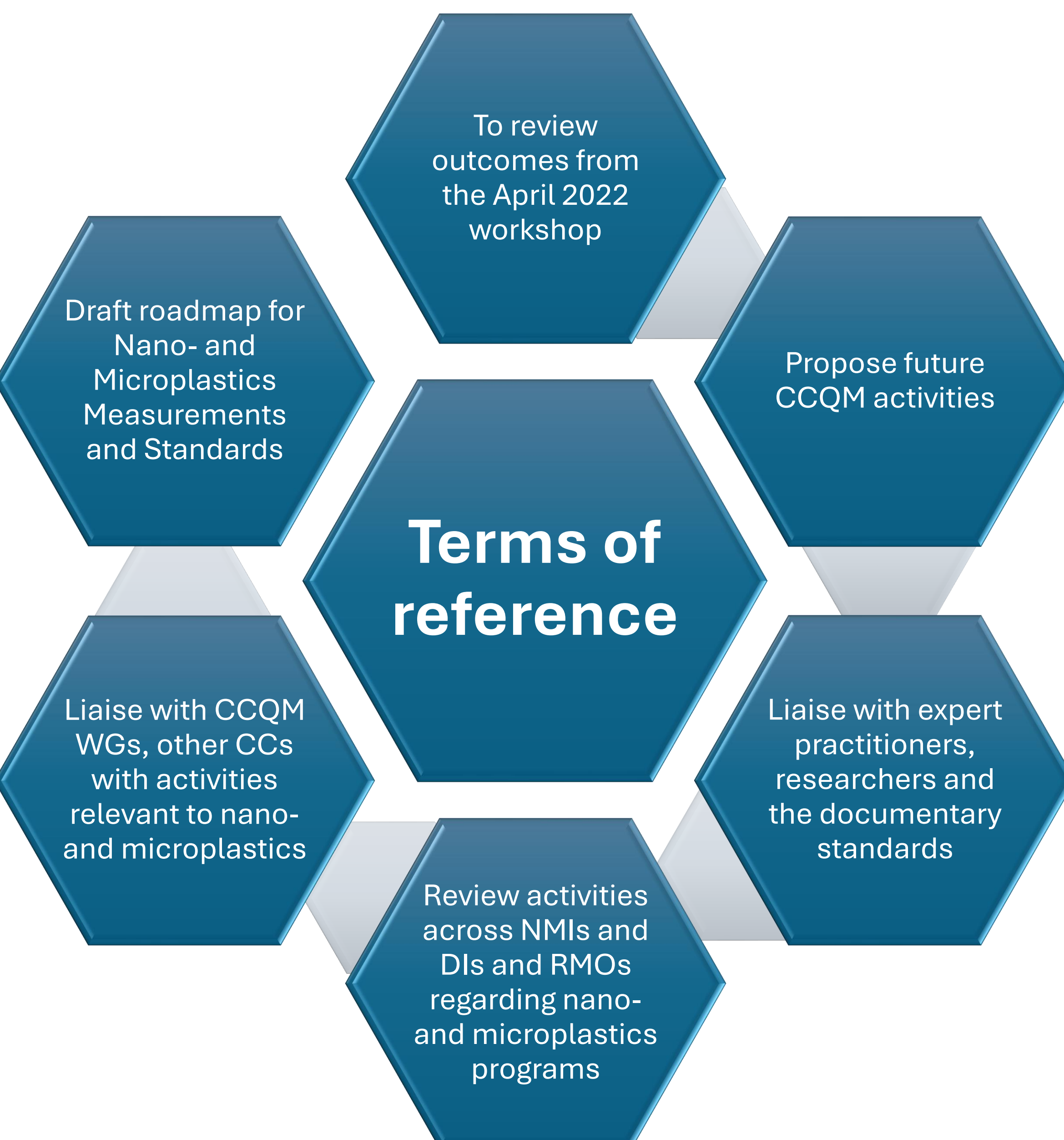


CCQM-TG-NMMS

Terms of reference



5-6 April 2022

CCQM First Workshop on “Microplastics Measurements and Standards”

April 2022

The CCQM-TG-NMMS formed to meet the recommendation from the workshop.

Scope: To address metrology challenges in micro- and nanoplastics measurements and standards, preparing a report for the April 2024 Plenary.

April 2023

NMI Survey

April 2024

The CCQM-TG-NMMS was granted a one-year extension to organise a stakeholder workshop

24-25 February 2025

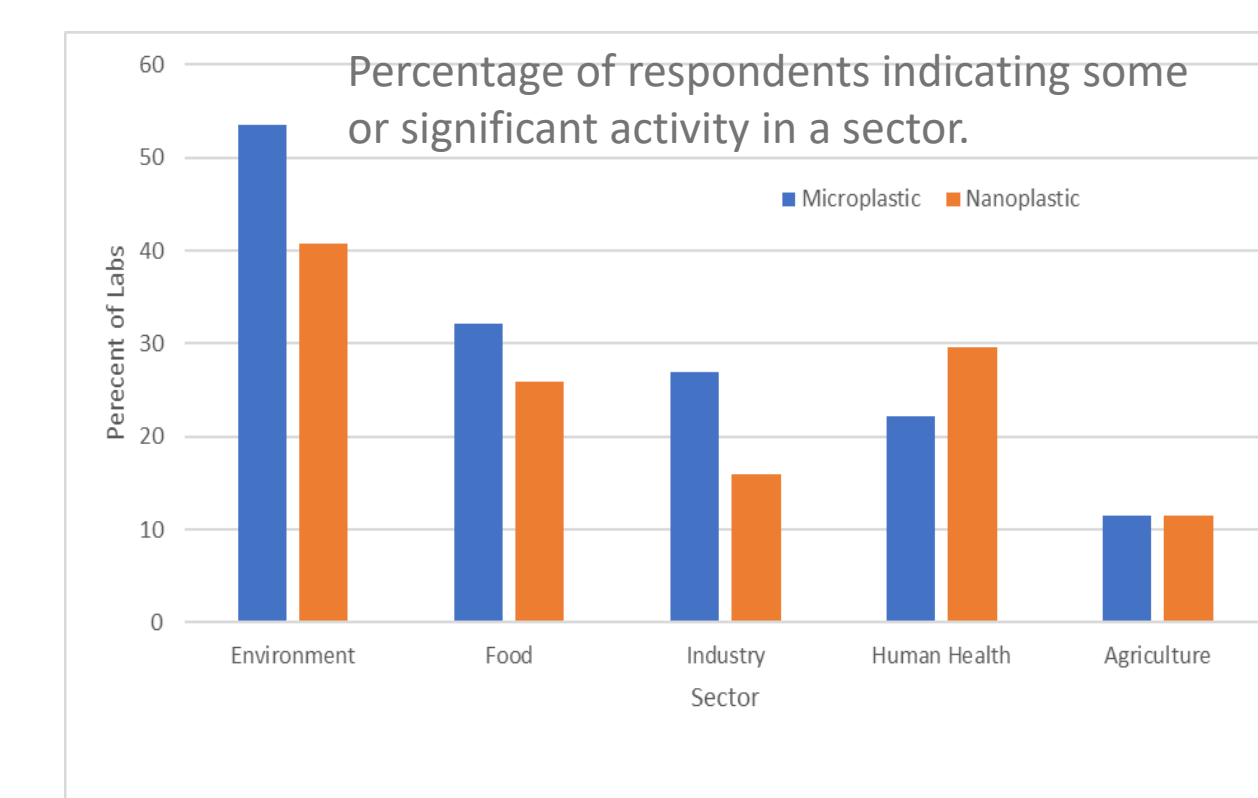
Virtual Stakeholder Workshop of the CCQM-TG-NMMS “Micro- and nanoplastics metrology: Current status”

Review activities across NMIs and DIs and RMOs regarding nano- and microplastics programs

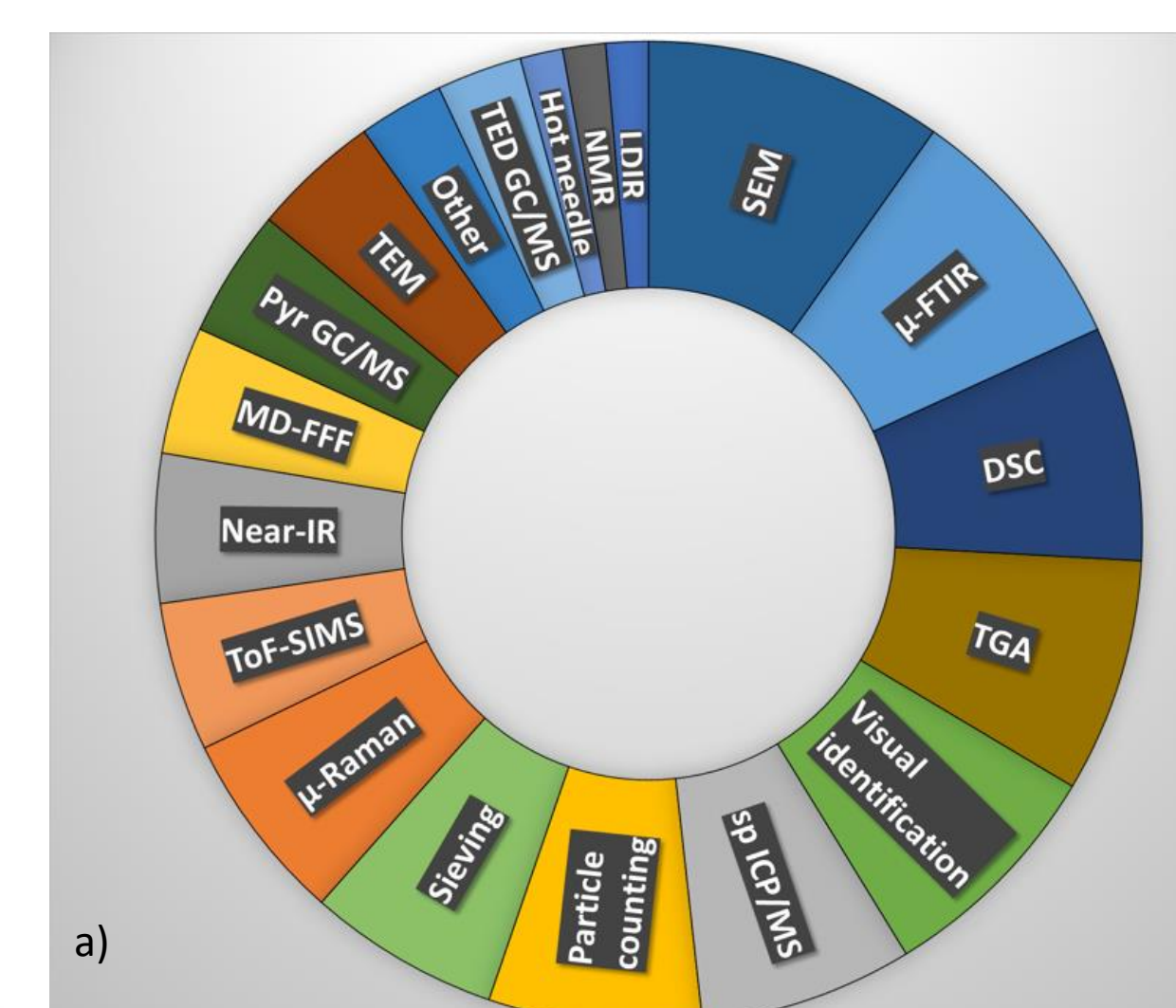
Survey

- Goal: Understand the current capability and status of micro- and nanoplastics metrology at National Metrology institutes (NMIs) across the globe
- Asked participants to answer based on organization’s, not necessarily personal, capabilities.
- The survey consisted of 43 questions organized around four topics: Capabilities, Current Activities, Drivers and Motivating Factors, Program Demographics.

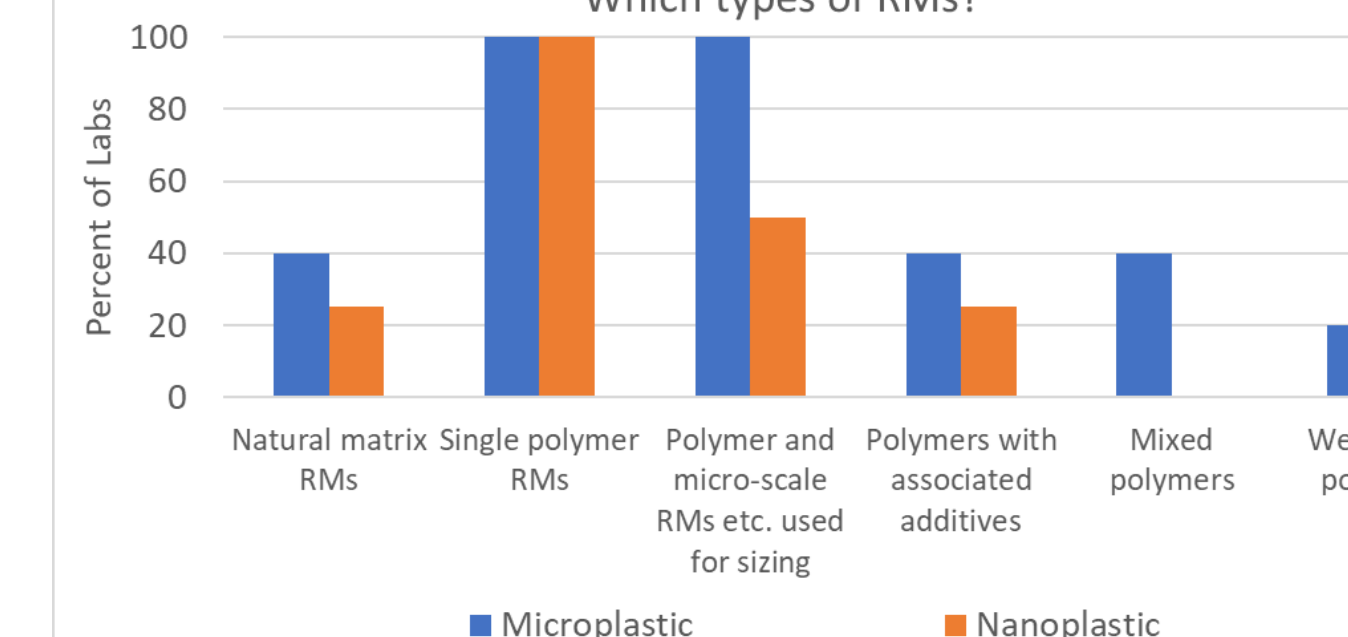
Survey responses:
Current involvement, RM developments, future needs from CCQM:



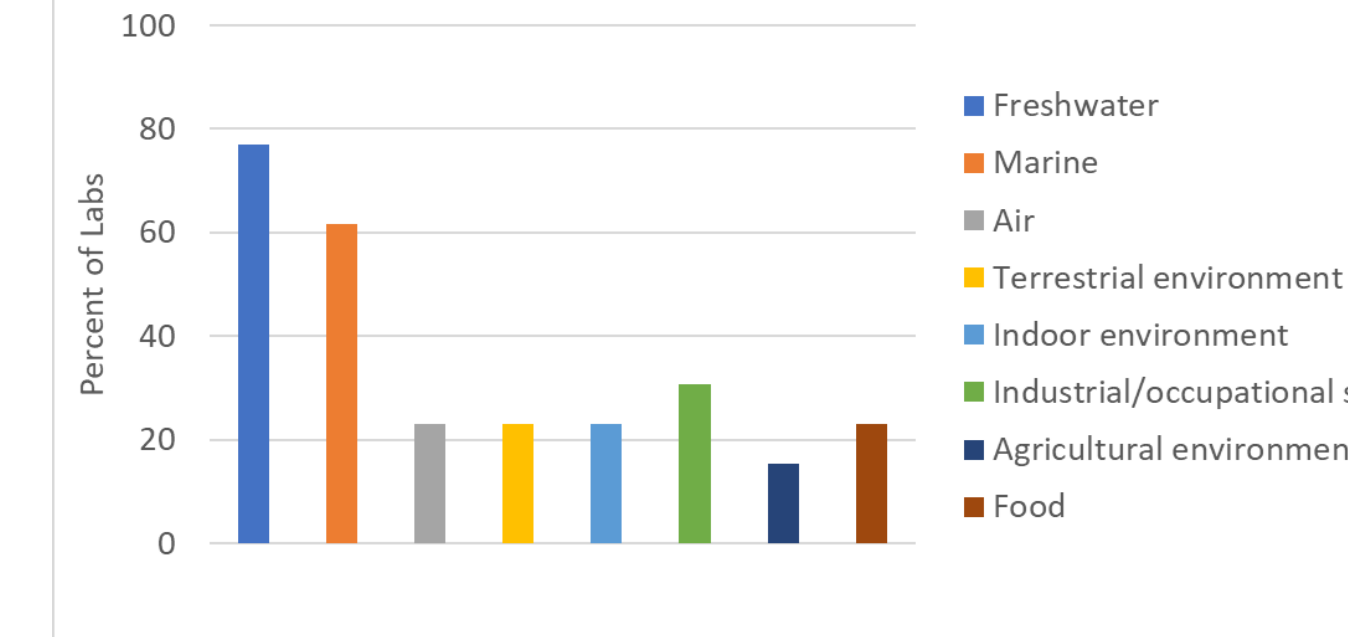
Survey responses:
Identified measurement techniques suitable for:
a) Microplastics b) Nanoplastics



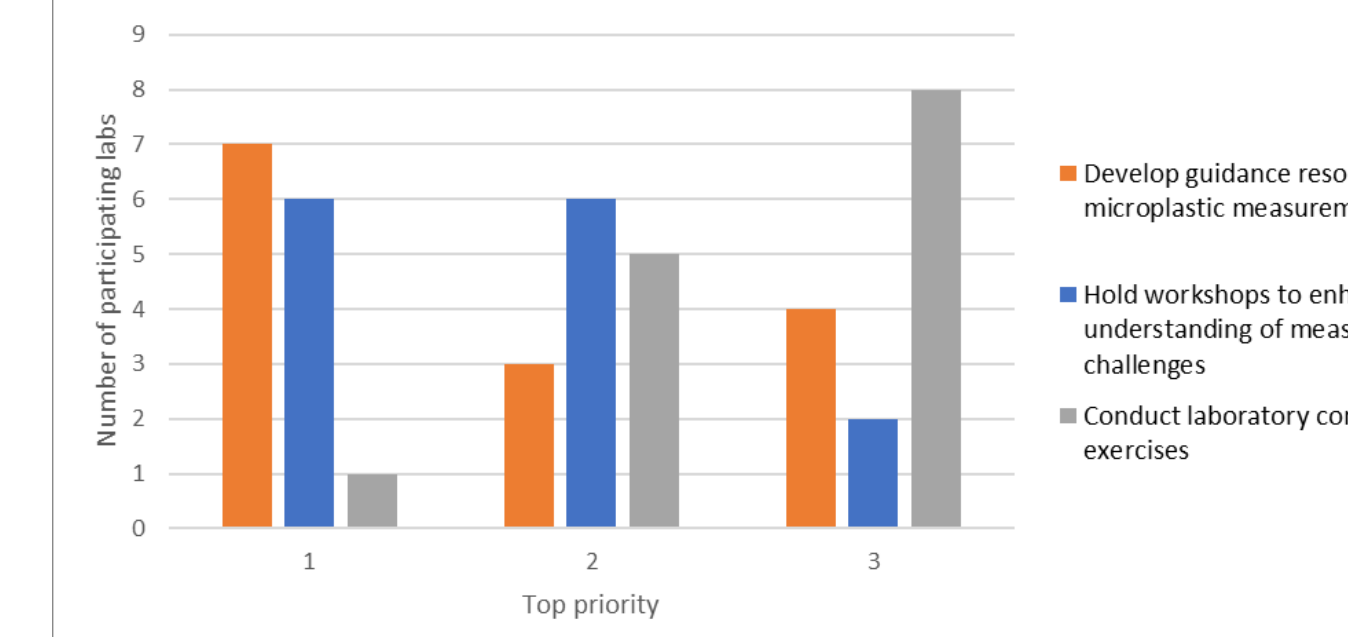
Development of micro and nanoplastic reference materials:
Which types of RMs?



Microplastic measurements in environmental matrices



Which CCQM activities could help to advance global comparability for microplastic measurement?



Left: Bank of Parramatta River, Sydney, Australia (photo courtesy of Philip Pogson)

Below: Microplastics RM preparations, >300 µm to 5 mm (photo courtesy of JRC)



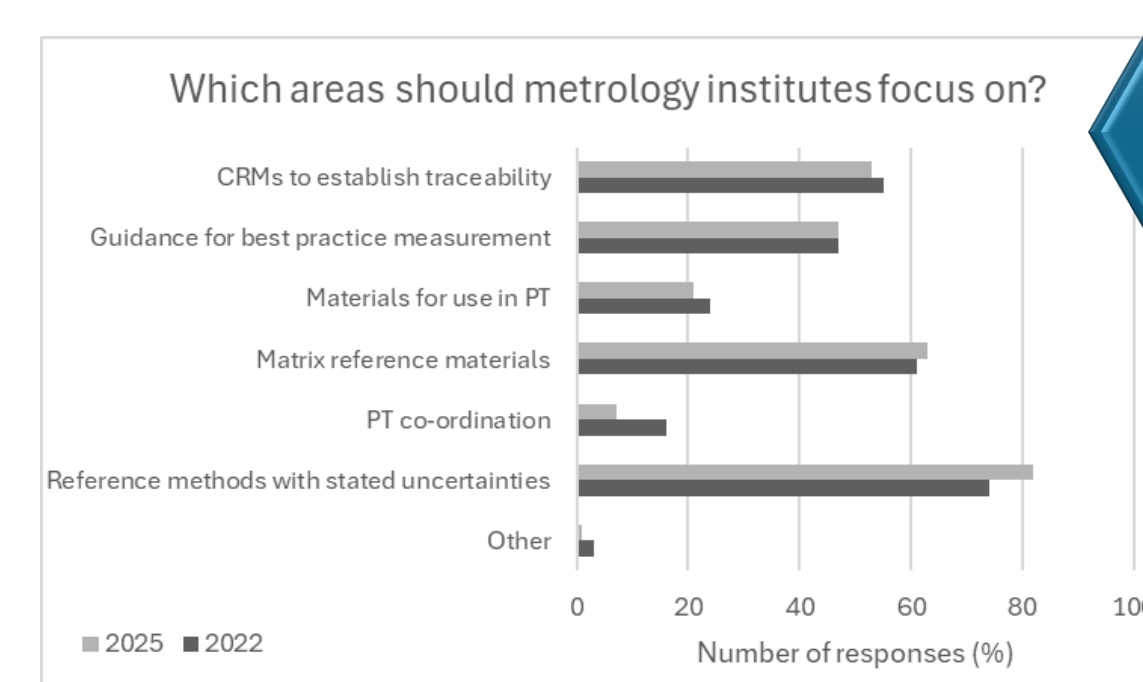
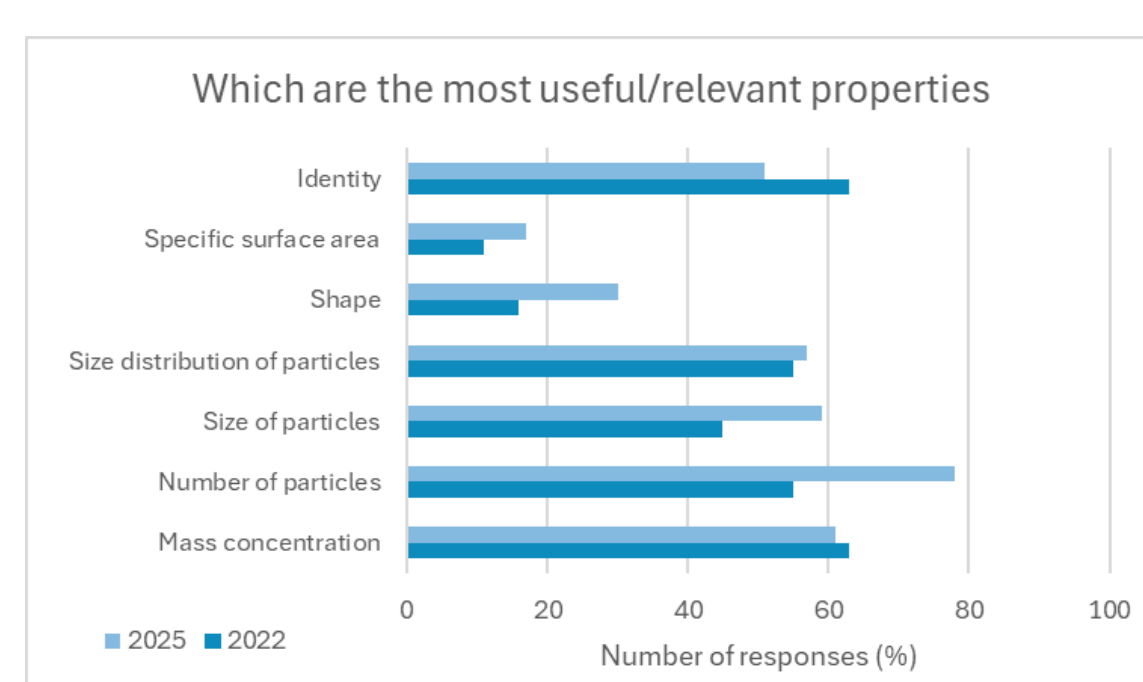
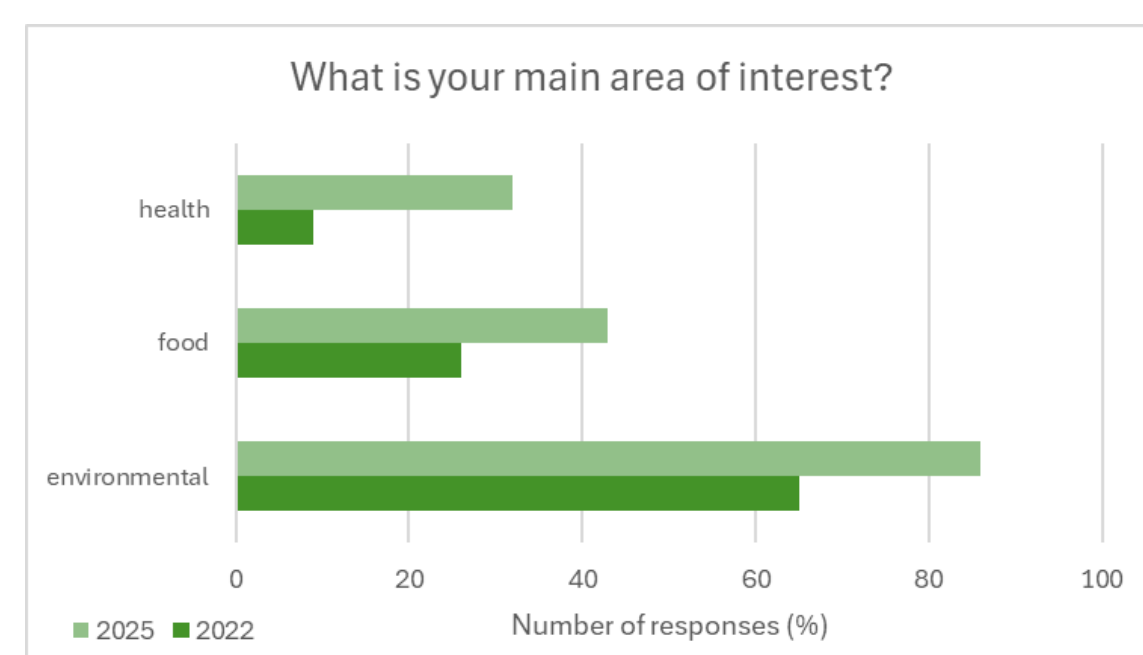
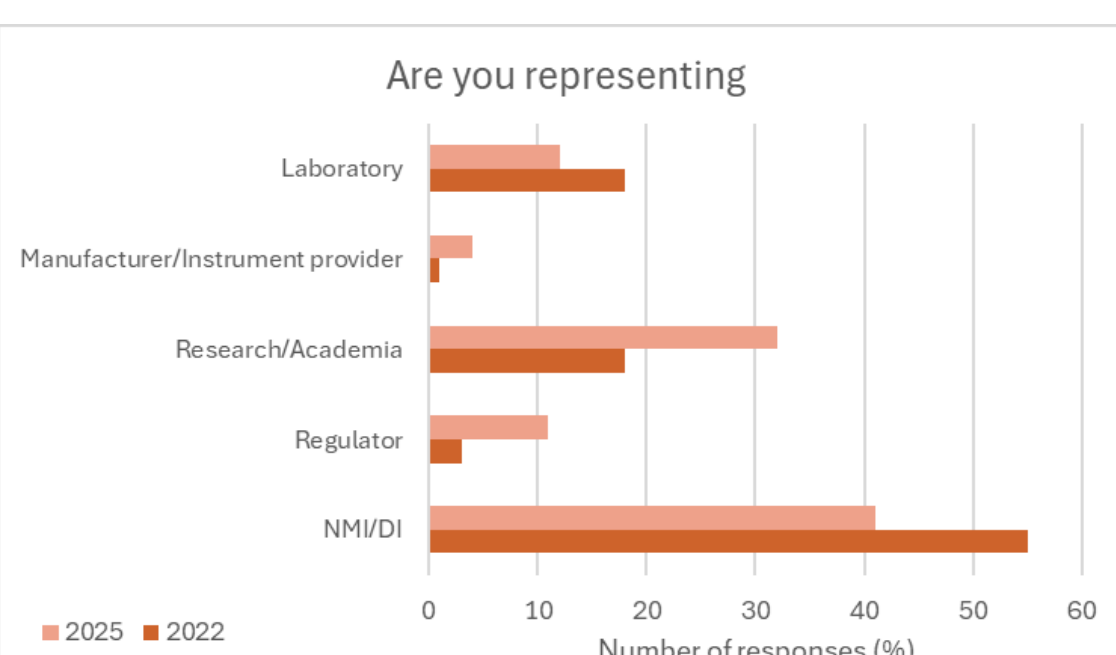
"Voces del Territorio," an initiative of the Papacria association aligned with the International Conference Micro 2024, Lanzarote, Canary Islands (photo courtesy of Enrica Alasonati)

Liaise with expert practitioners, researchers and the documentary standards

Liaise with CCQM WGs, other CCs with activities relevant to nano- and microplastics

CCQM TG-NMMS Workshops

Input from workshop participants, 2022 vs 2025:



2022:
What further specific comments would you make for priorities or issues?

Smaller Particles
Standardized Methods
Sample Preparation
Sampling
Uncertainty Estimation
Method Validation
ILCs

2025:
What, in your opinion, is the greatest roadblock regarding micro- and nanoplastics measurements?

Data Comparability
Sampling
Particle Heterogeneity
CRMs
Traceability
Standardization
Standardized Protocols
ILCs
Measurands
Measurement Techniques
Complex Matrices

Potential future directions for CCQM:

- Pilot study:** CCQM to consider a pilot study.
- Cross-cutting Task Group:** CCQM to consider establishing a longer term, cross-cutting Task Group. Given the complexity of nano- and microplastic measurement and the increasing regulatory interest in this area, combining already active efforts within the IAWG, SAWG and CAWG in addition to the OAWG.
- A key role of a **longer-term Task Group** could be to coordinate the delivery of any pilot study in this area within the existing CCQM WG structure.

Propose future CCQM activities

Task Group Members, current and former

- Åsa Jämting, NMIA (Australia) – Chair
- Enrica Alasonati, LNE (France) – Vice-Chair
- Gustavo Martos, BIPM – Secretary
- Dorota Bartczak, LGC (United Kingdom)
- Jingbo Chao, NIM (China)
- Andrea Mario Giovannozzi, INRIM (Italy)
- Marina Ricci, JRC-Geel, European Commission
- Chris Zangmeister, NIST (USA)
- Shan Zou, NRC (Canada)
- John Kucklick, NIST (USA)
- Andrea Held, JRC-Geel, European Commission
- Steven Westwood, BIPM