Benefits of SeaDataNet implementation

Rita Poikane
Latvian Institute of Aquatic Ecology
The Agency of Daugavpils University
rita.poikane@lhei.lv

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About LHEI

In total 40 employees:
administrative staff – 6,
Lab HCh – 14,
Lab HB – 11,
Lab ExpHB – 9.

Outsourcing IT agreement
– 1 person

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Marine monitoring

Tallinn Technical University research vessel SALME
Equipped with Rosette sampler, other sampling equipment needed.

Latvian Navy ship VARONIS
All sampling equipment needed. Water samples for chemical analyses are taken by transparent plastic Nansen water samplers.

The State Environmental Service
Fishery control ship MARE
Sampling equipment needed. Not suitable for deep station monitoring. Good for microplastic sampling.

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Marine monitoring

**Chemical parameters**
- NO$_{23}$
- NO$_2$
- NH$_4$
- N$_{tot}$
- PO$_4$
- P$_{tot}$
- SiO$_4$
- O$_2$
- CHL A
- pH
- Me in Biota

**Biological parameters**
- Zooplankton
- Phytoplankton
- Zoobenthos

**Physical parameters**
- Temperature
- Conductivity/Salinity
- Turbidity

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Expanding the current marine monitoring program

**Chemical parameters**
- Organic pollutants in Biota
- Marine litter (microplastic)
- Biotesting – impact of toxic substances

**Biological parameters**
- Non-indigenous species

**Biotope mapping**
- Reefs
- Sandbanks

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Data flow in LHEI

**Physical parameters**
- CTD profile measurements (raw data)
- Processed CTD profiles

**Chemical parameters (PO4)**
- Sampling and measurement on board (original data source in paper format)
- Data entry and basic calculation in Excel
- Calculated data copy to Cruise Template (Excel file) for all chemical parameters

- Preparation of Excel file for further manipulation – semantic headers, columns for information from Sampling Protocols and Quality Flags.
- Quality check by ODV and Octopus
- Split in mono-files by Octopus

**CTD profile database**
**BTL data database**

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Activity of LHEI

- EDMO - 23 data centres
- CDI – 4468 files (new entries in December)
  - CTD,
  - Bottle data,
  - CHL A,
  - Me in biota,
  - Me in sediments
- CSR – 205 Cruises (ongoing)
- EDMERP – 45 (new entries in December)
- EDMED – 18 (new entries in December)
- LHEI is involved in EMODnet CH and EMODnet DI
- LHEI provided information and tips about SDC for other data centres (Maritime administration of Latvia)

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Implementation of data QA

- Data Quality checking by ODV pointed the urgency to tidy up database.
- LHEI accepted SDC Quality Flag system.
- Data format is similar for all data centres.
- LHEI experts use Ocean Data View for data exploration, analysis and visualization. In the future NEMO will be used.
Here’s something that you can not live without!

**BENEFIT 2**

**Improvement of protocols for local (LHEI) data producers and users**

- Information about risk to use data without quality checking.
- Doubtful data must be checked from original source (paper format).
- To be careful with new station names.
- Instrument code in semantic header will be great step forward to improve information about data collection.
«Here’s something that you can not live without!»

LHEI data are part of common network

1. LHEI and other data centres can work because SDC provides services and platform for other projects (like EMODnet).
2. LHEI data are available for all groups of users and data from other data centres can be downloaded and used by LHEI (MSFD).
3. SDC «built a bridge» to connect data centres from countries around the Baltic Sea.
Developing of LHEI knowledge

- Thanks to efforts of SDC project team, the amount of good data increased. It is great opportunity for local scientists, experts and students to use good data from different Data centres around the World for, e.g., modelling, policy making etc.
- Other projects are interested in good data provided via SDC platform.
Thank you!
Thanks to SeaDataCloud!

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