

**Preparatory Actions for European Marine Observation and Data
Network**

**SEVENTH PROGRESS REPORT
FOR THE PERIOD
AUGUST-SEPTEMBER 2010**

**Service Contract No. "MARE/2008/03 - Lot 3 Chemistry –
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1. INTRODUCTION

This report gives an overview of the activities undertaken during two months of the project (4th of August – 3rd of October 2010).

This period was very busy, with the organization of the EMODNET Chemical Data Products Experts workshop, held in Venice the 20th – 21st of September 2010. Representatives from MODEG Chemicals (Çolpan Beken, TUBITAK and Gianna Casazza, APAT), DG MARE (Iain Shepherd), EEA (Trine Christiansen), OSPAR (Audrey Baconnais-rosez), HELCOM (Minna Pyhala), Bs-com (Volodymyr Myroshnychenko and Violeta Velikova), MED POL (Francesco Saverio Civili), UNEP-MAP (Jacqueline Alder or Maria Luisa Silva Mejias), IODE (Gwenaelle Moncoiffe, BODC), local agencies like CORILA (Pierpaolo Campostrini), ARPA FVG (Giorgio Mattassi, Italy), ISPRA (Cecilia Silvestri, Italy), EEA in Slovenia (Mojca Dobnikar Tehovnik, Slovenia) and all the EMODNET Coordination Group were invited to participate. Objectives of the meeting were to review and discuss EMODNET Chemical data and products availability, providing a general overview of data distribution per region (including spots); proposals how to move from data to products, what kind of products can be done with EMODNET Chemical data.

The workshop was very productive. We get interesting comments on the existing products and their documentation as well as on the merging of data obtained with different methodologies and on the possibilities to show the chemical data. The general conclusions from EMODNET Chemical Data Products Experts workshop were the following:

- Availability maps can be shown (with dots and related CDI metadata)
- Availability can also be shown by making an extra interface that gives a coloured matrix with sea regions at one axis and chemical parameters groups on the other axis. The colour indicates the intensity of CDI entries. Click on a cell and you go to the specific CDI query.
- Interpolated maps can be produced for parameters measured on a basin scale (mainly nutrients and organic matter, oxygen, possibly heavy metals but check the data distribution);
- For coastal points repeated in time, show station on a map and show time series with link to the method used for data collection.

At the end of the workshop, the 21st of September 2010 we organised the Fifth Coordination Group meeting, with the objective of review the conclusions from EMODNET Chemical Data Products Experts workshop and define the necessary next steps.

The conclusions of the meeting are summarised in the Action list, given in the following.

Besides, all partners continued with the data collection, the data formatting (including mapping with SDN standard vocabularies to harmonize the EMODNET data flow to the SDN infrastructure) for the production of ODV data files and CDI metadata files. In fact, during this period the regional task leader improved the first release of DIVA maps production to discuss it at the Experts workshop.

2. FIFTH COORDINATION GROUP MEETING

The Fifth EMODNET Chemical lot Coordination Group meeting was held in Venice (Italy) immediately after the EMODNET Chemical Data Products Experts workshop. Participants were the Coordination Group members and a representative of the GHER group, referent for products publication on the EMODNET portal.

The meeting was mainly dedicated to review the Experts workshop results and define the next project steps.

The meeting opened with the presentation of the data collection and the link between the regional task leaders and the regional conventions. We need to synchronize data collected in the regional data pools with the available data from MED-POL, Black Sea Commission.

The synchronization of the data collected in the regional data pools with the CDI sent to Maris (and included in the EMODNET portal) is well underway, for the three regions.

Finally, an open discussion started while thinking on the possible implementation of the Experts workshop conclusions, main related to the time series plots. In fact, time series plots can be linked to station map and the visualisation tools are rather different from the Ocean Browser possibilities. A general consensus was reached on data products generation and visualisation and the consequent work plan of activities for the near future is reported in the action list.

EMODNET LOT 3 CHEMISTRY – MEETING OF COORDINATION GROUP

SUBJECT: List of decisions and actions from meeting of Coordination Group
PLACE: Salesians Patronato Leone XIII, Venice – Italy
DATE: 21st September 2010
PARTICIPANTS: OGS, MARIS, IFREMER, NERC-BODC, NERI-MAR, HCMR, MHI, GHER.

Primary goal of this meeting has been to review the conclusions from EMODNET Chemical Data Products Experts workshop and define next steps; review the progress in data collection and product generation and discuss problems and difficulties; review the synchronization of the regional buffers with CDI.

Action: Sissy (HCMR) will distribute to Mediterranean partners a general overview of the data collected for the Mediterranean spots for consequent updating. Each partner has to compare with MED-POL data. Sissy will also contact Michael Angelidis of UNEP/MAP – MED-POL to get good overview of the MED-POL data and contacts (see also Michael's presentation)

Action: For the Greater North Sea region, station time series data are missing from France. Gilbert (IFREMER) will undertake action for delivery by November 2010. He needs to solve an issue with Roy (BODC) for this.

Action: No new entries have been received so far from IMR – Norway. This has to be checked with Helge (IMR).

Action: Rijkswaterstaat – The Netherlands has sent a message via Niels Kinneking that they are preparing additional CDI and ODV data sets for the contaminants in water, sediments and biota. Delivery is planned for November 2010

Action: For the Black Sea region, so far data gathering by MHI has been restricted to EMODNET partners. This approach will be changed and more relevant data sources will be included, such as NATO data by MHI itself.

Action: The data gathering for the Black Sea is a joint action with SeaDataNet, Upgrade Black Sea Scene project and with support of Black Sea Commission Secretariate. Dick (MARIS) will coordinate these efforts towards e.g. Turkish data sources (University of Istanbul, IMS-METU, SINOP, SHODB,..), Bulgarian sources (Ministry of Environment via IO-BAS), Ukrainian sources (arrangement with UkrSCES, that already has delivered a first set of data), SESAME data (contact with Isaac Gertman and Vangelis), Russian sources (Ruben Kosyan of SIO-RAS – Southern Branch), ...

It is concluded that the synchronisation of CDI – ODV files for the North Sea is now well underway. In the North Sea large contributions have been made recently by UK (MERMAN

data), Germany, Denmark, Sweden, Belgium, and underway are extra from the Netherlands (see action) and France (see action).

It is concluded that an expert validation of basin wide data products is always required to bring in local expertise and knowledge and to compensate for limitation in the data or their availability.

Action: Dick (MARIS) will explore how this validation of data products for the Black Sea region can be incorporated in the activities of the Upgrade Black Sea SCENE project in which there is a large WP for Data Quality Control of Black Sea chemical data.

Expert feedback from the Workshop:

- The Product map interface needs to be made more friendly and easily to use; e.g. the layer titles can be explained better
- It must be made clear exactly how the products have been compiled using DIVA including which datasets have been used. This should be part of the readily retrievable documentation of each product (this can be done via CAMIOON in association with CDI).
- The SeaDataNet T and S climatology products should be included as fixed WMS layers in the EMODNET map interface because these provide relevant background information
- Should be able to extract data by month or season (e.g. winter nutrients) as well and min-max year
- Where data is too sparse to support spatial maps then spots on a map which open to show trends at that site may be better. But how to identify stations that are suitable for temporal analysis - station names change. Trends are important for MSFD reporting; status (against criteria) are out of scope of EMODNET but should be undertaken by other initiatives using the data from EMODNET. EMODNET needs to consider carefully how the metadata could be improved to support provision of data that is QA suitable for these assessments.
- Useful to include DO, AL and CORG in EMODNET chemistry
- Need to be careful comparing like with like data - sediment fraction, dry/wet, organism size, digestion technique etc. Some parameter/matrix combinations are standard - see OSPAR CEMP guidance - we can use this to exclude combinations that are not useful for assessments
- Should be able to identify and extract data by MSFD region (GES water bodies) and descriptor/criteria/indicator (Note: Mark is preparing a mapping between indicators and P021 terms that can be used for that purpose)
- Show clearly in the products where there is no data (currently blue - change to white?)
- Areas for improvement target environmentalists and policy makers but also port developers, consultancies, fishery organisations
- Need to include methodology (acid extraction) and analytical method in parameter code so we can compare data spatially
- If a concentration is below LOD then give half LOD rather than 0 or give a different symbol when plotting or exclude from temporal trend analysis.
- Specify which conventions or directives the data is collected for (and which monitoring sites collect data to the same standards/guidelines as those conventions) in the metadata. This then will help identify data from common standards/guidelines/methods. Also help identify what data is being collected but not being reported to the conventions.
- Michael Angelidis will send a new Guide for analysis of contaminants in Sediments

General conclusions from EMODNET Chemical Data Products Experts workshop:

- **Availability** maps can be shown (with dots and related CDI metadata)
- **Availability can also be shown by making an extra interface that gives a coloured matrix with sea regions at one axis and chemical parameters groups on the other axis. The colour indicates the intensity of CDI entries. Click on a cell and you go to the specific CDI query.**
- **Interpolated** maps can be produced for parameters measured on a basin scale (mainly nutrients and organic matter, oxygen, possibly heavy metals but check the data distribution);
- For coastal points repeated in time, show **station** on a map and show **time series** with link to the method used for data collection.

Action: Mark (BODC) will draft a template how to present timeseries for given stations and how to include metadata

Action: Gilbert (IFREMER) proposes to put in his database a number of stations and make product available “on the fly” as WFS server using IFREMER interface (see carte at http://wwz.ifremer.fr/envlit/resultats/surval_1). Check possibility.

Action: Sissy (HCMR) will check the possibility to produce station maps with points linked to time series plots.

Action: Continue discussion on possible implementation of station maps per region and points linked to time series plots (static). In the future these station series should be visualised by each data centre itself and visible from the portal. This is included in the SDN II workplan. However on short term this is too much effort and not feasible in time and budget. Therefore it is agreed to try it out via the regional buffer databases and then maybe only for a few stations and parameters. One option is to use the visualisation function in ODV for producing static graphics (images).

Action: It is difficult to identify the stations in the CDI database. In fact we miss EDIOS and its links to CDI. Therefore every data centre is requested to indicate in a spreadsheet which CDI records belong to specific established stations. If needed, MARIS can provide an excel with the CDI records id's and some CDI details per data centre as template for giving the station identifiers.

Action: Dick (MARIS) will compile input for further tuning and upgrading of the EMODNET services and their interrelationships to improve the access and ease of use for users. This list will guide the development activities by UIG, MARIS and IFREMER for the Ocean Browser, CDI service and CAMIOON. Below already a few actions are listed.

Action: In the viewing service, layer titles have to be explained better.

Action: Include more descriptions in the products (specifying data used).

Action: When adding the CDI WMS Service to a Product maps, the zoom to the selected region has to be maintained (with a zoom to selected in the CDI interface).

Action: Maris, Ifremer, Awi and Gher will deal with the technical issues related to data points visualization on top of the maps, including the CDI metadata. October 2010 (Action list from July meeting in Trieste)

Action: Set up a telephone conference the second week of November.