

EMODnet Chemistry: News and plans

SeaDataCloud 1st Annual Meeting, Athens

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EMODnet Chemistry 3

→ 6/3/2017 - 5/3/2019

Collects data on:

In 3 matrices:

- water column;
- biota;
- sediment.

	Group	Examples
Eutrophication	nutrients, dissolved gasses	N, P, Si, Oxy, Chl-a
Ocean acidification	acidity	pH, pCO2
Pollution	hydrocarbons, heavy metals, pesticides,	anthracene, fluroanthene, Me, Cd, Pb, TBT, DDTs
Marine Litter	beach litter, seabed litter, microlitter	

Covers all European waters

Involves **45 institutes** from **27 countries** and 3 international organisations (ICES, Black Sea Commission, UNEP/MAP)



Adopting and adapting SeaDataNet infrastructure and standards

- Additional P01 terms, P35 for EMODNET chemistry aggregations, P36 for EMODNET Chemistry themes
- ODV software for data sub-setting, parameter aggregation with P35, quality control
- © CDI Data Access interface (with matrix selection, ...)
- Ocean Browser (viewing maps and time series)
- Sextant (including link to DOIs landing pages)



Use of Digital Object Identifiers (DOIs)

- DOIs from DataCite
- All DIVA maps have a DOI
- All scientific reports have DOI
- We plan to give a DOI to all data collections at regional level, and introducing also versioning
- All DOIs landing pages are linked to Sextant metadata products descriptions



Focus extended to Marine Litter

- EMODnet Chemistry scope has been expanded with gathering data, generating data products on a European scale, and publishing data and data products on:
 - Beach litter (nets, bottles etc.)
 - Seafloor litter (i.e. litter collected by fish trawl surveys)
 - Micro litter (microplastics)
- Not on litter in biota
- It is stipulated that digital layers of plastic or litter must be available after the first year
- Approach discussed at MSFD Technical Group Marine Litter



Proposed approach

- Opt for developing two central EMODnet databases:
 - one for beach litter, modelled after the OSPAR-MCS approach
 - one for seafloor litter, modelled after the ICES-DATRAS approach
- Arrange data exchange mechanisms and cooperation with the relevant regional systems, their responsible managers and related networks
- Encourage further population of the existing systems by organisations in the relevant regions
- Set up and operate central submission facilities for covering submissions by organisations in regions that fall outside existing systems

6

- Extra population by EMODnet Chemistry partners and through EMODnet Ingestion project
- Develop search and display services (including maps) on the central EMODnet validated databases



Present situation – beach litter

- Regular harvesting from OSPAR-MCS
- Started agreement with OSPAR about the set up of a web service
- Central submission facility covers additional data providers



- The reference list of beach litter categories is the Master List published in 'Guidance on Monitoring of Marine Litter in European Seas' (Galgani et al., 2013)
- Next steps DeFishGear (Adriatic-Ionian region)
- Cooperation planned with HELCOM SPICE (under way), UNEP/MAP INFO/RAC (planning), EEA, Black Sea Commission, JRC 'Project on ML baselines' (all these parties joined the kick-off)



Present situation – **seafloor litter**

- Regular harvesting from ICES-DATRAS, including BITS
- Contacts with MEDITS
- Central submission facility covers additional data providers
- The reference list of seafloor litter categories from ICES vocabs
- Taking on board DeFishGear and PERSEUS as next steps



Micro litter - proposed approach

For **micro litter** there are not yet coordinated efforts at regional or European scale. EMODnet Chemistry proposes to **adopt** the data management approach as generally applied for marine data in Europe, adopting and adapting the **SeaDataNet infrastructure and standards**:

- CDIs → include micro litter metadata information, for discovery and access
- ODVs → include data, extending ODV mandatory fields with additional selected fields necessary to describe marine micro litter (category, count,... and size, color,...)



Micro litter - proposed approach II

- A document with the proposed approach for marine micro litter was submitted and presented as proposal to the Technical Group on Marine Litter (TG ML) with the ultimate aim to establish official support.
 - So far positive feedback from Germany and HELCOM
- The reviewed version was also positively discussed at JPI Oceans BASEMAN recently



Impact to SeaDataNet

- Extend ODV "bio-ODV like" data format with a set of additional fields to describe marine micro litter:
 - additional <u>mandatory</u>: fields will be always present in ODV file and always filled
 - additional <u>optional</u>: fields will be always present in ODV file but could be empty
- Creation of 6 new vocabs for Type of micro-litter particles (H01), Shape of micro-litter particles (H02), Size class of micro-litter particles (H03), Colour class of micro-litter particles (H04), Micro-litter polymer types (H05), Douglas Sea Scale



Use-cases for Chemistry data

- Collaboration with UNEP/MAP case study on EO5 in the North Adriatic (Partnership agreement under evaluation)
- Meeting with Info-RAC for synergy between information systems
- EMODnet Chemistry validated buffer with contaminants and nutrients in the Black sea for the BSCS SOE (February 2017)
- EMODnet Chemistry contaminants data requested for EEA thematic report
- Possible collaboration with CMEMS-Med-MFC



International dimension - interoperability

- EMODnet Chemistry want to provide controlled access to regional standardized, aggregated and validated datasets on the cloud provided by SeaDataNet
- EMODnet Chemistry adopts 3 layers of interoperability:
 - formats and vocabs on a technical level (ODIP)
 - QC, flag on a content wise layer (IOC/IODE, including NOAA and ICES)
 - Collection and processing, using international instruments and lab tests

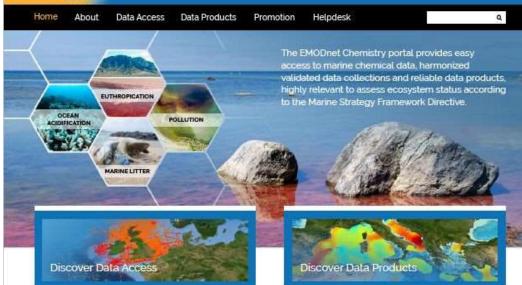


Data Network

New design



Chemistry



News

16-19 July 2017

EMODnet Chemistry 3, Steering Committee and Kick-off meeting Trieste, Italy, 16-19 May, 2017.

READ MORE

10-11 July 2017

EMODnet Chemistry 3, Steering Committee and Kick-off meeting Trieste, Italy, 16-19 May, 2017.

READ MORE

6-3 june 2017

EMODnet Chemistry 3, Steering Committee and Kick-off meeting Trieste, Italy, 16-19 May, 2017.

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Product visualisation

Have a look at animations of the visualisation services for:
* browsing the spatial distribution of surface phosphate
concentrations in European waters over time from 1990 to 2010

* browsing the geo coverage of associated data observation points and retrieving graphics of these data sets as time series and profiles

WATCH NOW













