

# Regional Sea Convention perspective on biodiversity data reporting and MSFD data harmonisation

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# Content

1. Related HELCOM work
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4. Consideration for better data flows



# 1. Related HELCOM work

- Policy setting: RSC assessments to be utilized in MSFD reporting
- RSC assessments: Quality status reports, Holistic assessments
- HELCOM Assessment:
  - Key component is **Core indicator** (51 of those, grouped per theme)
  - Definition of core indicator:
    - 1. Definition of indicator to assess status of marine environment e.g. “Seal health status”
    - 2. Definition of spatial scale of core indicator (5 scales applied currently, HELCOM Assessment Units))
    - 3. Definition of threshold value(s) (uniform or per assessment unit)
    - 4. Monitoring guideline to be defined, agreed and implemented by Contracting Parties (What to monitor and how  comparable data available that can be reported!)
    - 5. Data format to be defined: Based on existing standards, if possible, extended, if (when) needed, e.g. “Blubber thickness of seal (mm)”
    - 6. Implementation of monitoring -> data reporting -> time series
    - 7. Assessments can be performed
- <https://indicators.helcom.fi/>



# 1. Related HELCOM work



- Monitoring:

- well-established function Monitoring of physical, chemical and biological variables of the Baltic Sea started already in 1979 and the HELCOM monitoring was initiated in 1998. To cover the inputs of nutrients and heavy metals, HELCOM monitoring was initiated in 1998. To cover the inputs of nutrients and heavy metals, HELCOM monitoring was initiated in 1998. To cover the inputs of nutrients and heavy metals, HELCOM monitoring was initiated in 1998.

### 2.3.3.4.2 Biovolume calculation

As specified above, during the counting process, the species (individuals) have to be allocated to size classes according to the scheme of Olenina et al. (2006) and its updated appendix (available at ICES website: [https://www.ices.dk/data/Documents/ENV/PEG\\_BVOL.zip](https://www.ices.dk/data/Documents/ENV/PEG_BVOL.zip) ). The individual biovolumes of the different counting units have to be multiplied with their abundance to get the biovolume per dm<sup>3</sup>.

$$\text{Biovolume}_{\text{taxon}} [\text{mm}^3 \text{dm}^{-3}] = \text{abundance} [\text{dm}^{-3}] \times \text{VCU} \times 10^{-9}$$

VCU = volume of counting unit (in μm<sup>3</sup>)

From the biovolume data, the biomass (wet weight) is simply derived by a rough assumption of a plasma density of 1 g cm<sup>-3</sup>, as follows (EN 16695):

$$1 \text{ mm}^3 \text{ l}^{-1} (\text{biovolume}) = 1 \text{ cm}^3 \text{ m}^{-3} (\text{biovolume}) = 1 \text{ mg l}^{-1} (\text{wet weight}):$$

$$1 \text{ mm}^3 \text{ m}^{-3} (\text{biovolume}) = 10^6 \mu\text{m}^3 \text{ l}^{-1} (\text{biovolume}) = 1 \mu\text{g l}^{-1} (\text{wet weight})$$

- Monitoring guidelines:

- <https://helcom.fi/action-areas/monitoring-and-assessment/monitoring-guidelines/>



# 2. Use

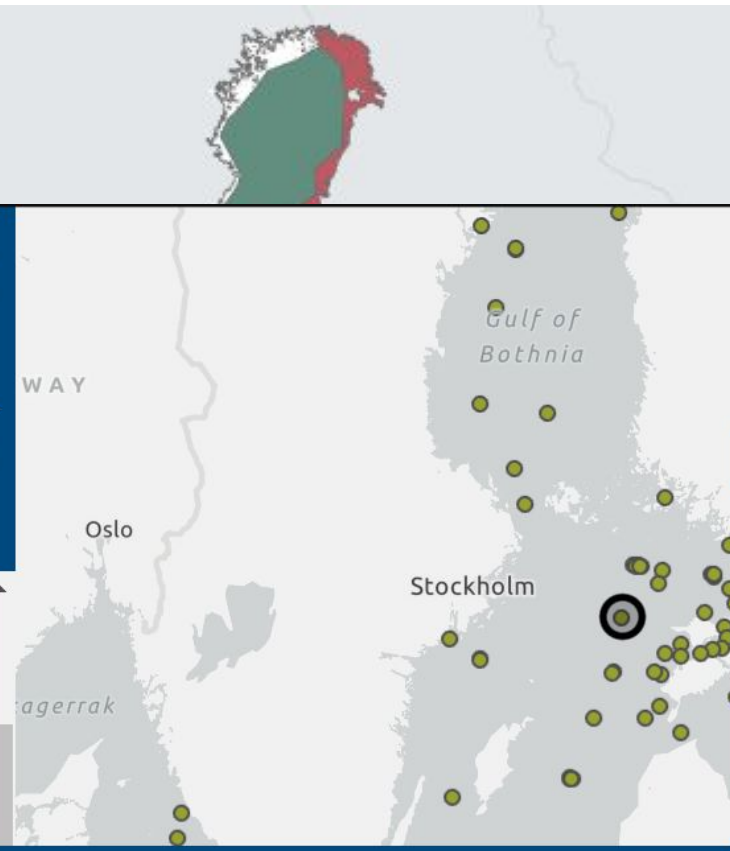
Seasonal succession of dominating phytoplankton

# MSFD

HELCOM Map and data service

seasonal

- .....Diatom-dinoflagellate index
- .....Distribution of Baltic seals
- .....Nutritional status of seals
- .....Population trends and abundance of seals
- .....Reproductive status of seals



FINLAND Tell us about your experience using the HELCOM MAD5 via this su

Layers added to the map

Map location info

- Longitude 21.00333
- MNDEP 0
- MXDEP 10
- MYEAR 2016
- DATE 1464652800000
- Year 2016
- Month 5
- RLIST PEG\_BVOL
- SPECL\_name Flagellates
- AphiaID 146222
- WoRMS\_name Flagellates
- AphiaID\_ac 5
- WoRMS\_acce Protozoa
- SFLAG
- SIZCL 9
- SIZRF PEG\_BVOL2016
- TRPHY
- STAGE
- COEFF 4673
- Value 3.4
- PARAM BMWETWT
- MUNIT mg/m3
- final\_valu 3.4
- final\_va\_1 mg/m3
- PEG\_count\_
- PEG\_volume 0
- PEG\_carbon 0
- QFLAG
- PEG\_specie Flagellates
- tblParamID 48649830

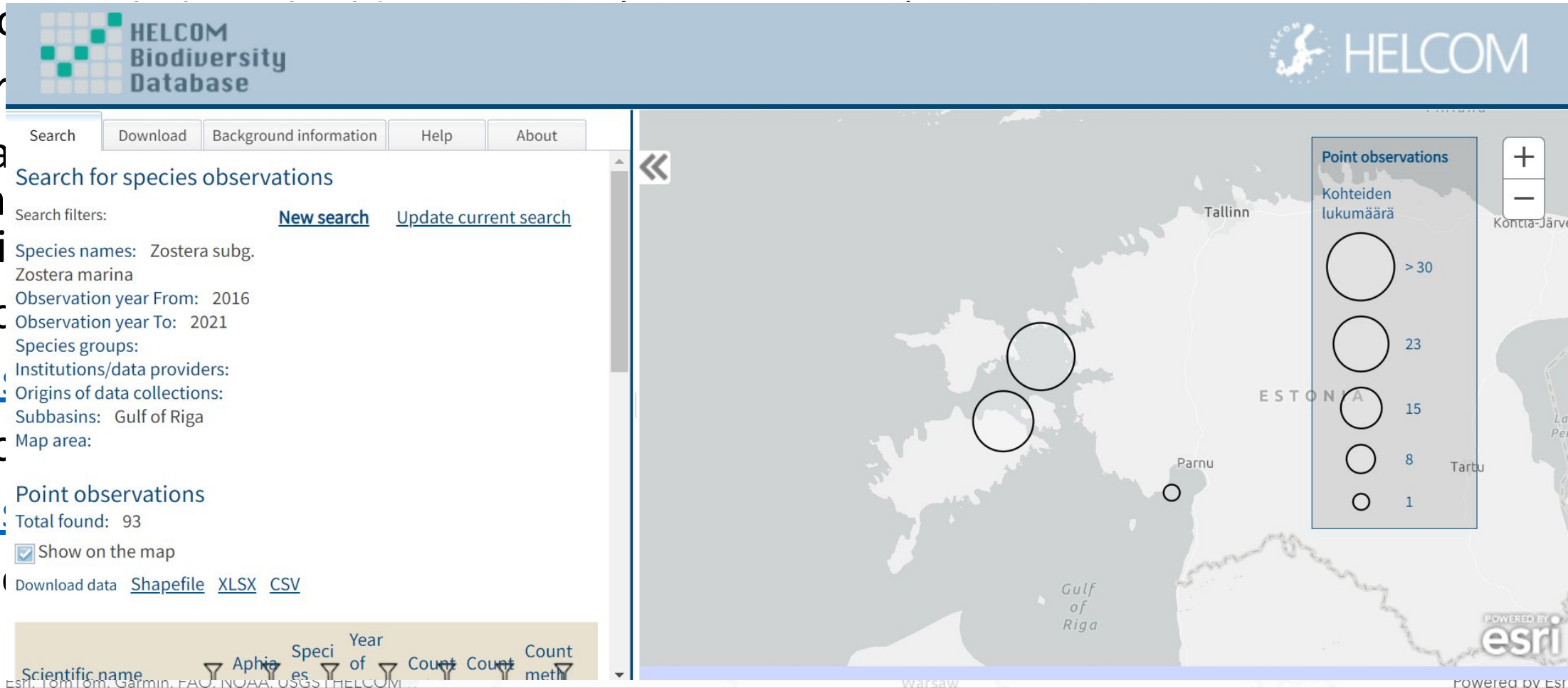
Attribute table

Seasonal succession of dominating phytoplankton groups data HOLAS 3 (Yhteensä: 242 352 | Valinta: 0)

	Value	PARAM	MUNIT
■	0.1951562	BMWETWT	ug/l
■	0.1	BMWETWT	mg/m3
■	0.2	BMWETWT	mg/m3

# 3. Use case: Zostera

- Impo
- Ther
- Data
- Balti
- Spec
- [http:](#)
- Spec
- [http:](#)
- Zost



The screenshot displays the HELCOM Biodiversity Database interface. The top navigation bar includes 'Search', 'Download', 'Background information', 'Help', and 'About'. The main search area is titled 'Search for species observations' and contains the following filters:

- Search filters: [New search](#) [Update current search](#)
- Species names: Zostera subg. Zostera marina
- Observation year From: 2016
- Observation year To: 2021
- Species groups:
- Institutions/data providers:
- Origins of data collections:
- Subbasins: Gulf of Riga
- Map area:

Under the 'Point observations' section, it states 'Total found: 93' and has a checked box for 'Show on the map'. Below this are download options: [Download data](#), [Shapefile](#), [XLSX](#), and [CSV](#).

The map on the right shows the Baltic Sea region with two large circles indicating high observation counts. A legend titled 'Point observations' shows the following scale:

Kohteiden lukumäärä	Count
(Large circle)	> 30
(Medium-large circle)	23
(Medium-small circle)	15
(Small circle)	8
(Very small circle)	1

At the bottom of the interface, a table header is visible with columns: Scientific name, Aphid, Species, Year of, Count, Count, Count meth.

## 4. Consideration for better data flows

- The Need (Use case) should define the data flow
  - What is the data needed for?
    - Attributes?
  - How often should it be updated/reported?
    - Reporting/data flows
- HELCOM Data policy is open
  - Data can be reused/shared (CC-BY)
  - Can be utilized for any purposes
- HELCOM WG Biodiv deals with biodiversity monitoring and data related issues
  - 2 meetings per year. Potential presentation / ideas for alignment/harmonization?



Thank you!

