EU efforts for data harmonisation for policy purposes

G20 Workshop on harmonized monitoring and data compilation of marine plastic litter, 7th September 2020, Online, Japan

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EU MSFD (Marine Strategy Framework Directive 2008/56/EC), the EU Member States are committed to the protection of the European Seas by achieving **Good Environmental Status** by 2020.

**11 Descriptors** of the State of the Marine Environment:

1. Biodiversity
2. Alien Species
3. Fisheries
4. Foodwebs
5. Eutrophication
6. Seafloor integrity
7. Hydrographical Conditions
8. Contaminants
9. Contaminants in Sea Food
10. Marine Litter
11. Energy including Noise

**Quantitative Criteria:**
- Beach litter
- Sea Surface litter
- Seafloor litter
- Micro-litter
- Biota entanglement
- Litter ingestion

Baselines, Thresholds + Targets
MSFD CIS working group set-up to coordinate the implementation of monitoring, compiling data, defining baselines & thresholds, providing harmonised protocols

- Chaired by France, Germany, JRC*
- EC, EEA
- EU Member States
- Regional Sea Conventions
- Other stakeholders
- 113 Members

Collaboration through on-line platform, annual meeting and technical workshops

Link to reports:


*Science and knowledge service of the European Commission
EU efforts on data management

Long-term initiative (2009-...) by DG MARE as part of EU Blue Growth strategy

- to unlock marine data, facilitating access and re-use
- for different domains

Towards the new vision
- interoperability (FAIR)
Collect, aggregate, standardize, quality check data, share information and products on marine water quality:

- Marine Litter
- Eutrophication
- Contaminants
- Ocean acidification

Data on water, biota and sediment

http://www.emodnet-chemistry.eu/
Support to EU MSFD Directive

EMODnet Chemistry aims at providing access to marine chemistry data and generating products relevant for the implementation of the EU Marine Strategy Framework Directive (MSFD, 2008)

Tight connection with EEA, RSCs, JRC, ICES through MSFD Experts Board meetings to obtain feedbacks on data products useful for indicators of MSFD descriptors
EMODnet Chemistry brings together **16 organisations** from 11 countries along European seas, and a group of **24 data centres** and **organizations** joining the open Advisory Forum, including **ICES** and the regional sea conventions (**OSPAR**, **HELCOM**, **UNEP/MAP** and **BSC**).
Data and metadata standards:

Adopts and adapts **SeaDataNet**, the consolidated pan – European infrastructure set up and operated for ocean and marine data management

- Adoption of ISO 19115 – 19139 standard for describing metadata (on data sets, research cruises, monitoring networks, research projects => marine metadata profiles, schemas, schematron rules)
- **Controlled vocabularies** for the marine domain (>65,000 terms in 82 lists), with **international governance** and web service
- **Standard data exchange formats**: ASCII and binary (NetCDF) fully supported by controlled vocabularies

*Works* together with IOC/IODE and ICES for **maintenance** and **dissemination** of standard QA-QC procedures
Protocols and formats agreed at European scale (MSFD TG ML)

**BEACH**
- Based on consolidated protocols adopted by regional sea conventions (OSPAR, UNEP, TG ML)
- New EMODnet format and tools based on OSPAR data format

**SEAFLOOR**
- Based on consolidated protocols (ICES, MEDITS, DeFishGear)
- New EMODnet format based on ICES and MEDITS

**FLOATING MICROLITTER**
- More fragmented and heterogeneous management
- New EMODnet format based on SeaDataNet/EMODnet data formats and infrastructure

Collect all type of data with central submission facilities, and provide open access to harmonized information
## Litter Databases content

<table>
<thead>
<tr>
<th>Category</th>
<th>Database Details</th>
<th>Count Details</th>
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<tbody>
<tr>
<td>Beach</td>
<td>OSPAR-MCS database Data collection from Member States EMODnet partners and associates, EEA Marine Litter Watch</td>
<td>38 countries 1096 beaches 7077 surveys</td>
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<tr>
<td>Seafloor</td>
<td>ICES-DATRAS database DeFishGear, EMODnet partners</td>
<td>23 countries 4339 surveys</td>
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<tr>
<td>Floating microlitter</td>
<td>EMODnet partners, Volvo Ocean Race</td>
<td>6 countries 163 surveys</td>
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Counts updated at 01/09/2020
Data collections

Available to download as EMODnet Beach litter spreadsheet and as EMODnet Sea-floor litter csv file.

Data collections are available in ODV csv spreadsheet format, which can be easily handled and visualised with ODV Software (More information can be found at www.seadatanet.org/Software/ODV).
beach litter surveys: location and lists used during the surveys (official monitoring & other sources)

seafloor trawlings: surveys location and trawling gears used
Data Harmonization & harmonised monitoring

EU Joint list of litter categories:

- **Mapping** between different lists (TG ML, OSPAR, UNEP) allows merging and harmonizing data from different sources.

- But some codes miss correspondence (impossible mapping as a generic code is missing) or mapping many-to-many (with lost of information). Hierarchical approach allows more detail.

- Harmonised monitoring is the key to comparable assessments and thus to equal levels of protection.

Litter quantification parameters often depend on the applied method ➔ Close interaction with regional (RSCs) and global (UN, G7/20) harmonisation efforts is needed.

Provided “Guidance on Monitoring of Marine Litter”, review of approaches and methods is currently ongoing.
Microplastics for a global assessment

Data template is available to undertake collection of available datasets from EU Member States through TG ML by EMODnet Chemistry. Mandatory data (min-max depth, distance, net-opening, mesh-size, type, size & count), weight, ...

Possible link with Japanese approach / G20 platform for global assessment

Protocols to be harmonised

<table>
<thead>
<tr>
<th>Categories for Microparticles</th>
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<tr>
<td>Material</td>
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<td>Plastic</td>
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Table 9: Categories used to describe microplastics appearance