

## Questionnaire to collect «advice» on EMODnet Chemistry map visualization products on contaminants

The EMODnet Chemistry portal provides easy access to marine chemical data, harmonized and validated data collections and reliable data products, relevant to assess ecosystem status according to the Marine Strategy Framework Directive

### EMODnet Chemistry targets:

- Eutrophication
- **Contaminants**
- Marine Litter

### EMODnet Chemistry objectives:

- Shared approach at European level (EU + non EU)
- Basin scale overview

### Current data availability per Group of Variables per MSFD regions:

#### MSFD regions

Group of Variables	Baltic Sea	Iberian peninsula - Macaronesia - Bay of Biscay	Greater North Sea - Celtic Sea - Faroes	Arctic Ocean - Norwegian Sea - Greenland Sea - Barents Sea - Icelandic Waters	Mediterranean Sea	Black Sea - Sea of Azov - Marmara Sea
Acidity <sup>1</sup>	■	■	■	■	■	■
Antifoulants <sup>1</sup>	■	■	■	■	■	■
Chlorophyll <sup>1</sup>	■	■	■	■	■	■
Dissolved gasses <sup>1</sup>	■	■	■	■	■	■
Fertilisers <sup>1</sup>	■	■	■	■	■	■
Hydrocarbons <sup>1</sup>	■	■	■	■	■	■
Heavy metals <sup>1</sup>	■	■	■	■	■	■
Organic matter <sup>1</sup>	■	■	■	■	■	■
Polychlorinated biphenyls <sup>1</sup>	■	■	■	■	■	■
Pesticides and biocides <sup>1</sup>	■	■	■	■	■	■
Radionuclides <sup>1</sup>	■	■	■	■	■	■
Silicates <sup>1</sup>	■	■	■	■	■	■

■ 1-50	■ 251-1000	■ 2501-5000	■ 10001-25000
■ 51-250	■ 1001-2500	■ 5001-10000	■ >25000

Number of datasets for each variable per marine region, indicated by different colours

## Current data visualizations for contaminants

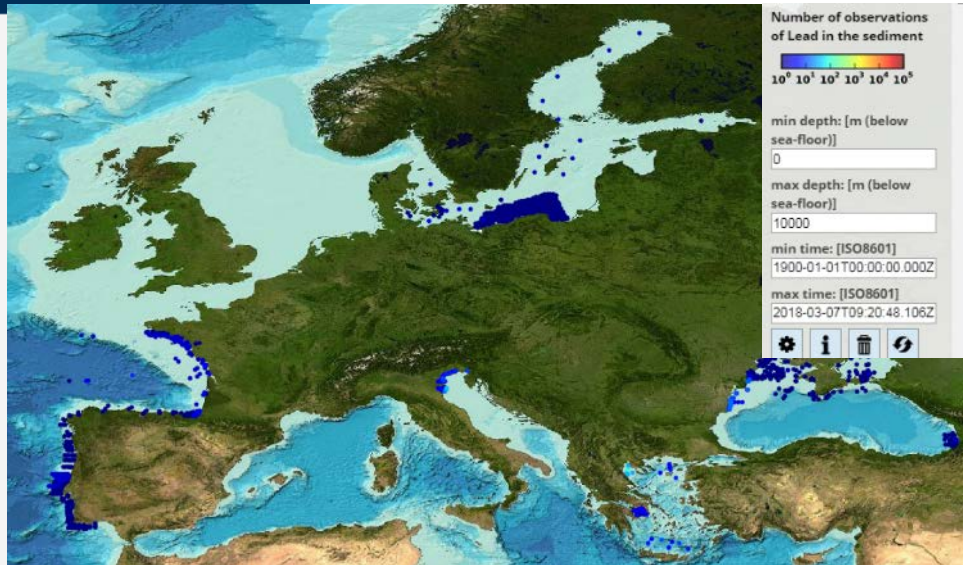
<http://ec.oceanbrowser.net/emodnet/#0>:

### EMODnet Chemistry – Dynamic plots

- To allow visualization of the position of monitoring stations for each group of parameters (list below), of the number of observations in the same station (colour code) and of temporal variability of concentration in each station.

#### EMODNET CHEMISTRY - DYNAMIC PLOTS

- > Acidity
- > Antifoulants
- > Chlorophyll
- > Dissolved gases
- > Fertilisers
- > Hydrocarbons
- > Heavy metals
- > Organic matter
- > Polychlorinated biphenyls
- > Pesticides and biocides
- > Radionuclides
- > Silicates



#### ✓ Pesticides and biocides

- Number of observations of Water body p,p'-DDT+DDD+DDE
- Number of observations of Water body Hexachlorobenzene (HCB)
- Number of observations of Hexachlorobenzene (HCB) in the sediment
- Number of observations of p,p'-DDT in the sediment
- Number of observations of p,p'-DDD in the sediment
- Number of observations of p,p'-DDE in the sediment
- Number of observations of Water body p,p'-DDT
- Number of observations of Water body p,p'-DDD
- Number of observations of Water body p,p'-DDE
- Number of observations of p,p'-DDT+DDD+DDE in Mytilus
- Number of observations of p,p'-DDD in Mytilus
- Number of observations of p,p'-DDT in Mytilus
- Number of observations of p,p'-DDE in Mytilus
- Number of observations of Hexachlorobenzene (HCB) in Mytilus

## Choice of substances to be visualized

- ❑ Based on the list of priority hazardous substances of EU directives (2000/60/EC, 2008/105/EC, 2013/39/EU) and the availability of Environmental Quality Standards (EQS), the substances proposed for the maps to be produced in EMODnet Chemistry Phase III tender are listed in the following table:

Matrix	Contaminants
Water	<b>Pesticides and biocides:</b> DDT, HCB <b>Antifoulants:</b> TBT, TPT <b>Heavy metals:</b> mercury, cadmium, lead <b>Hydrocarbons (PAH):</b> Anthracene, Fluoroanthene, Benzo(a)pyrene
Sediments	<b>Pesticides and biocides:</b> DDT, HCB <b>Antifoulants:</b> TBT <b>Heavy metals:</b> mercury, cadmium, lead <b>Hydrocarbons (PAH):</b> Anthracene, Naphtalene
Biota	<b>Pesticides and biocides:</b> total DDT, HCB <b>Heavy metals:</b> mercury and its compounds <b>Hydrocarbons (PAH):</b> Fluoroanthene, Benzo(a)pyrene

- ❑ Is this choice of substances:

- Fit
- Partially fit
- Unfit

Suggestions?

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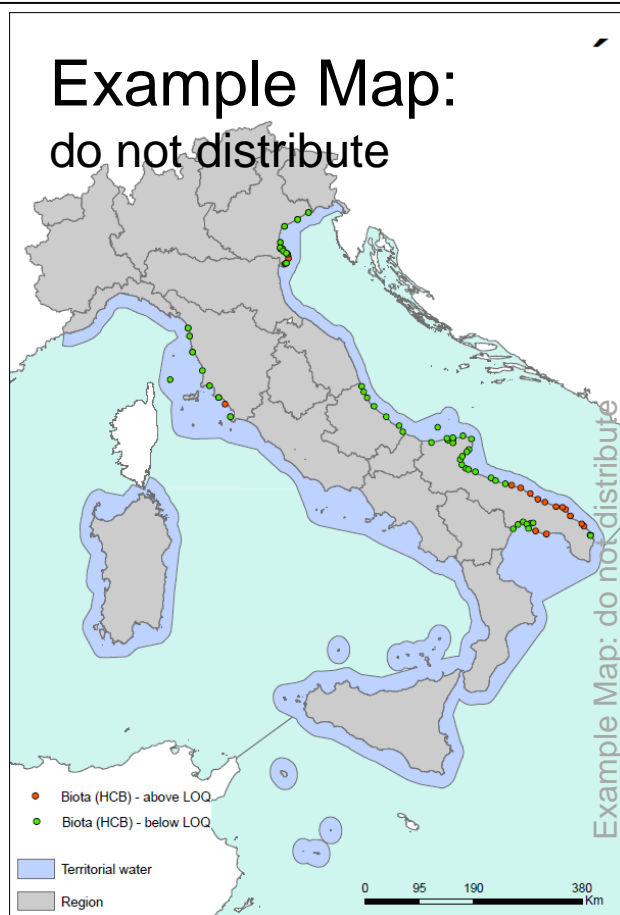
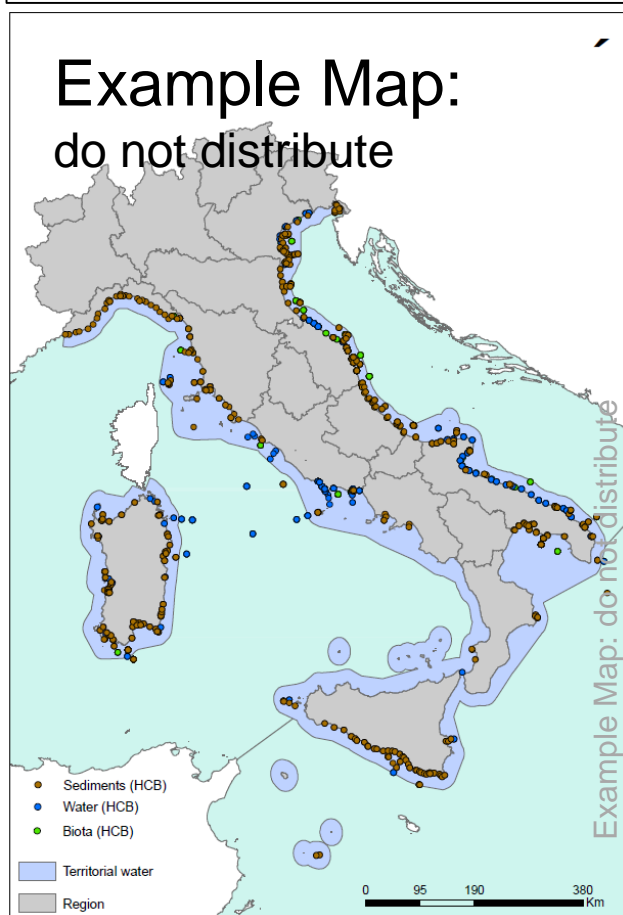
- ❑ Specific suggestions and needs for additional substances:
- .....
- .....
- .....

## EMODnet Chemistry – Next steps to improve fitness for EU directives (Priority Substances D., MSFD, WFD,...)

Types of maps proposed:

- Maps showing matrix monitored (example on the left\*)
- Maps showing biota type monitored (at least for DDT, Fluoranthene, HCB, Mercury and Benzo(a)pyrene) according to EQSD thresholds for biota
- Maps showing values: above or below LOQ (example on the right\*)
- Maps showing data with LOQ above or below EQSD threshold values
- Maps showing the range of concentrations for selected substances

\*These maps are highly confidential and cannot be disclosed. They can only serve as example for the purpose of the meeting since they have not been formally endorsed by the Italian Competent Authority



## Fitness for use for the assessment of Environmental Status according to MSFD

### Maps showing matrix (and biota type) monitored

- Fit
- Partially fit
- Unfit

Suggestions?

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### Maps showing values: above or below LOQ

- Fit
- Partially fit
- Unfit

Suggestions?

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### Maps showing data with LOQ above or below EQSD threshold values

- Fit
- Partially fit
- Unfit

Suggestions?

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### Maps showing the range of concentrations for selected substances

- Fit
- Partially fit
- Unfit

Suggestions?

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### Specific suggestions and needs for visualization products:

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