OUTREACH AND INTERACTION WITH BOARD OF MSFD EXPERTS

EMODnet Chemistry III, steering meeting 4-5 September 2018.

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MSFD Board - recap

MSFD EXPERT BOARD (38 PEOPLE)

Expectations:
- 'Advise' on (suitable) products
- Monitor development of services (i.e. vocabs)
- Continuous dialogue

By:
- Workshops, Bilateral dialogues
- At their meetings
- Providing technical input, use cases

Contaminants Workshop (16 March 2018)

http://www.emodnet-chemistry.eu/newsevents/events/MSFD_board_of_experts_for_EMODnet_Chemistry_Contaminants_online_workshop_16_March_2018_Online

For Biota, Water, Sediment

maps below and above the Limit of Quantification (LOQ)

maps with LOQ above or below 30 percent of EQSD threshold values

maps below and above EQSD threshold values

Combined maps

Matrix monitored

Species group monitored

Range of concentrations (in percentiles)

Contaminants Workshop (16 March 2018)

((•)) We promised draft maps in October

((•)) Online workshop with MSFD experts to review

Events

MSFD board of experts for EMODnet Chemistry: Contaminants online workshop, 16 March 2018, Online

The second online workshop of the MSFD board of experts for EMODnet Chemistry took place on March 16, 2018 and was aimed to align EMODnet Chemistry developments related to contaminants with MSFD implementation and confirm the focus on data to be gathered.

Using this legislative background, EMODnet Chemistry is proposing a list of substances to focus on with a set of dedicated products for Biota, Water, Sediment and combined maps (showing e.g. matrix monitored and species group monitored). The proposal is available here.

To ensure the continued engagement and relevance of the map visualization and data products with the MSFD board of experts, a workshop will be planned in the late Autumn for the MSFD board of experts, before the public release of the map and data products. The presentation (General overview and Dedicated maps on contaminants) and the workshop summary are also available.
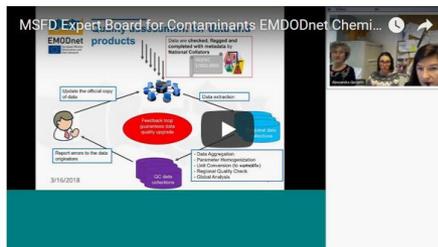
EEA Interaction

))) Data supply to Eutrophication and Contaminants thematic assessments (2017)

))) D8 mapping of substances to WISE, ICES and BODC lists

))) Marine litter watch (to follow-up after summer)

))) Marine litter workshop – 2nd Gen products?

EEA data flow: feedback on data preparation

EUTROPHICATION

- The EMODnet datasets for each region have been submitted multiple times (to EEA-ICES) – latest 2018-06-22 which is the dataset now being used;

- Each EMODnet geographical region has a buffer (around it), which doesn't correspond to the same EEA CSI indicator regions so in processing had to merge all 4 EMODnet regions and then classify those into the EEA regions.

- The file format delivered by each EMODnet regional product leader even within a given region is not consistent and doesn't follow the ODV spreadsheet format is therefore challenging in reading the files into a usable format. i.e [bottom-depth] allowed 'missing' values are 0 or null, however there were -9999 or -9 or 0 or null or 999999!

- The stations in EMODnet are not uniquely defined by either position and time or edmo_code and local_cdi_id even though they should be. There is apparently insufficient quality check on the data submitted by partners.

- At ICES we are only using profile data for the assessment. However it seems like EMODnet have included other kinds of data but there is no instrument information going along with the data. Solution: Filter for data without instruments identified or include from CDI into ODV file (there is a field for it)

- The EMODnet quality control by regional product leaders has not been performed consistently. As an example the value of depth, oxygen, nutrients and chlorophyll parameters can be minus without being flagged as bad. Likewise the parameter Nitrate+Nitrite can be bigger than Nitrate alone without being flagged as bad.

EEA data flow: feedback on data preparation

CONTAMINANTS

- See Eutrophication slide, format is difficult for contaminants
- ODV spreadsheets files for Black Sea and Mediterranean Sea contains 588 unique P01 codes with the P01 codes listed as separate columns. For the Black Sea there are for **example 347 P01 columns**. The grouping of data into the columns uses the local variable name which sometimes result in repeated columns with the same P01 code (with or without the same unit).

MYTGAL02	UMKG	Zn in mussels [mg/kg]
MYTGAL02	UMKG	MYTGAL02 [mg/kg]
MYTGAL02	UMKG	DryWt_Zn_BE006569 [mg/kg]

- Data processing is difficult because the important information on species, chemical substance, matrix, basis of determination etc. is contained in a single local variable / P01+P06 code that will need to be deconstructed before further processing
- ICES with BODC/NIVA DK are working on a exploded view of the P01 that could be used as the basis for preparing the contaminants data from EMODnet. (September-Nov). We're trying to 'hide' the P01 from the chemical experts in the EEA work as it is too difficult for them.

EEA data flow: feedback on data preparation

SUGGESTIONS FOR IMPROVEMENTS IN WORKFLOW

Transformation: To improve usability we suggest to transform the ODV formatted data into a long/vertical format, so that instead of having one column per P01 code, each P01 measurement will become a record line in the format. For traceability the local variable names can be maintained, but P01 is the primary information.

> *Station/sample information (lat, lon, station name, owner, etc...),'Local variable',* **P01, P06(unit), value, QC flag**
> **...**
> **...**

Decompose P01: In addition we suggest to break the P01 codes into its separate parts of information relevant for contaminants in biota data (substance, matrix relationship, biological entity, ..). Each part would be listed as an additional column. This will allow selections and aggregations of data using for example R or other tools in a more direct way. You would for example be able to directly select all cadmium data for Mytilus edulis:

... **P01, S06, S27, S02, S25, S07, S26,..., P06**, value, QC flag
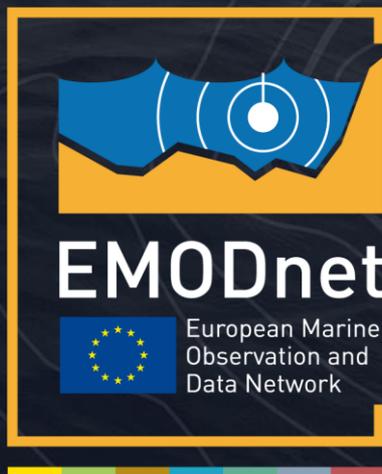
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