

HELCOM Data and Map services

Baltic from Space
workshop

Joni Kaitaranta 29.3.2017

Content

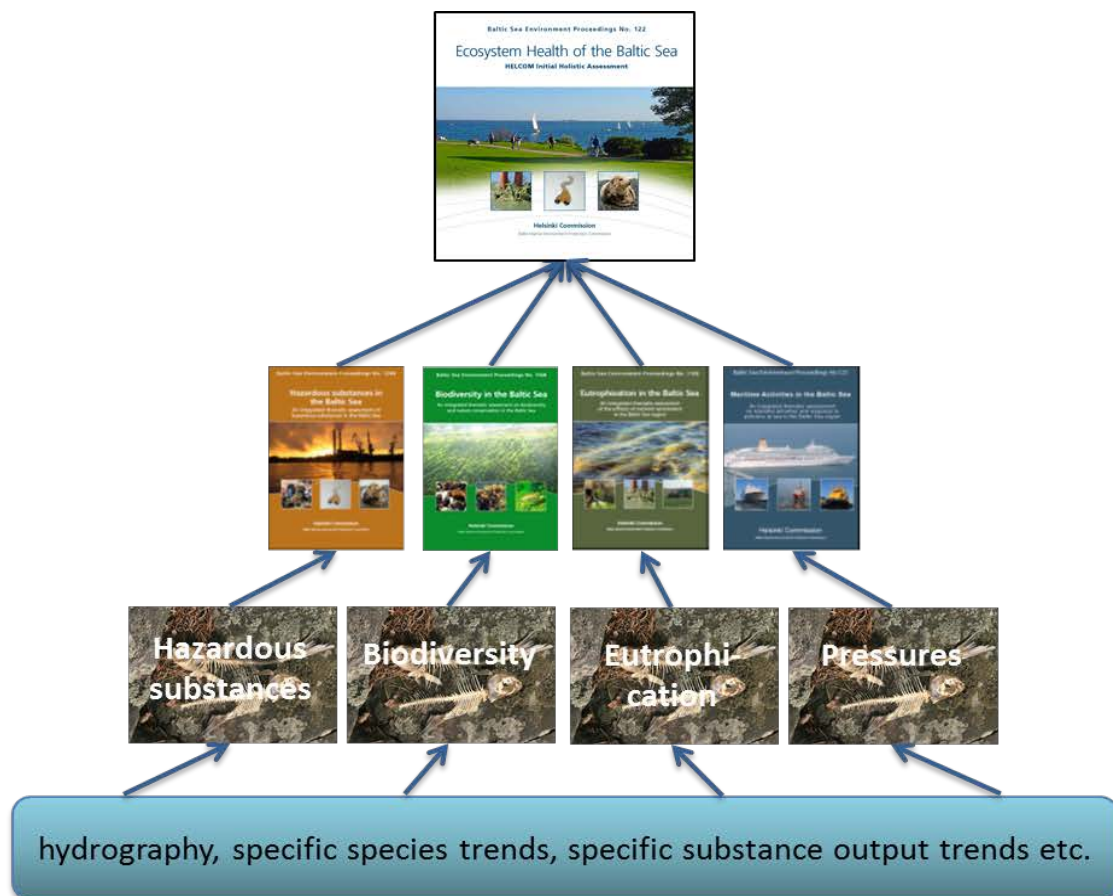
- **About HELCOM**
- **HELCOM and EO data**
- **HELCOM Map and Data services**

Basis of HELCOM monitoring and assessments



- Implementation of the 2007 HELCOM Baltic Sea Action Plan (BSAP)
 - 2010 Moscow Ministerial Declaration: AGREED to *establish, for those HELCOM Contracting States being also EU-Member States, the role of HELCOM as the coordinating platform for the regional implementation of the EU Marine Strategy Framework Directive (EU MSFD) in the Baltic Sea*
- > joint coordinated monitoring providing the necessary data for regular assessment of the status of the Baltic Sea and of pressures and impacts affecting the status, adapted to support the assessing of progress towards the achievement of the environmental objectives and targets, using indicators developed under the Baltic Sea Action Plan, enabling the assessment and evaluation of the implementation of the jointly agreed measures

HELCOM Monitoring and Assessment Strategy (2013)



Holistic Assessments

- periodical
- using assessment tools

Thematic Assessments

- periodical
- using assessment tools

Core indicators

- updated regularly
- measure distance to GES

Supplementary Indicators & Supporting parameters

- Updated as needed
- Linked to specific core indicators

Requirements for operationalizing core indicators

- Reliable quality assured data
- Comparable data (sampled and analyzed in a harmonized way)
- Sufficient spatial and temporal coverage (based on regular monitoring)
- Functional reporting of national data to a common database
- Quality assurance of data collection, reporting, hosting, access, assessments etc.
- Easy access to data and preferably semi-automated updating of data products for indicator assessments using jointly agreed assessment tools

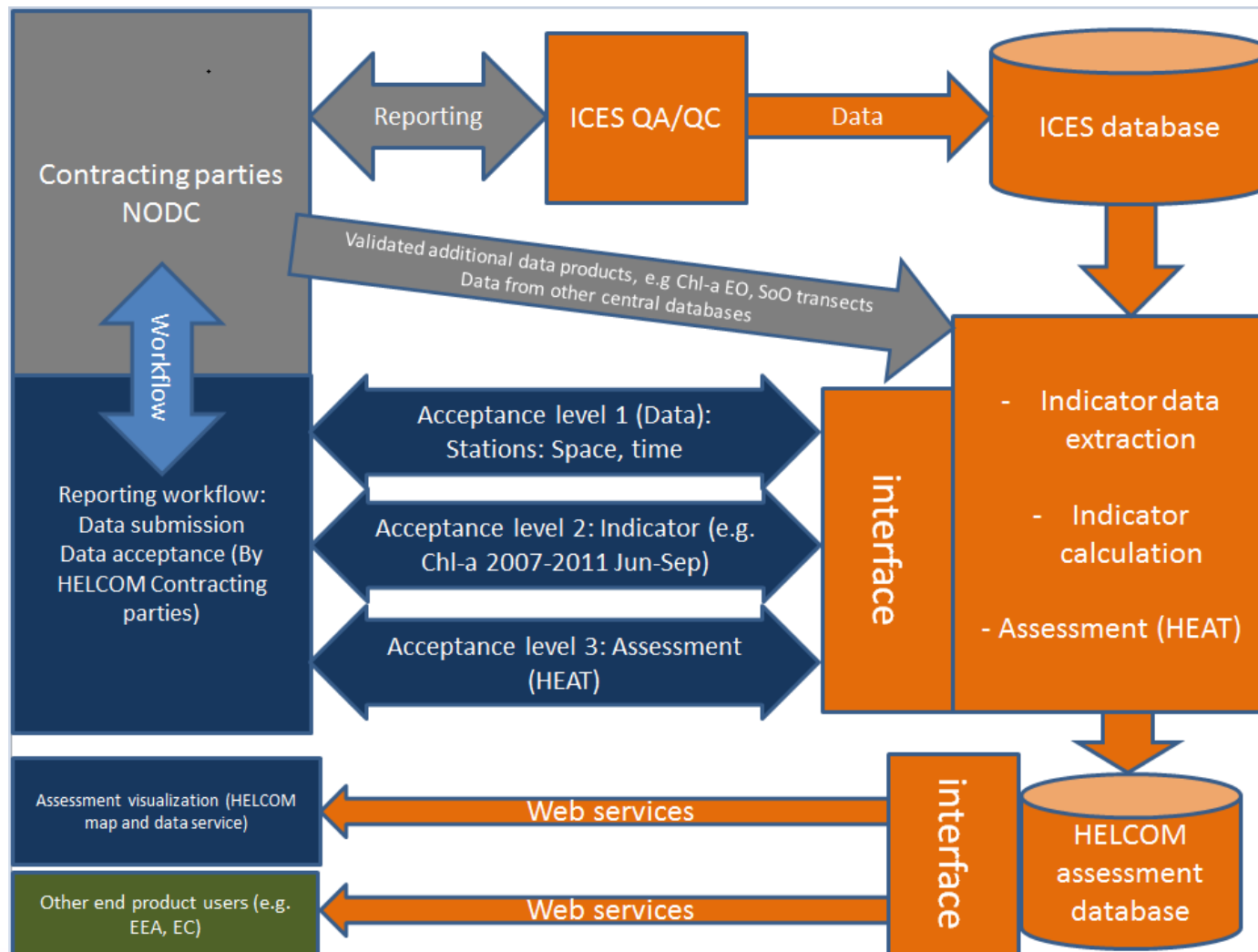
An underwater photograph showing a dense growth of green seaweed or algae. The water is a clear, light blue-green color. The seaweed has various leaf shapes, some broad and flat, others more elongated. The lighting is bright, suggesting sunlight filtering through the water.

HELCOM and EO data:

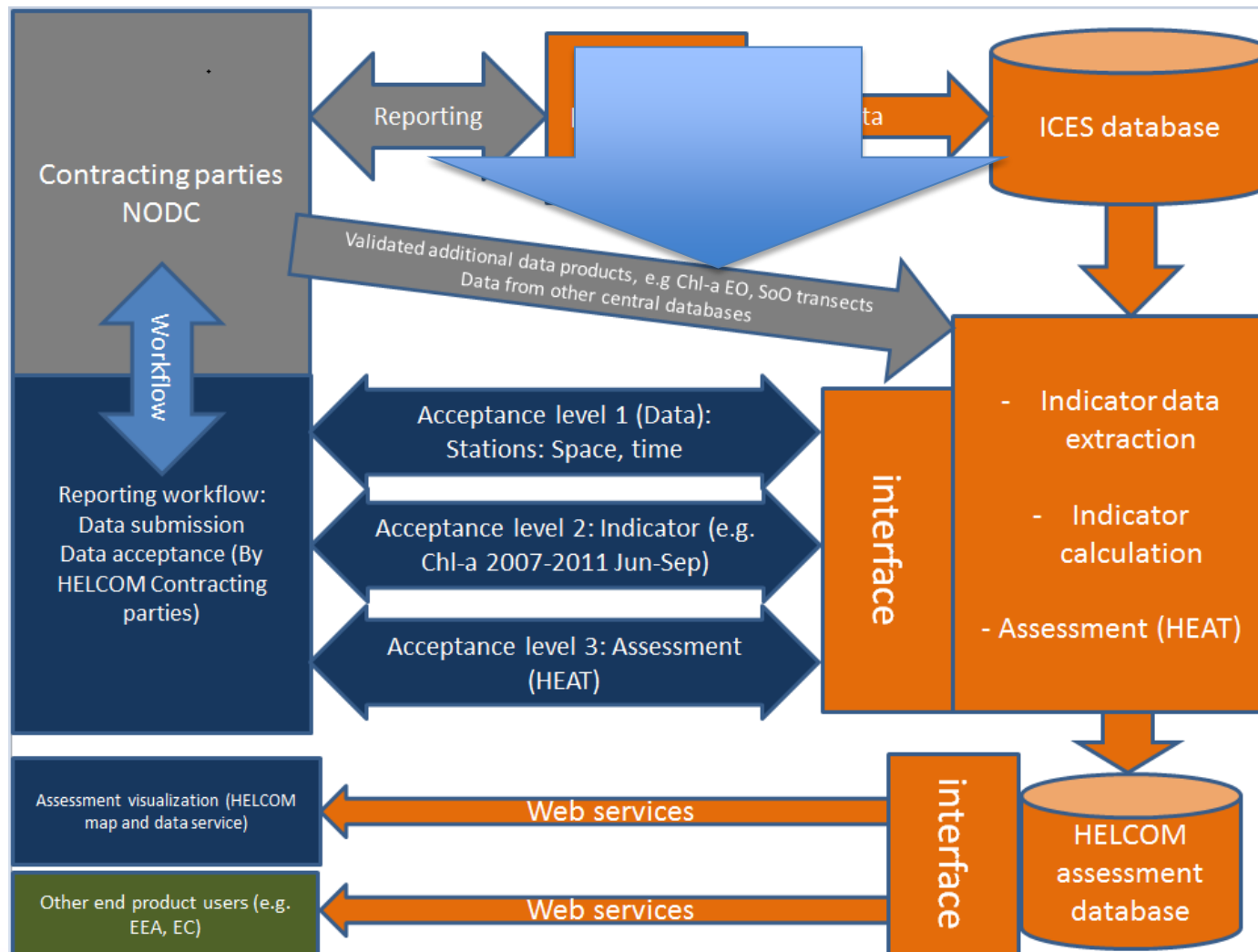
Case: Eutrophication

HELCOM Baltic Sea Action Plan – Eutrophication

HELCOM and EO data: Case Eutrophication



HELCOM and EO data: Case Eutrophication



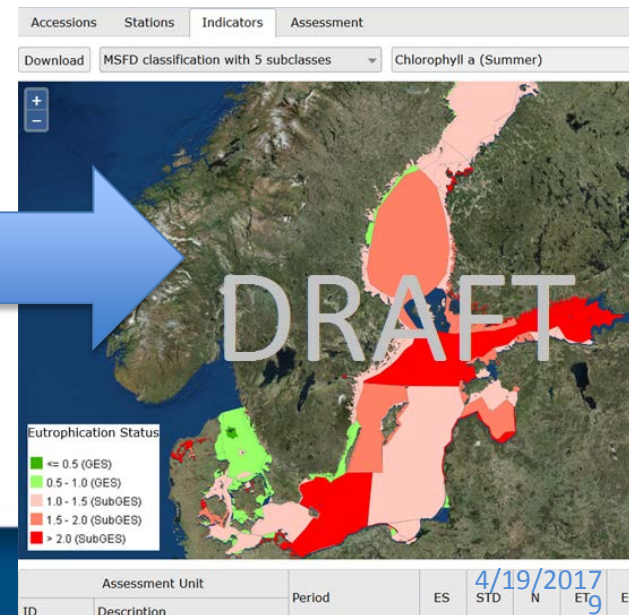
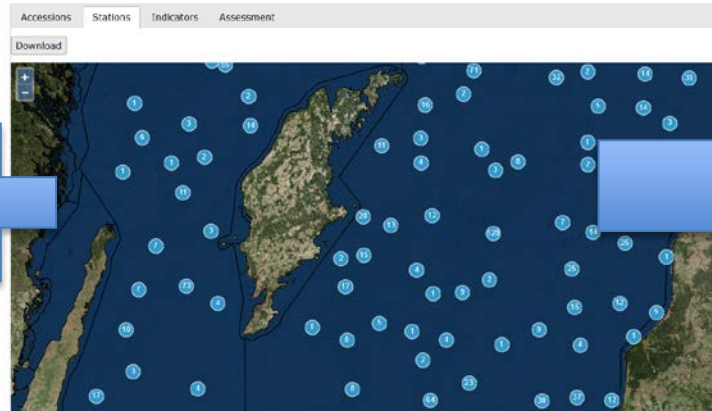
HELCOM and EO data: Case Eutrophication

- In the 2017 assessment, EO data and in-situ data is combined for chlorophyll-a and cyanobacterial bloom indicators
- **Combining of in-situ data and EO data is not straightforward!**
- A lot of work and expertise is required to produce comparable EO data and in-situ which can be combined to produce indicator-based assessment of the status of the sea

EO-data

In situ-data

Chl-a Indicator



HELCOM

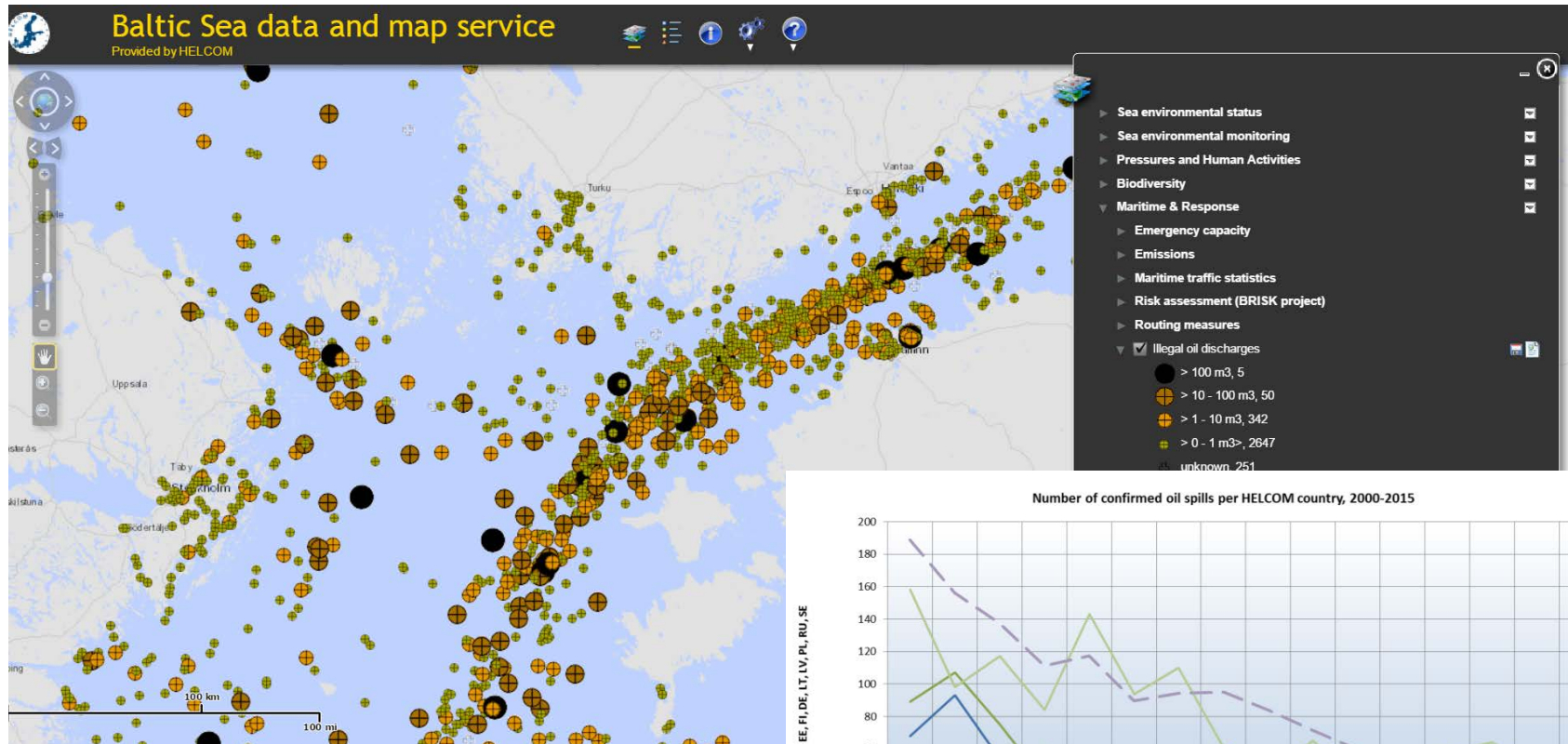
The background of the slide is a photograph of a ship's hull and propeller. The hull is dark blue with a white stripe near the top. The propeller is visible at the bottom right, partially submerged in the blue sea. In the background, another red ship is visible.

HELCOM and EO data:

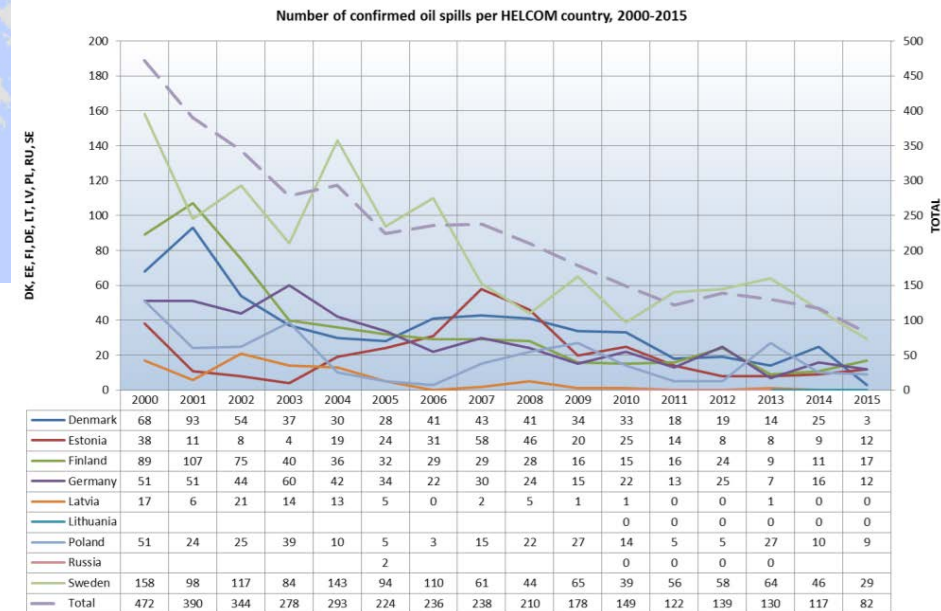
Case: Maritime Activities

HELCOM Baltic Sea Action Plan – Maritime Activities

HELCOM and EO data: Case Maritime activities

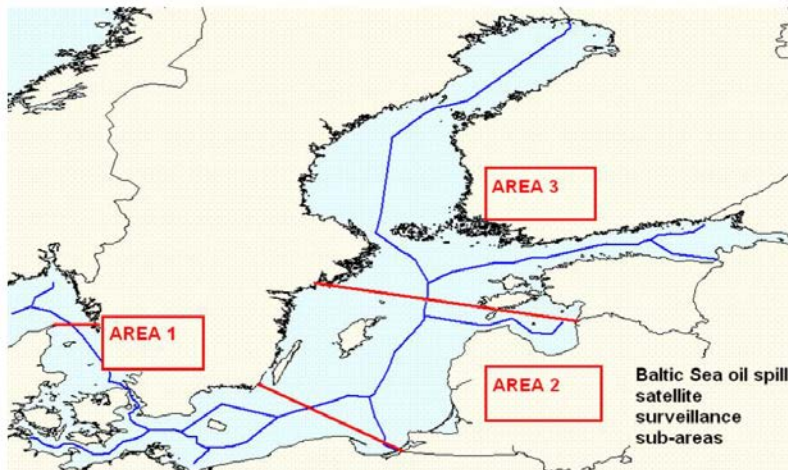


- HELCOM provides data on illegal spills from aerial surveillance carried out by Contracting Parties



HELCOM and EO data: Case Maritime activities

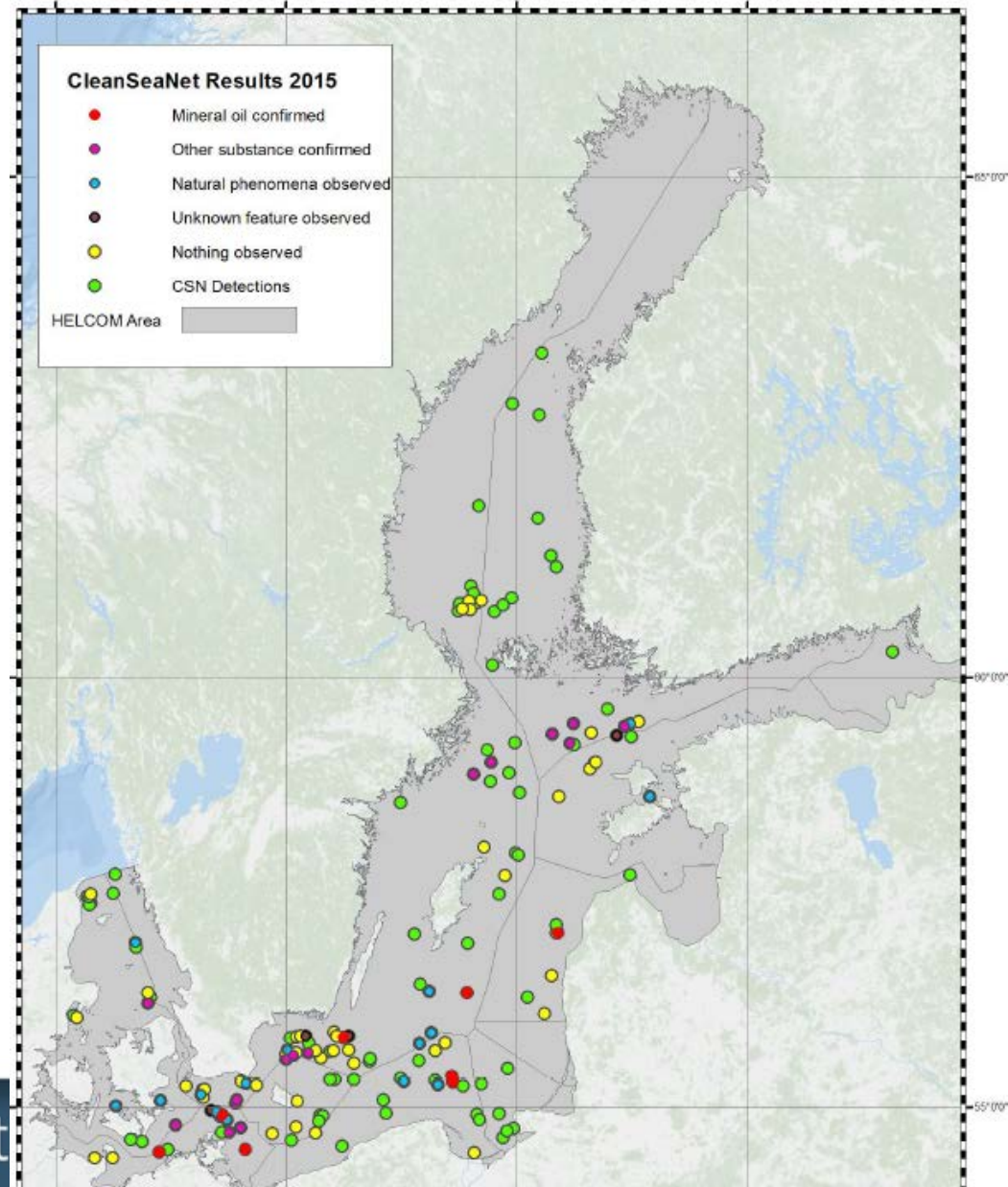
- EMSA CleanSeaNet (CSN) provides satellite surveillance on oil spills for HELCOM Contracting Parties
- HELCOM IWGAS group (Informal Working Group on Aerial Surveillance) defines requirements on satellite images per areas
- During 2015, out of the 169 CSN detections, 85 (50%) were checked by the Coastal States. Of the 85, 8 (9%) were confirmed as being “Mineral oil confirmed”, 15 (18%) were reported as “Other substance”, 15 (18%) were reported as “Natural phenomena”, 4 (5%) were reported as “Unknown feature” and in 43 (51%) nothing was observed



HELCOM Area 1			
	total	total	
	per	per	
	month	week	
January	30	7,5	
February	30	7,5	
March	30	7,5	
April	30	7,5	
May	30	7,5	
June	30	7,5	
July	30	7,5	
August	30	7,5	
September	30	7,5	
October	30	7,5	
November	30	7,5	
December	30	7,5	
	360		

HELCOM and EO data: Case Maritime activities

- → Satellite data is used as first detection which is confirmed by surveillance → satellite data improves the efficiency of regular aerial surveillance



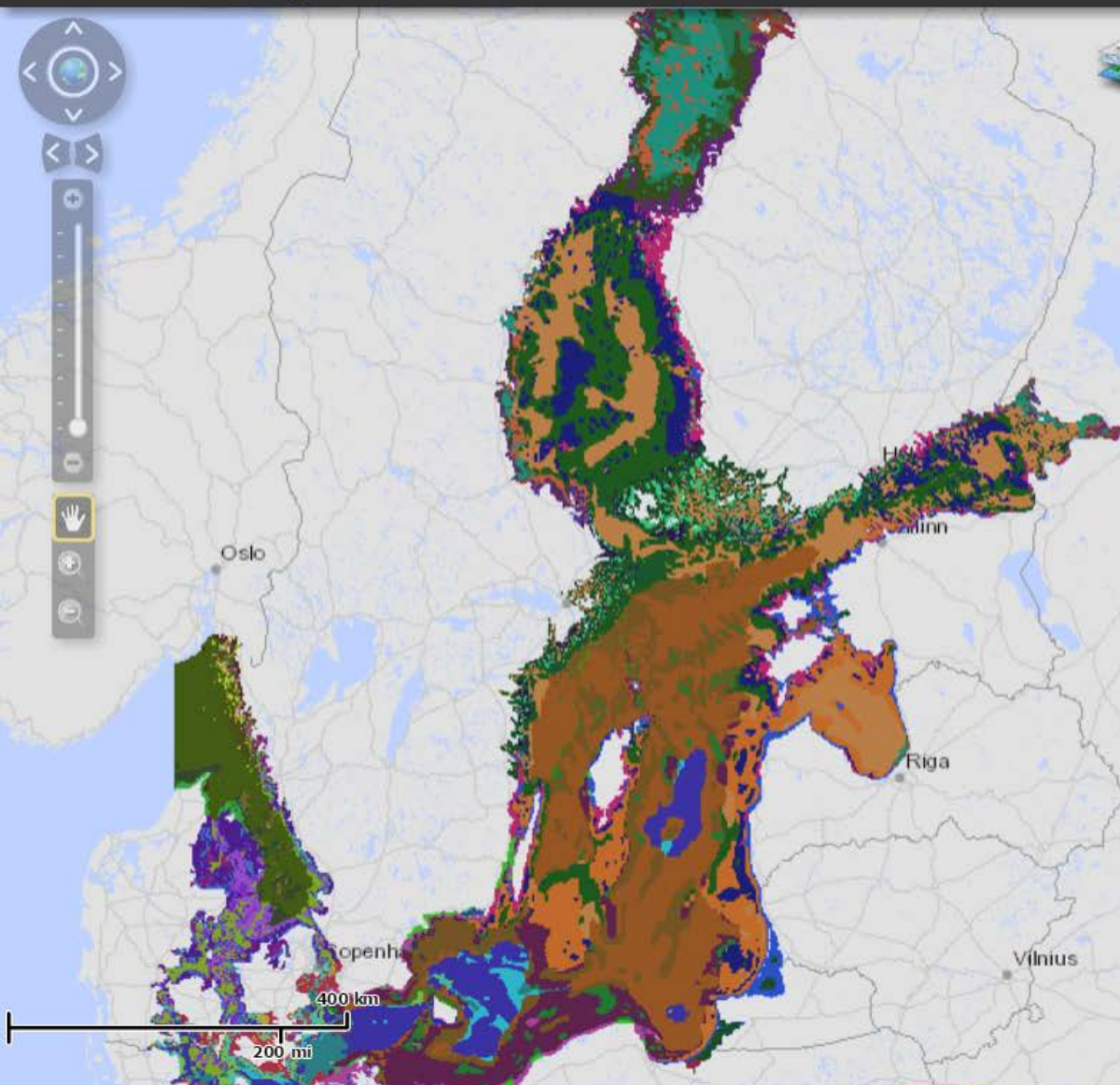
HELCOM Map and Data service

- Used for spatial data produced/used by HELCOM
 - Accessing and viewing dataset (map viewer, OGC WMS, ArcGIS rest)
 - Downloading dataset (shapefile / raster)
- New version released in mid-2017
 - Based on ESRI Javascript API 3 → improved support
 - New metadata catalogue → INSPIRE compliant, easier access of metadata and download
 - Improved WMS/WFS support for distributed data
 - Any WMS data source can be added



Baltic Sea data and map service

Provided by HELCOM



- ▶ Sea environmental status
- ▶ Sea environmental monitoring
- ▶ Pressures and Human Activities
- ▼ Biodiversity
 - ▶ Red List
 - ▼ Physical features
 - ▼ ☒ Benthic marine landscapes (BALANCE)
 - Photic bedrock <5psu
 - Photic bedrock 5-7.5psu
 - Photic bedrock 7.5-11psu
 - Photic bedrock 11-18psu
 - Photic bedrock 18-30psu
 - Photic bedrock >30psu
 - Non-photoc bedrock <5 psu
 - Non-photoc bedrock 5-7.5psu
 - Non-photoc bedrock 7.5-11psu
 - Non-photoc bedrock 11-18psu
 - Non-photoc bedrock 18-30psu
 - Non-photoc bedrock >30psu
 - Photic hard bottom comp. <5 psu

HELCOM

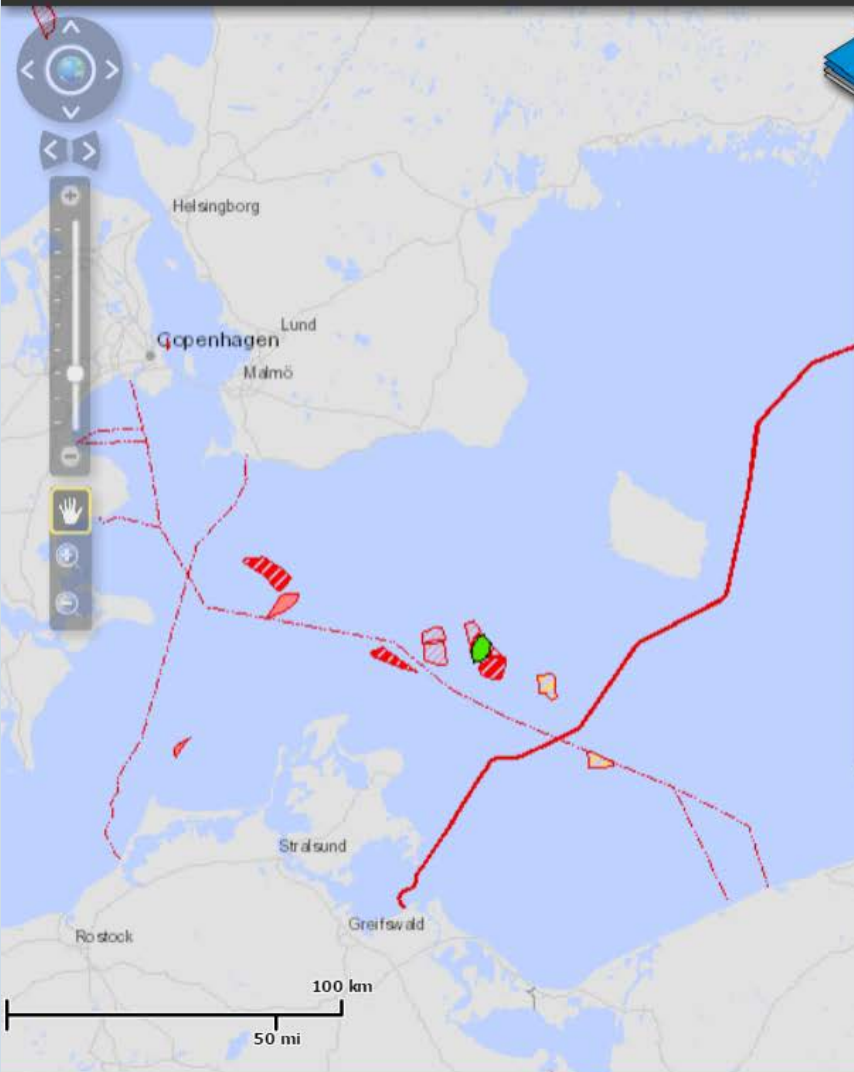


HELCOM



Baltic Sea data and map service

Provided by HELCOM



Add WMS Services

WMS URL: https://www.geoseaportal.de/wss/service/CONTIS_Facilities/guest?

WMS title: BSH WMS CONTIS Facilities

WMS abstract: Die Daten umfassen die Nutzungen und Schutzgebiete in Nord- und Ostsee.

[Clear WMS list](#)

WMS layer list. Add or remove them in the map by selecting checkbox.

Offshore_Windfarms	☒
Pipelines	☒
High_Voltage_Cables	☐
Cathode_Electrode	☐
Data_Cables	☐
Platforms	☐



HELCOM

Get started

Search over 647 data sets, services and maps, ...



Helcom Data Portal

Here you will find data, services and maps and more.

Browse by topics



Environment

610



Biota

138



Oceans

125



Climatology, meteorol...

19



Structure

16



Transportation

16



Inland waters

13



Utilities communication

8



Intelligence military

6



Farming

6



Economy

4



Health

4



Boundaries

1



Location

1



Society

1

Browse resources



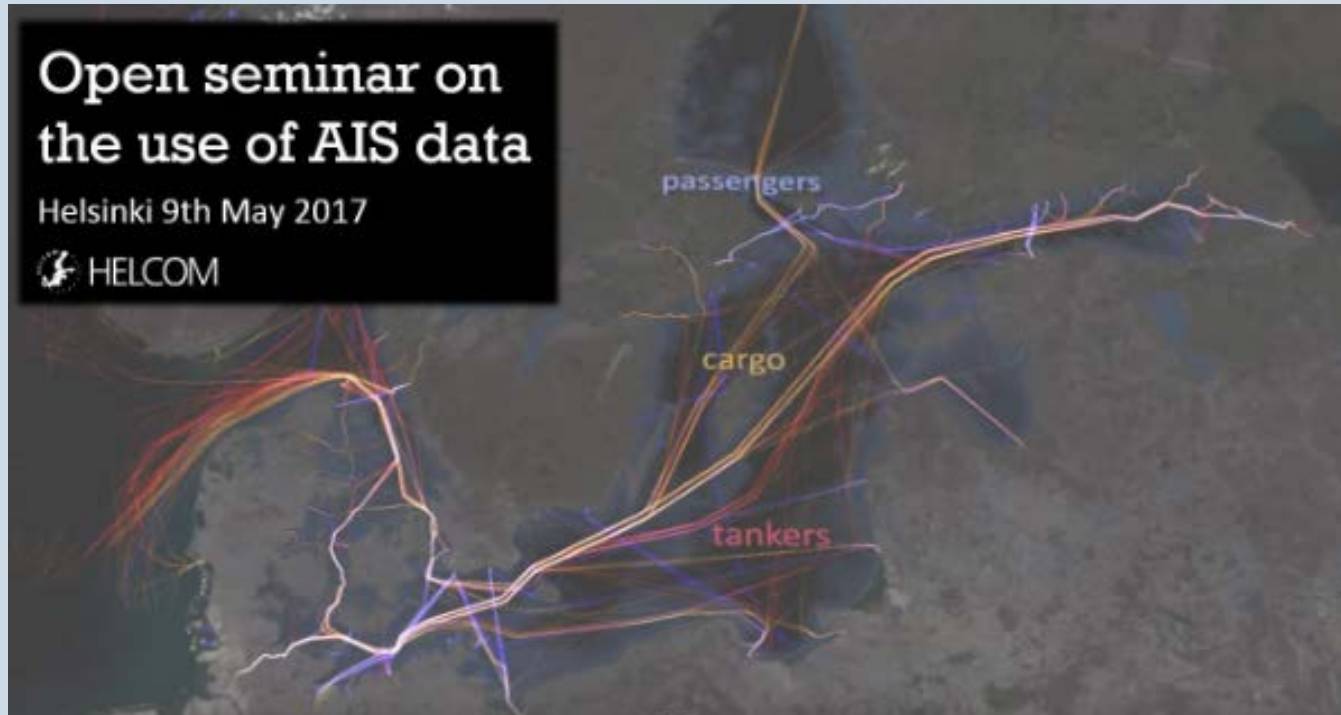
Dataset

647



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Thank you!



- FROM RAW DATA TO STATISTICS AND MAPS
 - The HELCOM Secretariat is organizing an open seminar on the use of [Automatic Identification System \(AIS\) data](#) on Tuesday 9 May 2017 (9:00 - 16:00) at the HELCOM Secretariat, Katajanokanlaituri 6 B, Helsinki, Finland.