



Key updates and forward look

15th EMODnet Steering Committee Meeting
8-9 September 2021

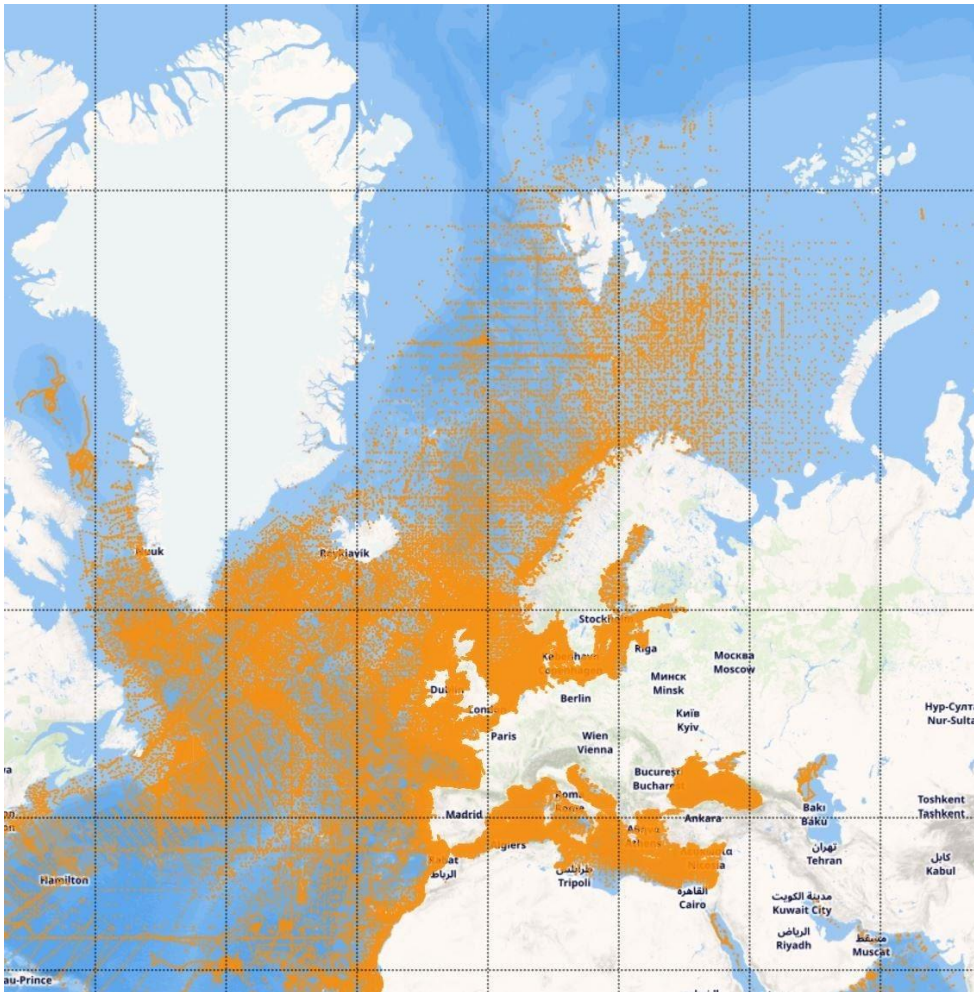
Alessandra Giorgetti
Dick Schaap

Chemistry portal
<https://www.emodnet-chemistry.eu/>

EMODnet Chemistry update: April 2021 – September 2021

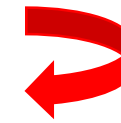
> M18 – M24 (October 2021)

- Further extension of the data access service supplied by a network of 65 data centers mobilized by EMODnet Chemistry; enriching or amending data and metadata already available



CDI service – coverage September 2021

- **CDI records and data sets:**
June 2014: **661095**;
June 2016: **807959**;
Feb 2018: **939400**;
June 2020: **1010933**;
Apr 2021: **1051948**;
September 2021: 1122527
- **65 Data Centres**
- **32 Countries**
- **490 Originators**
- **1868 – 2021 years**
- **89.5% unrestricted**
- **10.5% to be negotiated**



Increase **6 %**

70.579 CDI datasets

~ **14.000** datasets/month

EMODnet Chemistry update: April 2021 – September 2021

- **Launch of floating microliter data collection** from all Member States in synergy with MSFD Technical Group of Marine Litter
- As follow-up to the release of data collection, **meetings with UNEP/MAP** exploring possibilities to use EMODnet data for calculation of the assessment criteria for nutrients and contaminants

Group of Variables
Acidity ⓘ
Antifoulants ⓘ
Chlorophyll ⓘ
Dissolved gasses ⓘ
Fertilisers ⓘ
Hydrocarbons ⓘ
Heavy metals ⓘ
Marine litter ⓘ
Organic matter ⓘ
Polychlorinated biphenyls ⓘ
Pesticides and biocides ⓘ
Radionuclides ⓘ
Silicates ⓘ

- Further **revision of SeaDataNet vocabularies** (P02 PARAMETER DISCOVERY terms mapping to P36 EMODNET CHEMISTRY CHEMICAL GROUPS)
- Interest by JRC in marine Sediment Contaminants data as **exercise to support MSFD** and the EU Zero Pollution Action Plan

RADIONUCLIDES ×

Used parameters:

Parameter	Description
BRAD	Radioactivity in biota
SRAD	Geological sample radioactivity
WRAD	Radioactivity in water bodies

EMODnet Chemistry update: April 2021 – September 2021

- **Updating** of the online webODV service to explore and extract **contaminant** data collections
- Opportunity to make **wider use** of WebODV as part of a new EOSC project, in which MARIS and AWI are developing a use case for WebODV

The screenshot displays the EMODnet Chemistry webODV interface. The top navigation bar includes the EMODnet logo, the text "CHEMISTRY Data & products on marine water quality", and links for "HELPDESK" and "DATA PROTECTION NOTICE". The main content area is titled "webODV data > contaminants > NorthSea > Contaminants_NorthSea_biota_2021".

On the left, a map of the North Sea region shows sampling stations marked with blue dots. The map includes latitude and longitude coordinates (48°N to 58°N, 10°W to 20°E).

The central panel, titled "AXES VARIABLES" and "AXES RANGES", allows users to select variables and ranges for the data. The selected variables are X: ACDWCF01 and Y: DTUT8601. The axes ranges are X: 0 to 60 and Y: 1992.5 to 2017.5. There are also buttons for "FULL RANGE", "OUTLIERS", and "RESET".

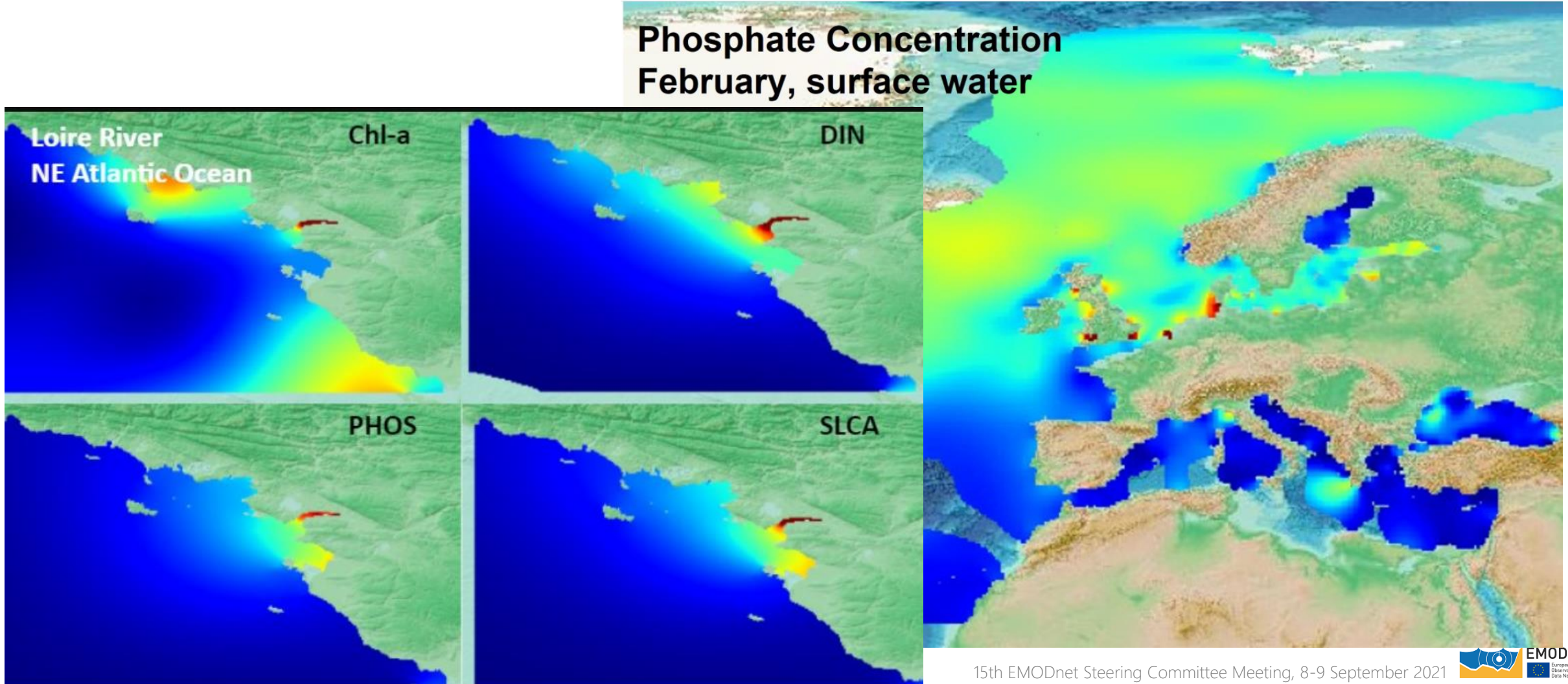
On the right, a scatter plot shows the concentration of anthracene (CAS 120-12-7) per unit dry weight of biota (Crassostrea gigas) from 1995 to 2015. The x-axis is labeled "*DryWt_CAS120-12-7_BE006624 [ug/kg]" and ranges from 0 to 60. The y-axis represents years from 1995 to 2015. A small inset map shows the location of the sampling stations in the North Sea.

On the far right, a "SELECTION STATUS" panel shows "Stations: 521 of 1460" and "Output variables: 110 of 409". Below it is an "EXPORT IMAGE" button with a "Download" link. A "SELECTED VARIABLES (OR)" panel lists various variables, with ACDWCF01 selected.

The bottom of the interface shows a footer with "© Copyright 2020 - EMODnet - THE EUROPEAN MARINE OBSERVATION AND DATA NETWORK" and a status bar indicating "R - 1460 / 1460: FullSc".

EMODnet Chemistry update: April 2021 – September 2021

- Release of new gridded climatologies of dissolved inorganic nitrogen (DIN), phosphate, silicate, chlorophyll - a, and dissolved oxygen concentration, with different resolutions from global, to regional and coastal



Cross-Thematic Interactions

- The joint **Copernicus Marine and EMODnet marine data catalogue** was presented at the Open Conference. Next step to plan is the interaction with the MSFD Technical Groups for detailed evaluation and adoption
- Example of **combining EMODnet data products (Chemistry, Biology, Bathymetry, HA, Seabed Habitats, Physics)** to support ecological research and environmental management presented at the Open Conference
- EMODnet (Chemistry and Human Activity) evaluate how to contribute to **harmonized reporting** and centralized data management regarding **acute pollution events** (oil and other contaminant spills)

COPERNICUS MARINE & EMODNET DATA CATALOGUE FOR THE MARINE STRATEGY FRAMEWORK DIRECTIVE

Baltic Sea Case study

Author(s): **Dominique Obaton, Laurence Crosnier** Copernicus Marine
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Alessandra Giorgetti, Chiara Altobelli EMODnet Chemistry
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Mickaël Vasquez EMODnet Seabed habitat

Date of release: June 2021

EMODnet Open Conference 14-16 June 2021

Combining multidisciplinary interoperable EMODnet data products to support conservation and management of Mediterranean Sensitive Habitats: example of the North Adriatic maërl beds.

Marina Lipizer, Alessandra Giorgetti - National Institute of Oceanography and of Experimental Geophysics - OGS
 Joana Beja - Vlaams Instituut voor de Zee - VIZ
 Alessandro Pittitto - COGEA

Maërl beds : what we need to know
 Maërl beds are assemblages of coralline red algae which form an important benthic habitat known to be a hot-spot of biodiversity. Maërl beds are target of several environmental conservation policies (UNEP-MAP, EU Habitats Directive, EU MSFD), however, the lack of relevant geospatial data of the distribution of this habitat in Mediterranean countries significantly hinders the effective implementation of these policies. To overcome limited data availability, habitat spatial distribution has been modelled according to a set of environmental variables (Martin et al, 2014). In the North Adriatic, multiple human pressures and environmental modifications threaten this Sensitive Habitat.

Environmental variables needed to model maërl

Occurrence:

- Phosphate concentration
- Sea surface current
- Silicate concentration
- Bathymetry
- Bottom salinity
- Euphotic depth
- Seafloor slope

Major threats to these fragile habitats:

- bottom otter trawling
- anchoring
- dredging
- extraction of sand for artificial beaches
- aquaculture
- offshore dumping
- chemical pollution
- global warming
- ocean acidification

Policy landscape:

UNEP-MAP, EU Habitats Directive, EU MSFD, UN Environment, Copernicus Marine Service, EMODnet

EMODnet's role:

EMODnet (European Marine Observation and Data Network), established in 2009, is a network of institutions collecting, managing and giving access to multidisciplinary (i.e. bathymetry, geology, seabed habitats, physics, chemistry, biology and human activities) (meta) data and data products concerning the European Sea basins.

• By providing multidisciplinary, standard, interoperable data aligned with the FAIR principles required to assist modelling Sensitive Habitat distribution and to assess possible threats, EMODnet can play a key role to support ecological research as well as environmental management and conservation.

North Adriatic example:

CHEMISTRY
 Phosphate concentration maps at several depths

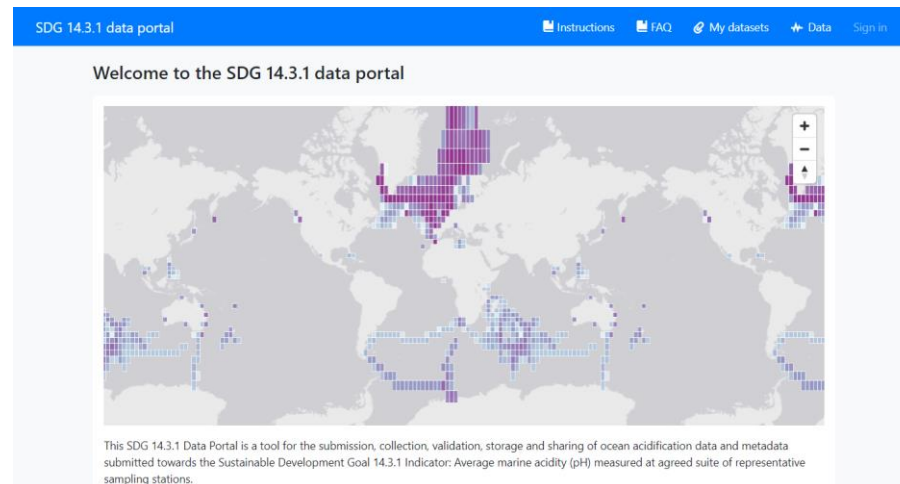
BIOLOGY
BATHYMETRY
HUMAN ACTIVITIES
PHYSICS
SEABED HABITATS

Combined products:
 Maërl beds sites
 Bathymetry
 Human activities (offshore platform, aquaculture and dredging sites)



External interactions

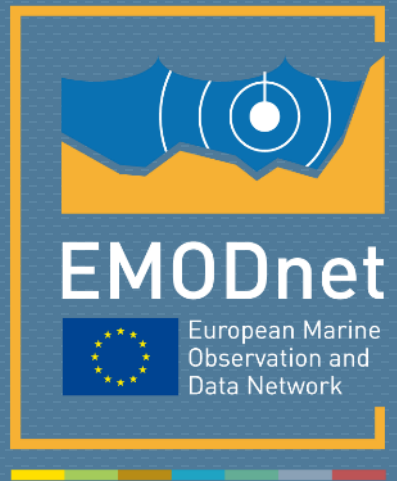
- Constant interaction with **RSCs and JRC** to support EU directives in the process of data harmonisation
- Contribution to the **SDG 14.3.1 data portal and federated data system** (workshop on 7/9/2021)
- Publication of the white paper for a **global ocean oxygen database and atlas**
- Sharing of the **UN SDG 14 quiz** and promotional video



Future Outlook

Plans for the remaining contract:

- **Completing floating micro-litter data collection** from EU Member States to EMODnet data centers, following the MSFD Technical Group on Marine Litter data call
- Revision and publication of **contaminants maps** (after comments by MSFD board of experts)
- **Promotion** of the new marine litter, eutrophication and contaminants datasets
- Promotion of webODV Data Explorer and Extractor (available for eutrophication and contaminants)
- Promotion of marine litter and eutrophication maps
- **Keep dialogue** with MSFD Technical Groups to get feedback on the joint Copernicus Marine and EMODnet marine data catalogue
- **Consolidate** input to global platforms (marine litter, oxygen, ocean acidification, ...)



emodnet.ec.europa.eu

Your gateway to marine data in Europe

