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Co-funded by the European Union

Knowledge Sharing Workshop

Maritime spatial planning challenges in the North Sea

22 May 2019
Antwerp

Presentations

Opening Session

Opening Session

Leo de Vrees, Project Coordinator, SEANSE project

SEANSE

Strategic Environmental Assessment North Sea Energy

Co-funded by the European Maritime and Fisheries Fund

SHOM

Danish Maritime Authority

BSH

Bundesamt für Seeschifffahrt und Hydrographie

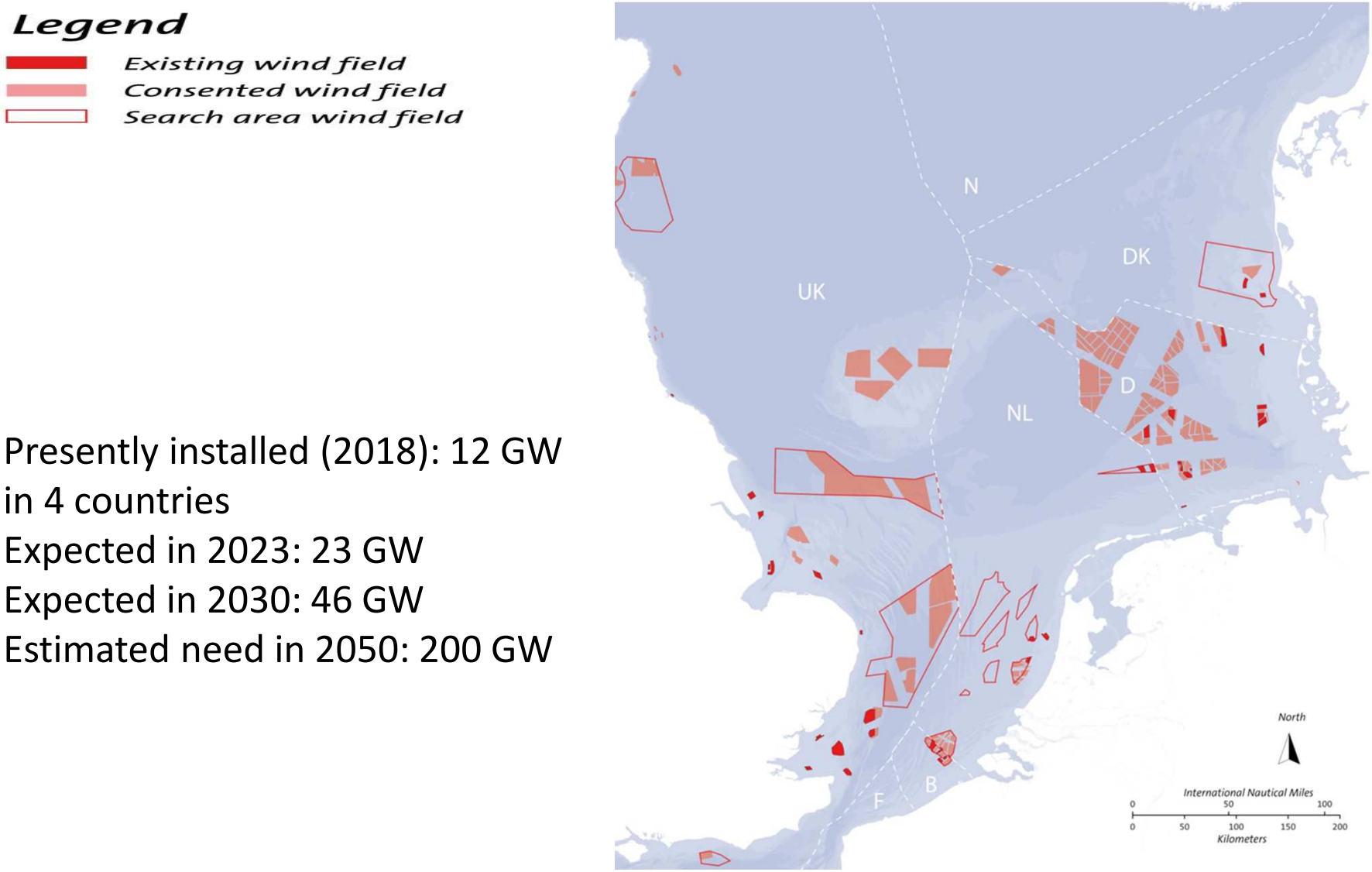
marinescotland

The Scottish Government

Rijkswaterstaat
Ministerie van Infrastructuur en Milieu

CPMR
CRPM
Conference of Peripheral Maritime Regions


2050 – An Energetic Odyssey



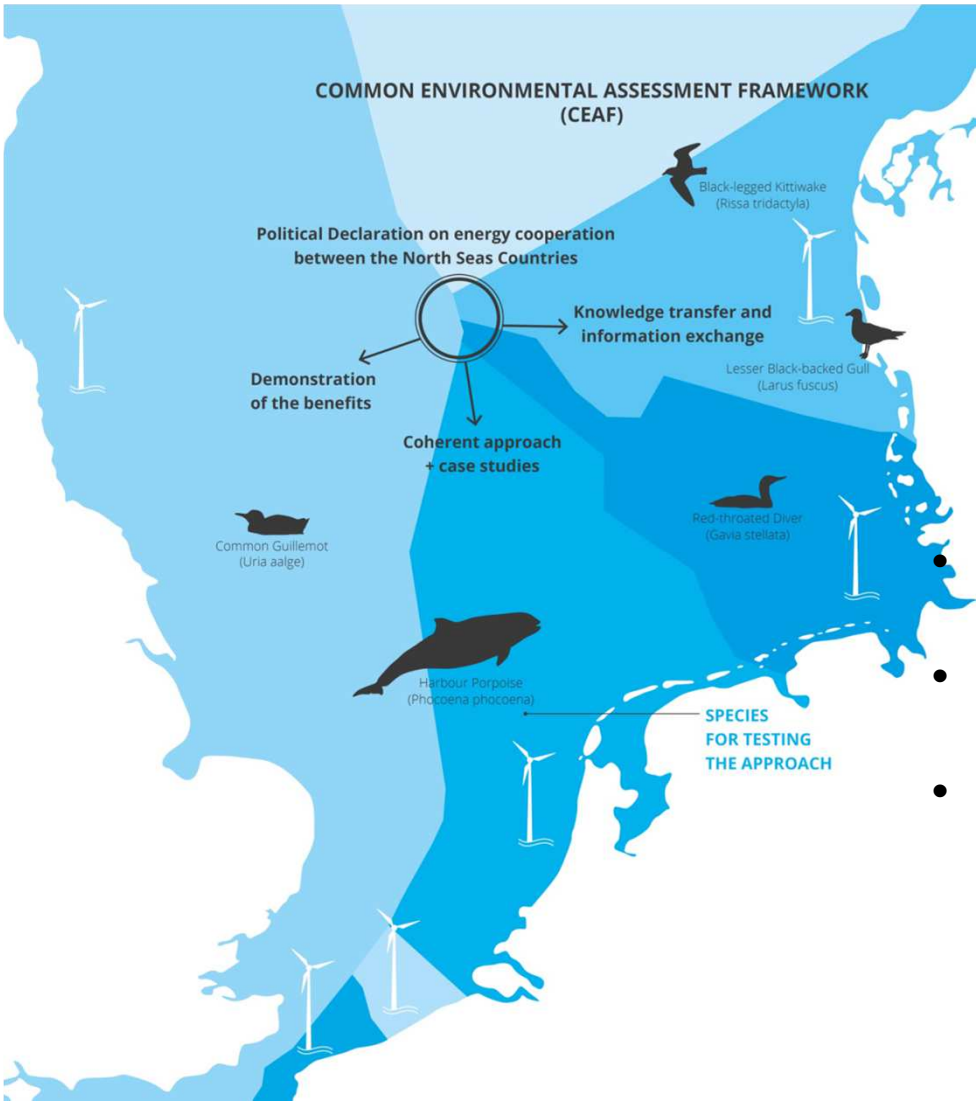
Presently installed (2018): 12 GW
in 4 countries
Expected in 2023: 23 GW
Expected in 2030: 46 GW
Estimated need in 2050: 200 GW

Strategic Environmental Assessment North Sea Energy

Objectives:

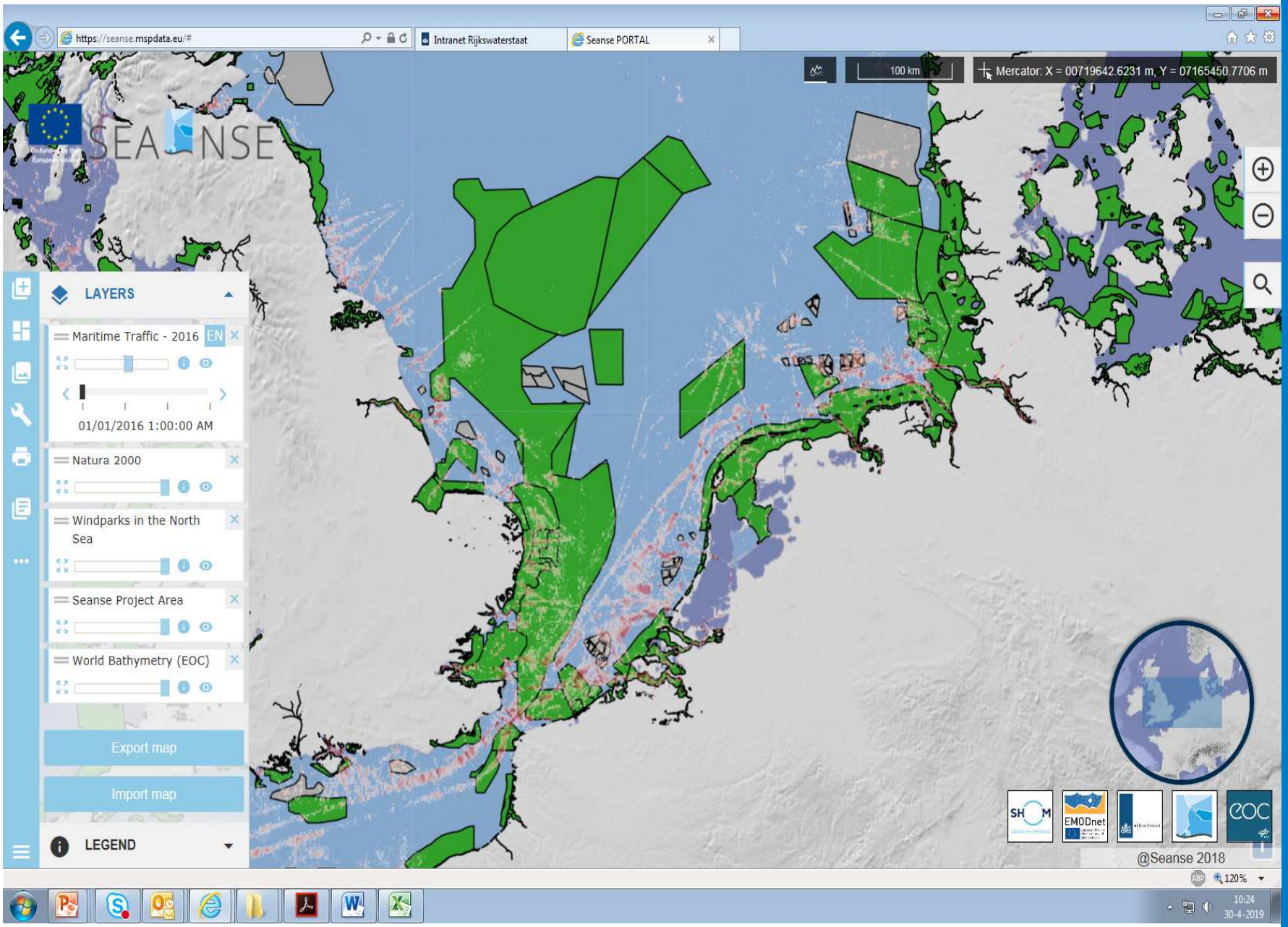
1. Develop a coherent approach to SEAs, with a focus on renewable energy and test it in practice through three case studies;
2. Create a coherent understanding of how and when to use SEA as a support tool for decision making in MSP through knowledge transfer and information exchange between North Sea countries;
3. Demonstrate the benefits of the implementation of a coherent SEA approach for the preparation of national MSPs;
4. Facilitate the efficient implementation of the "Political Declaration on energy cooperation between the North Seas Countries".

This Political Declaration was signed on 6th June 2016 by 10 ministers of North Sea countries and the EC (IRE, NO, SW, DK, GE, NL, BE, FR, UK, LX and EC)



Deliverables:

- Overview current practice SEA in North Sea countries
- Data portal demonstrator: seanse.mspdata.eu/
- Common Environmental Assessment Framework (CEAF) approach applied for four bird species and one marine mammal and three scenario's North Sea:
  - 23 GW in 2023 wind power
  - 46 GW in 2030
  - + 7 GW extra afterwards
- Applied coherent approach in SEA in different countries (DK, Scotland)
- Case on data in FR/BE border


https://seanse.mspdata.eu/#
Intranet Rijkswaterstaat
Seanse PORTAL
100 km
Mercator: X = 00719642.6231 m, Y = 07165450.7706 m
SEANSE
LAYERS
Maritime Traffic - 2016
EN
01/01/2016 1:00:00 AM
Natura 2000
Windparks in the North Sea
Seanse Project Area
World Bathymetry (EOC)
Export map
Import map
LEGEND
@Seanse 2018
120%
10:24
30-4-2019

SEANSE

Northseaportal.eu

Seanse.mspdata.eu

Session 1: MSP implementation process in North Sea

Session 1: MSP implementation process in North Sea

French MSP competent authority

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Knowledge Sharing Workshop Maritime spatial planning challenges in the North Sea SEANSE

Session 1

A word from the french national authority to give you some news about our MSP process

- **Sorry we can not be with you in Anvers**
- **Thanks to the SHOM representative to present an overview of our work**
- **We will remain at your disposal for any further information :-)**

=> julia.jordan@developpement-durable.gouv.fr

Head of project maritime spatial planning

Ministry for an ecological and solidary transition

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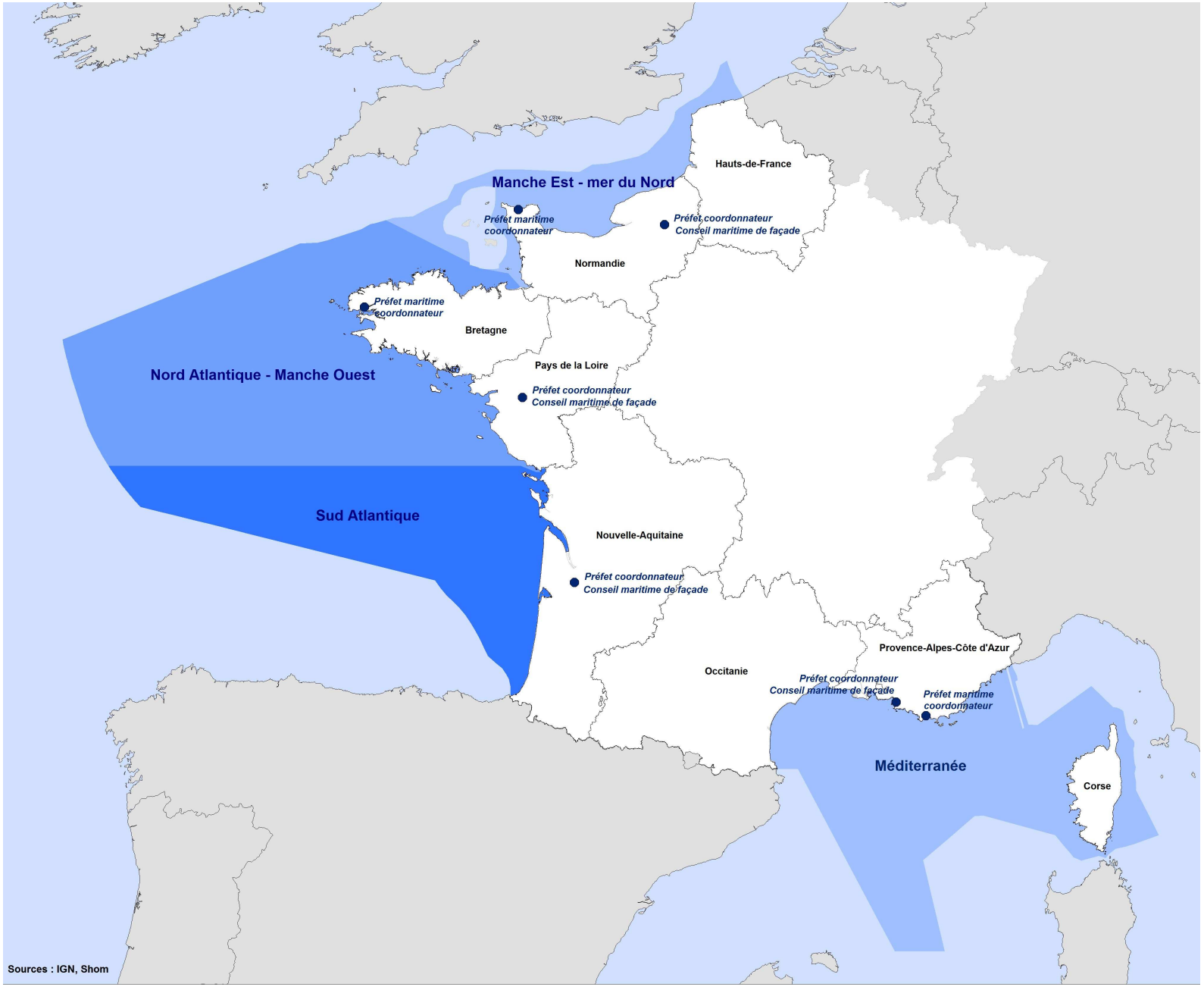

The coastlines of mainland France

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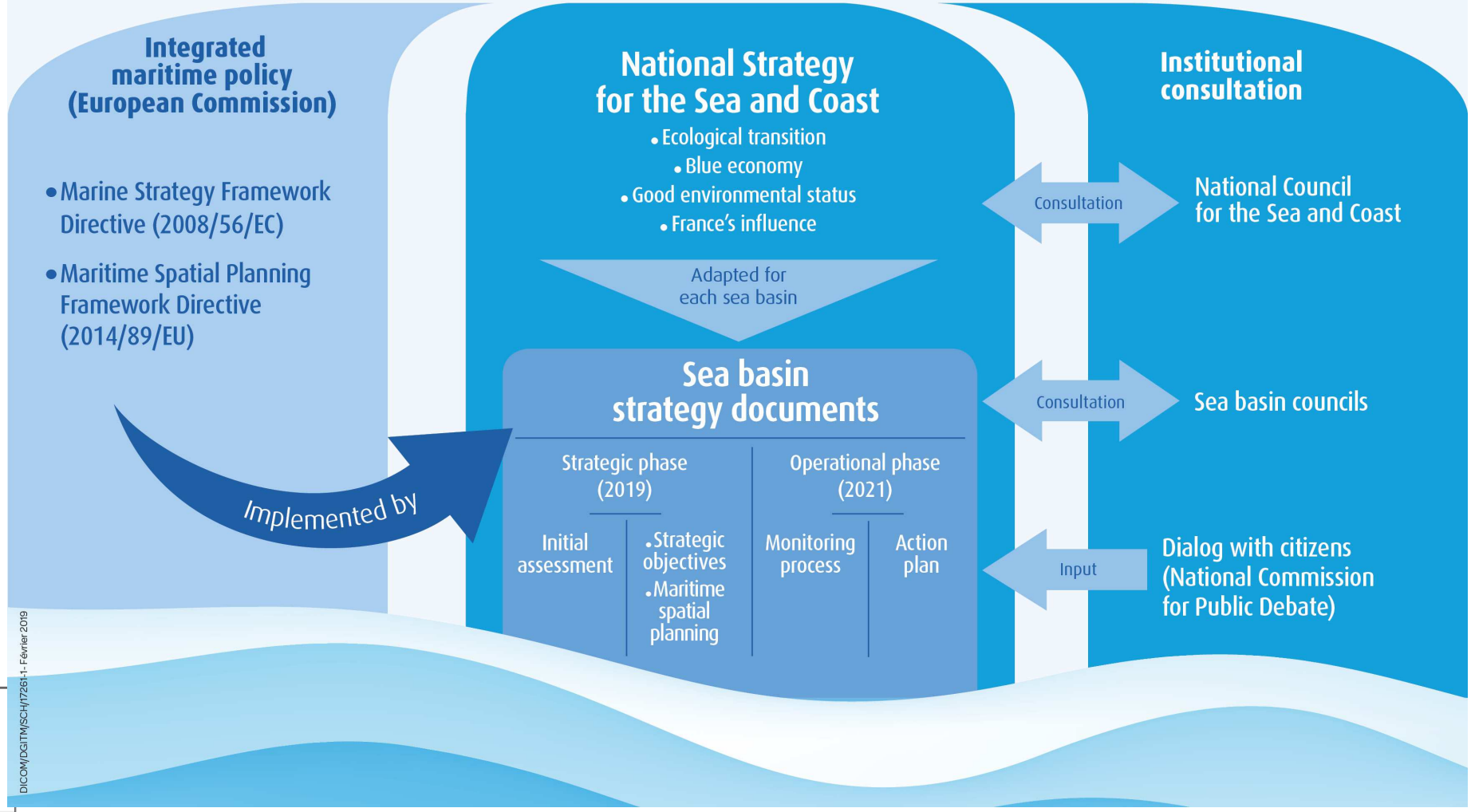
Sea basin strategy elaboration (mainland France)



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The 4 french sea basin strategies **implement 2 European directives :**

- The **MSFD** (marine strategy framework directive)
- The **MSPD** (marine spatial planning directive)

Strategic phase	
Initial assessment	*Definition of environmental, economic and social strategic objectives MSP*

Sea basin strategies projects :

→ **Currently : public consultation**
https://www.merlittoral2030.gouv.fr/

→The french minister is currently consulting his counterparts in the EU.
We hope for their replies by july. Documents in english :
http://www.geolittoral.developpement-durable.gouv.fr/documents-english-version-r549.html

Operational phase	
Action Plan	*Monitoring process*

2021 : approval of the sea basin strategies

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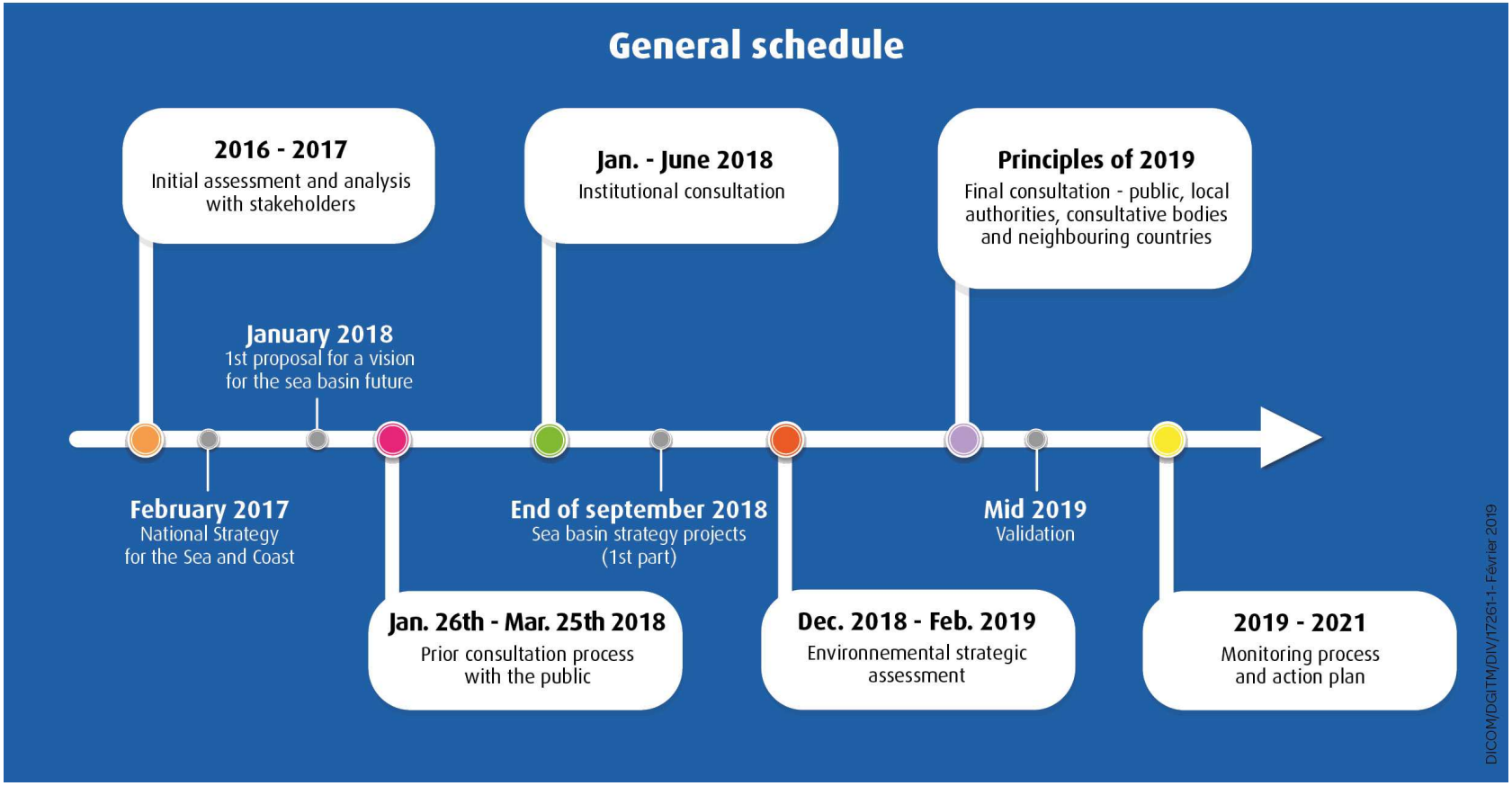

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Thank you
& have a constructive workshop !

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Session 1: MSP implementation process in North Sea

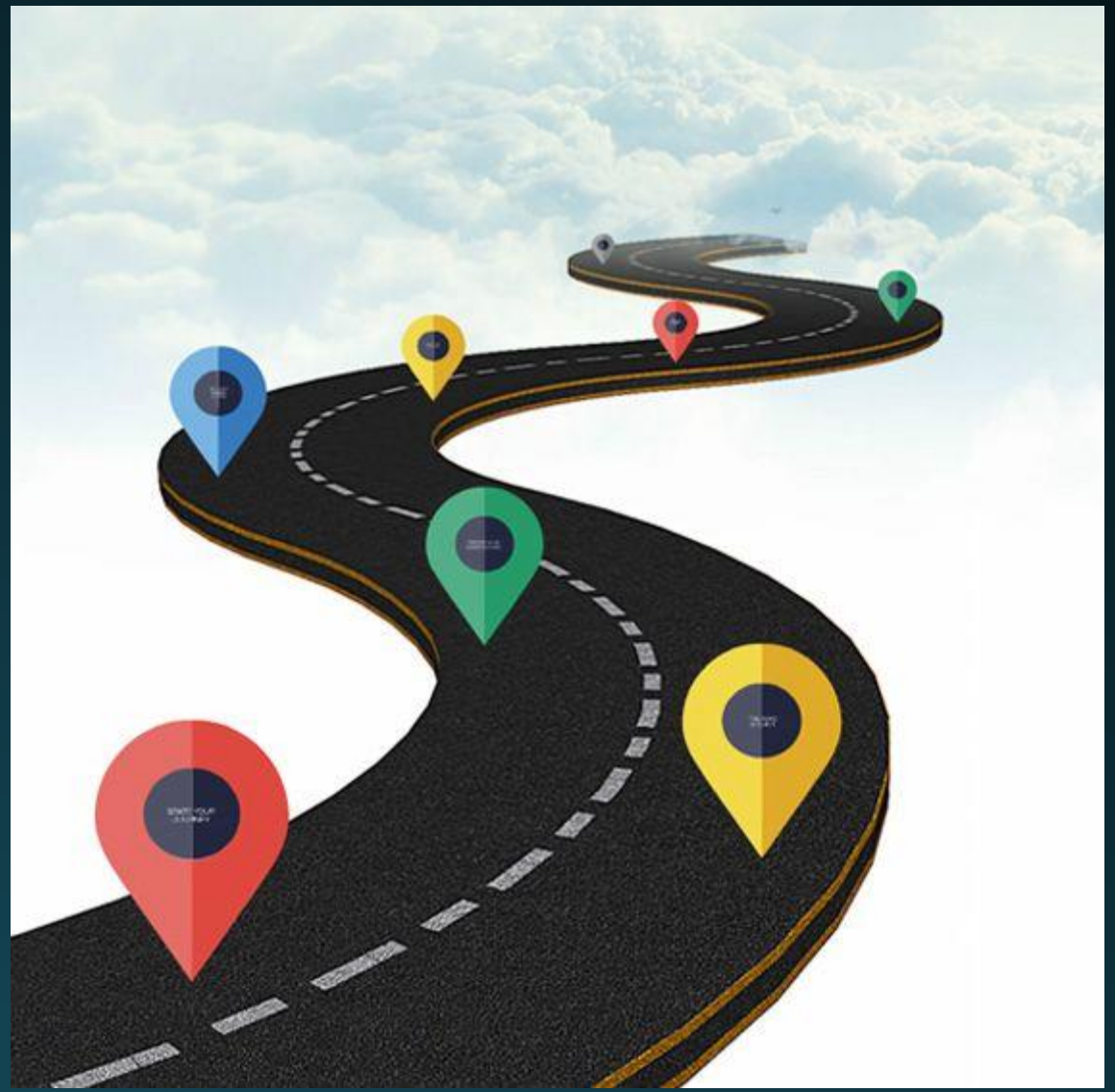
Jesse Verhalle, Belgian Minister of the North Sea, Marine Environment Division of the Federal Public Service

Belgian Marine Spatial Plan

2020-2026

How we got there

- The legal foundation
- The process
- The content



Legal foundation

MSP Directive

Marine Protection Act (1999)

- **Royal Decree**
- **Annex 1:** Spatial Analysis
- **Annex 2:** Long term vision, objectives, indicators and strategic choices
- **Annex 3:** Necessary actions
- **Annex 4:** Maps

Royal decree establishing an advisory commission and the procedure for a MSP (2012)

- Role and composition of the advisory commission
- Role of the Council of Ministers
- Public Consultation
- Consultation of the neighbouring countries

Process

Consultation
- 2017
- Informal event
- Proposals from stakeholders

First draft
- First draft MSP
- Advisory commission

Formal obligations
- Strategic Environmental Assessment
- Translation

Council of Ministers
- First approval
- 20th of April 2018

Process

Consultation

- July – September 2018
- +60.000 reactions from public
- Consultation of the regions, UK, NL and France

Consolidation

- October – December 2018
- Writing a second draft
- Writing a summary declaration

Council of Ministers

- Final approval
- 7th of December 2018

Final step

- Awaiting the King's signature
- Publication in the Belgian Official Gazette (Belgisch Staatsblad/Moniteur Belge)
- Enter into effect on the 20th of March 2020

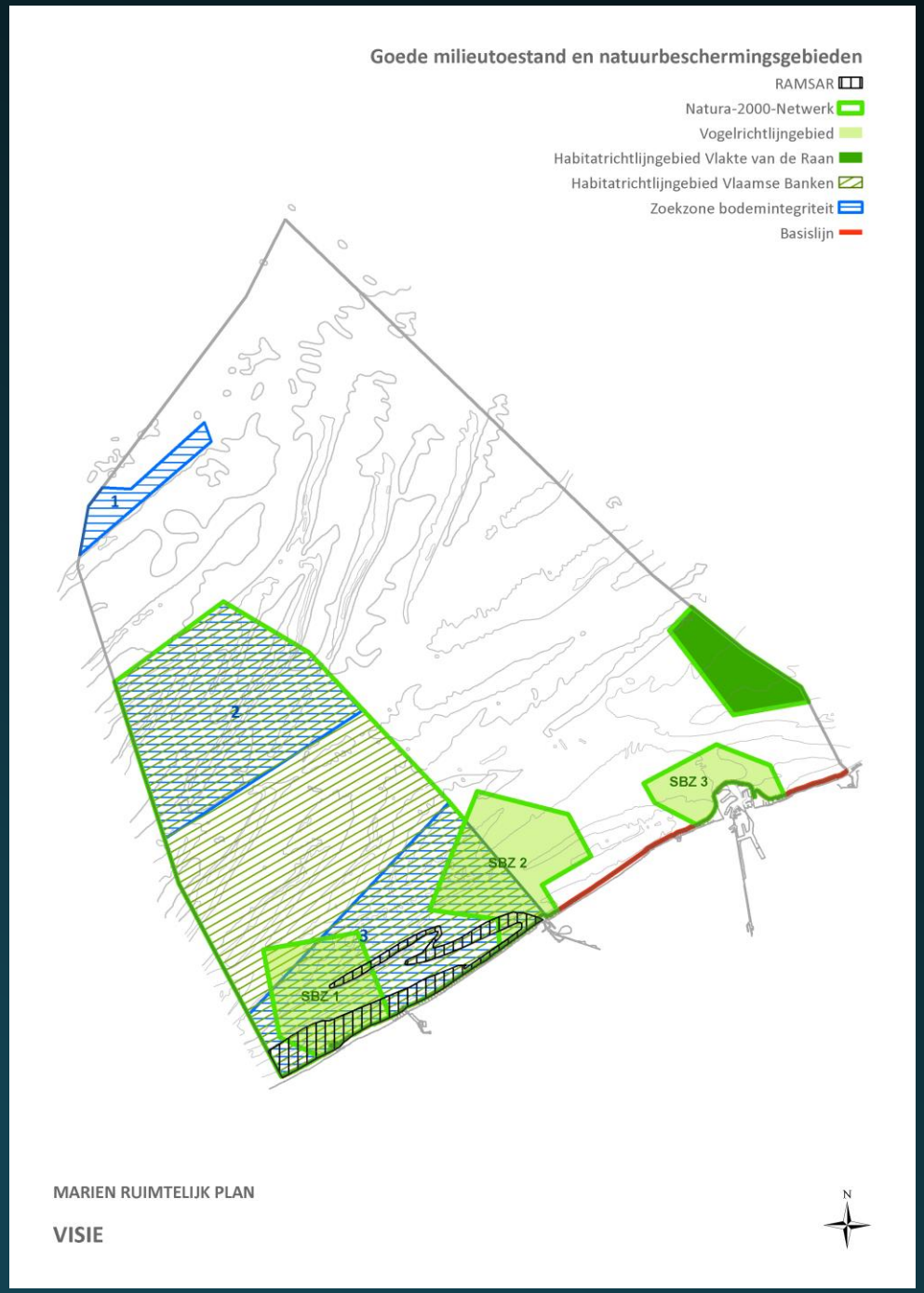
A closer look at the content

Content

- 8 thematical subjects and maps
- For 0,5% of the total surface of the North Sea (3.454 km²)
- Squished between UK, France and the Netherlands
- Only ‘territory’ managed by the federal level
- Commercial fisheries, ports and dredging and coastal defense managed by the Flemish region

Nature

- Two habitat areas
- Three bird areas
- Three search areas for habitat protection



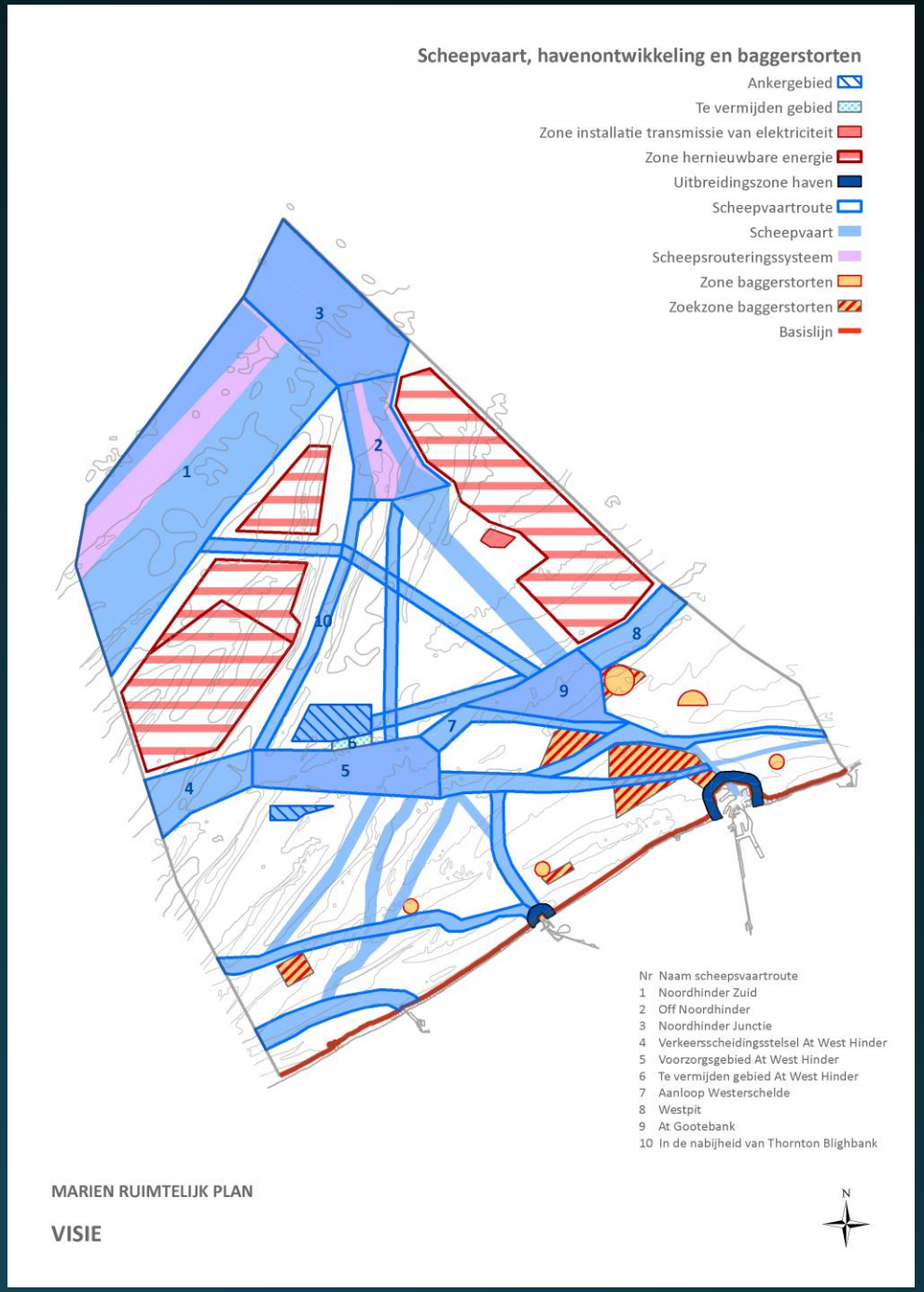
Energy

4th largest offshore producer
1st place: 14.6 % of available space

- Three new zones for renewable energy
- Corridors for cables and pipelines

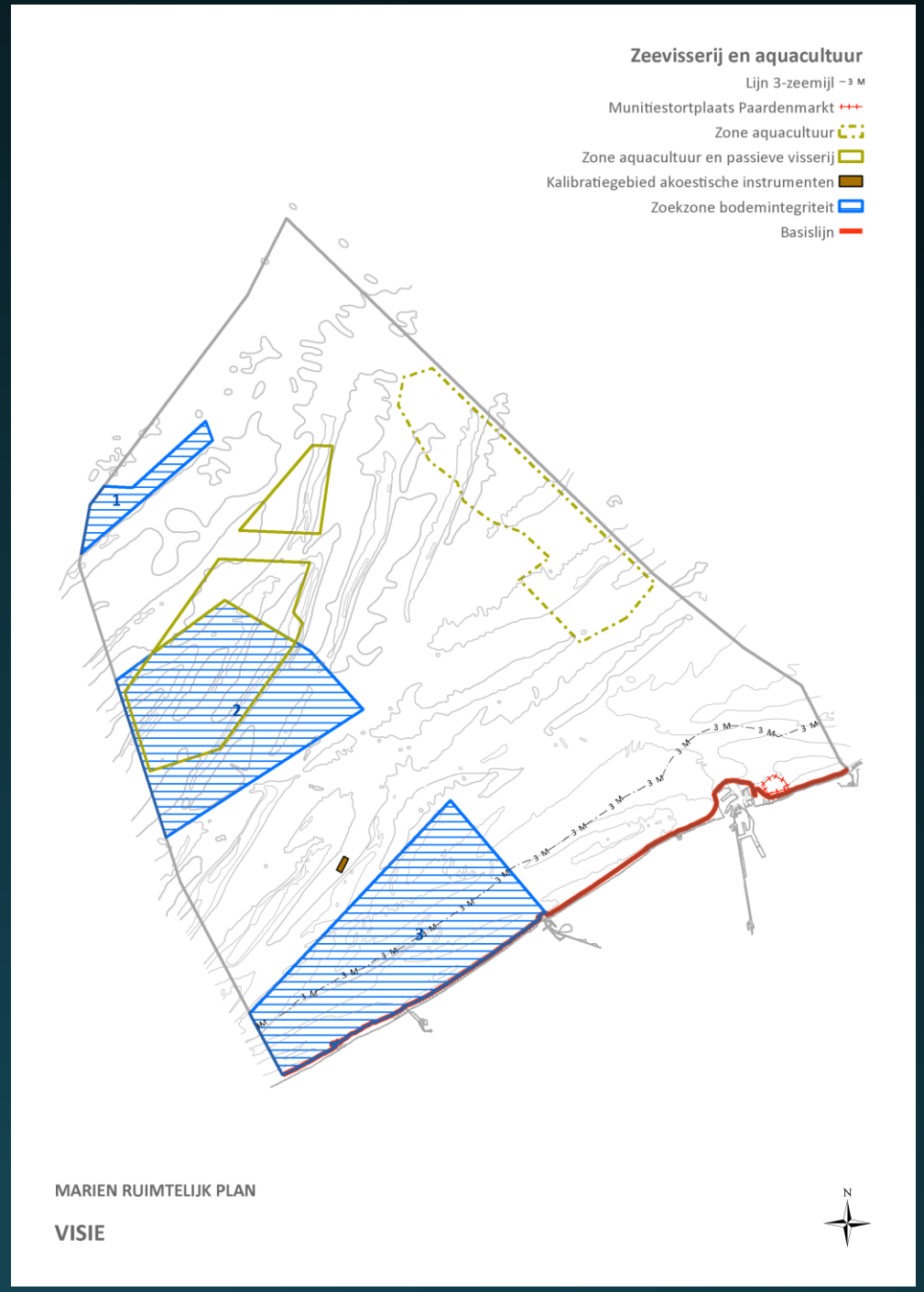
Shipping

- Two seaports
- Dredging
- Shipping lanes



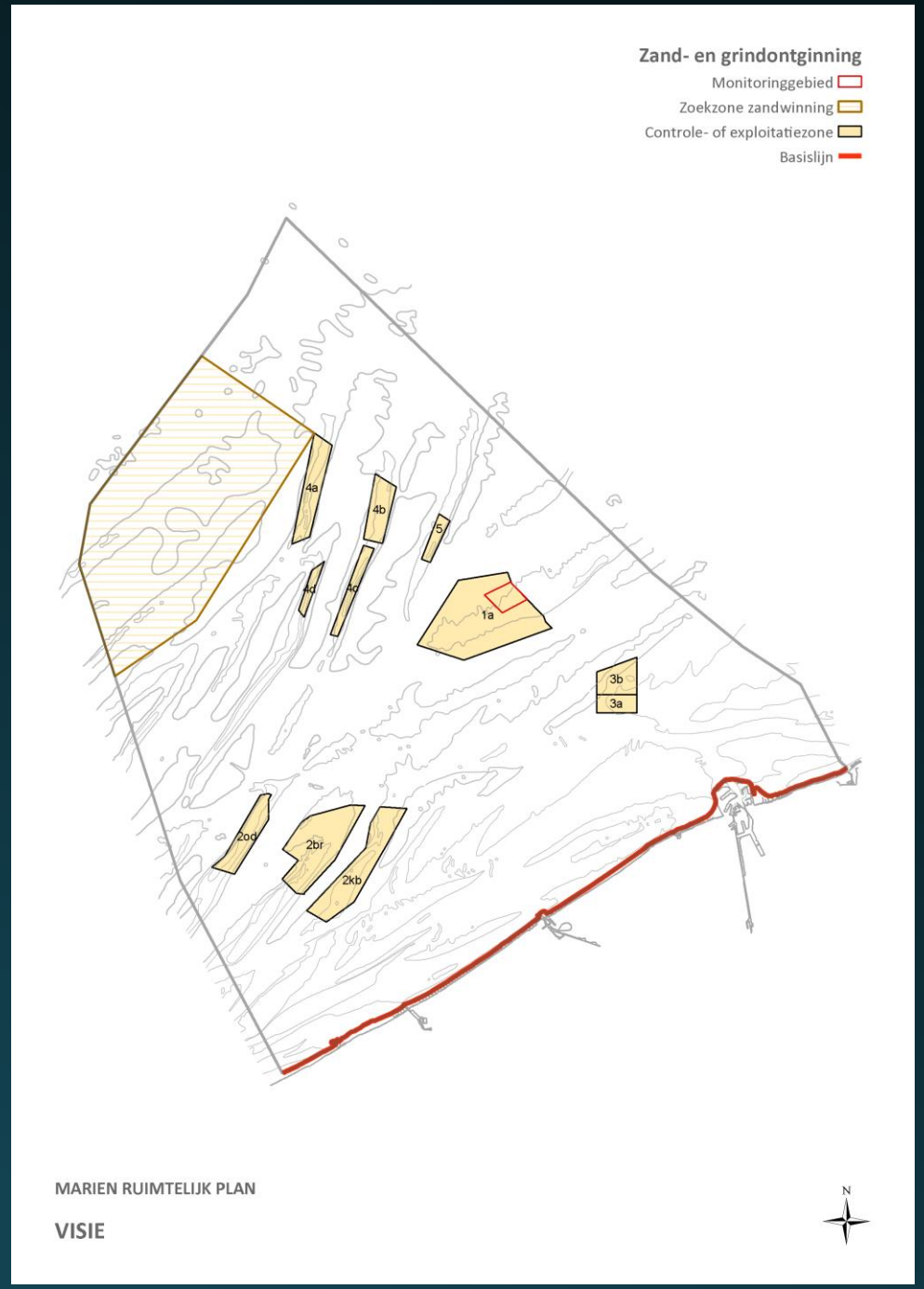
Fisheries and aquaculture

- Multispatial use
- Principle: allowed everywhere except when expressly prohibited



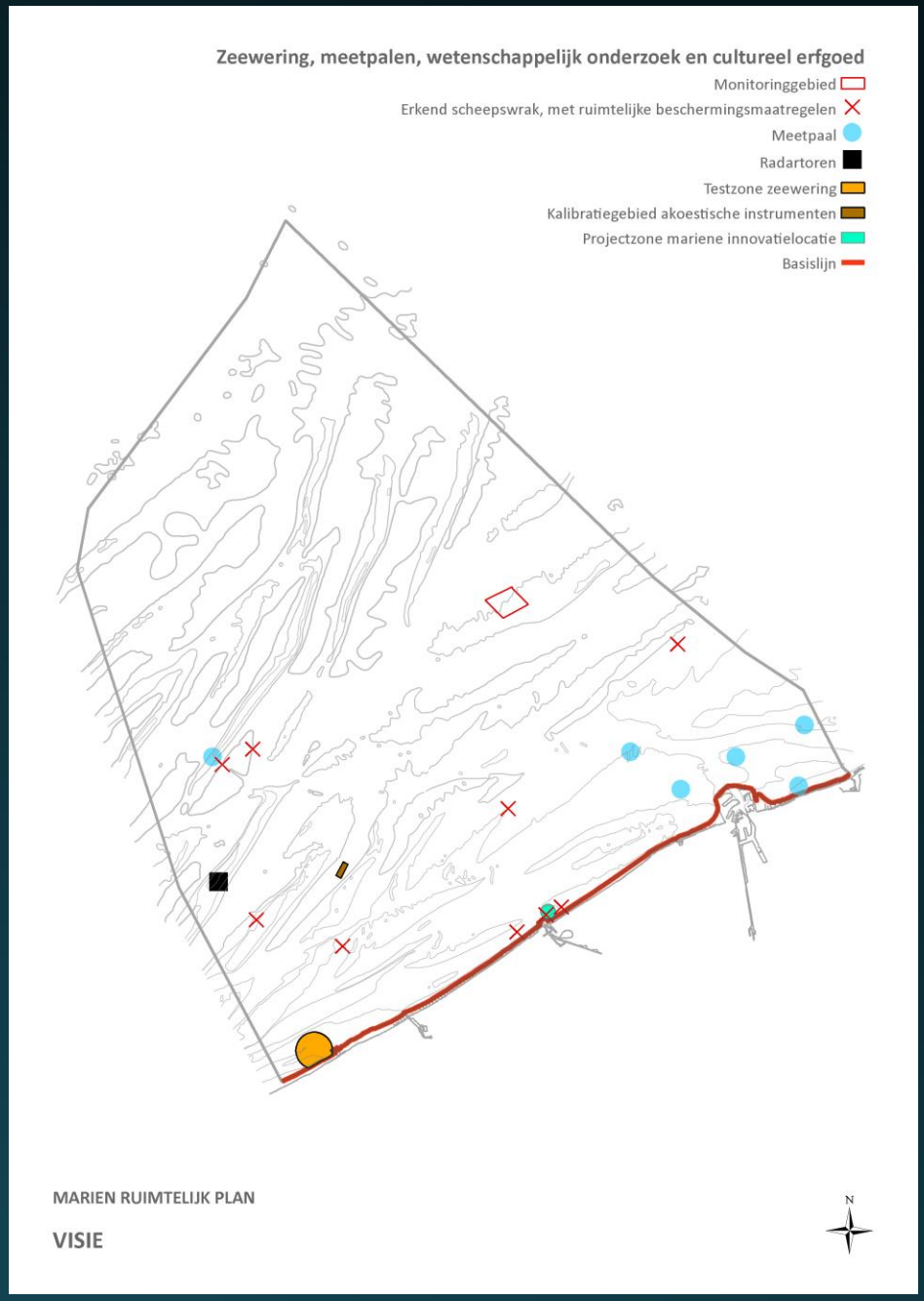
Sand extraction

- One new area
- Limitation for 4C
- Exploration area



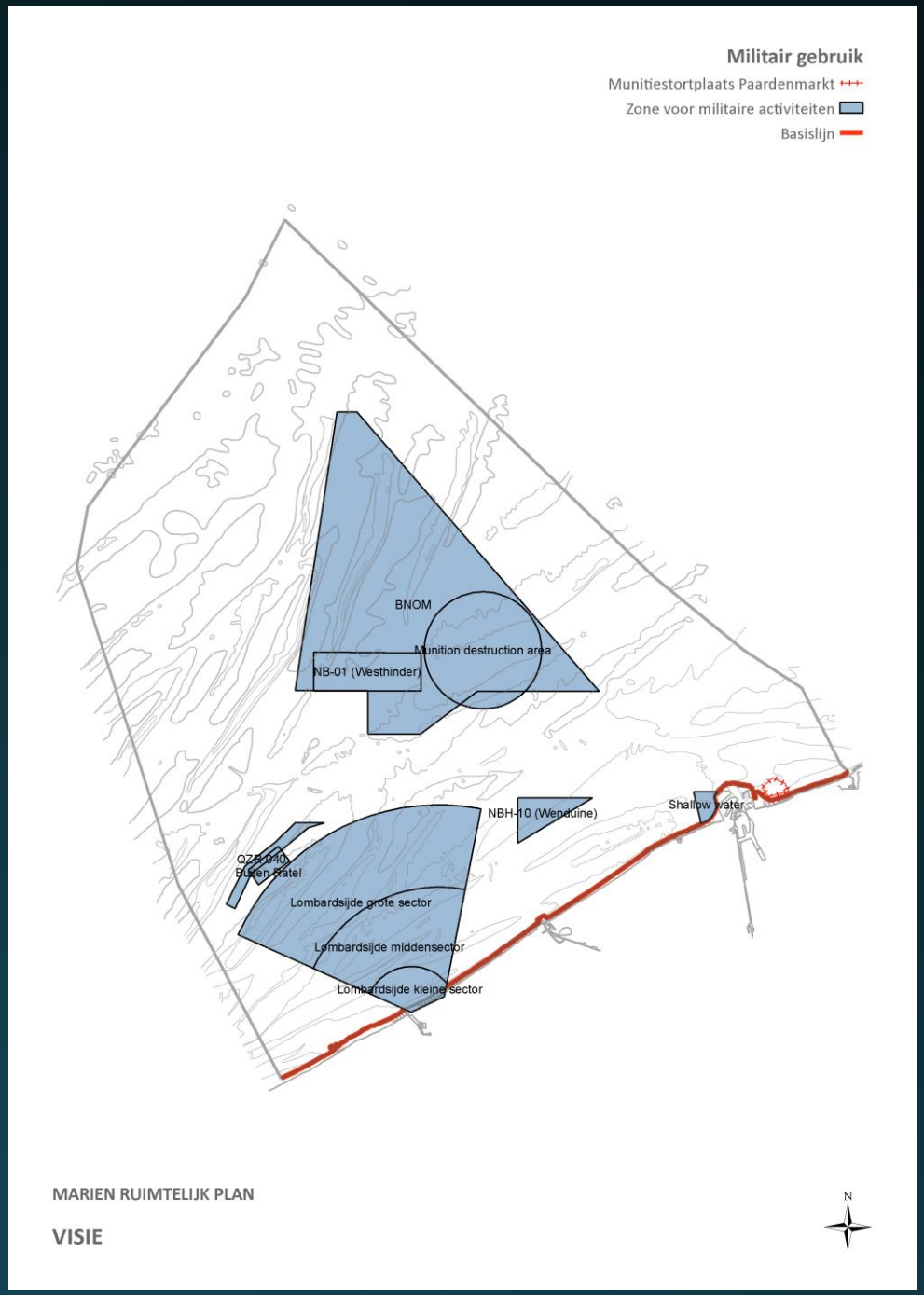
Coastal defense, scientific research and cultural heritage

- Protected shipwrecks
- Marine innovation location
- Research for new methods of coastal defense



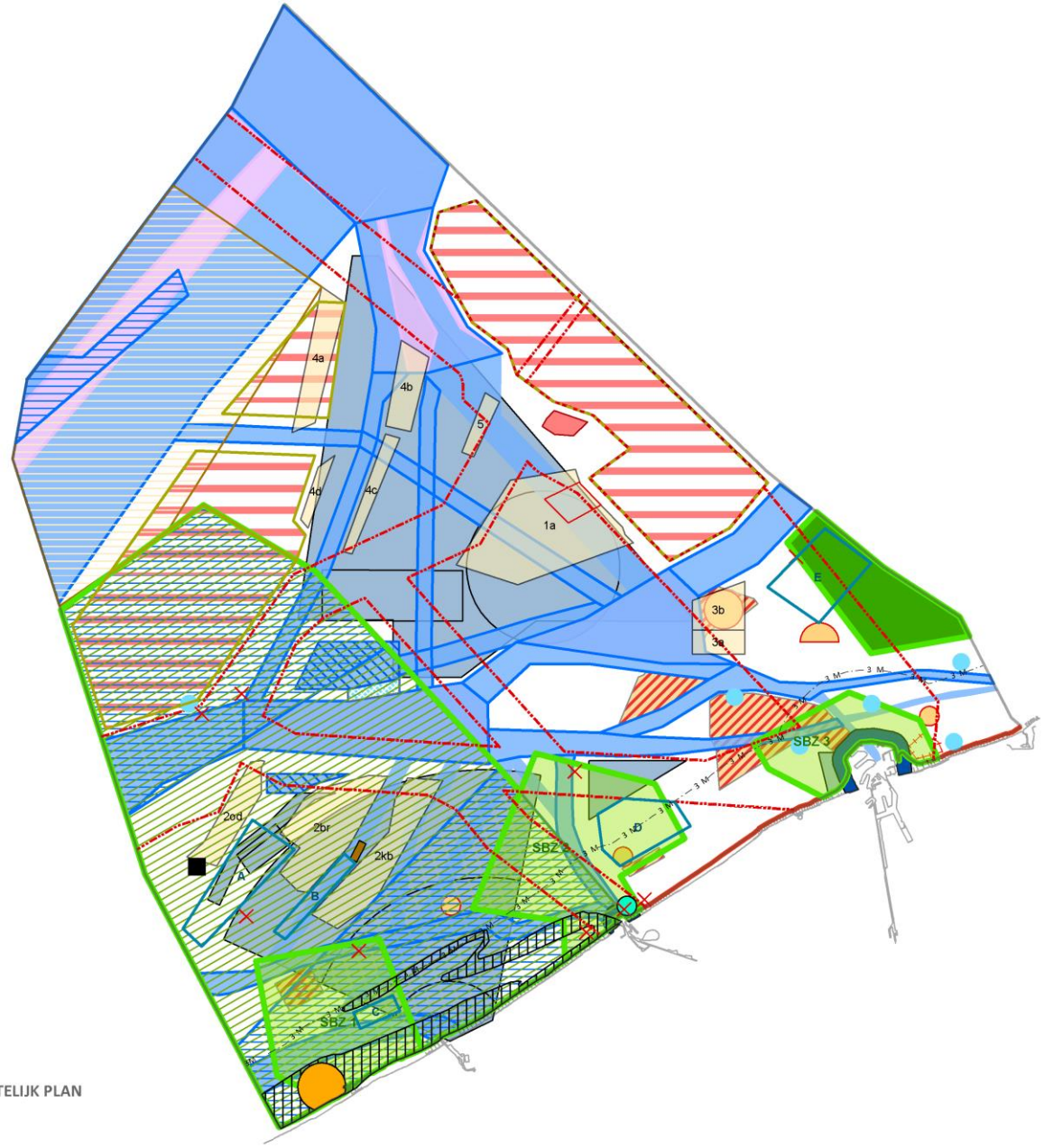
Military use

- Redrawing BNOM and NBH-10
- Amphibious vehicles, underwater exercises



Commercial and industrial activities

- New
- No fixed definition
- All in conservation areas



Geïntegreerde visiekaart

- Lijn 3-zeemijl – 3 M
- Zone commerciële en industriële activiteiten
- Zone aquacultuur
- Zone aquacultuur en passieve visserij
- Erkend scheepswrak, met ruimtelijke beschermingsmaatregelen
- Meetpaal
- Radartoren
- Testzone zeewering
- Kalibratiegebied akoestische instrumenten
- Projectzone mariene innovatielocatie
- Zone kabels en pijpleidingen
- RAMSAR
- Natura-2000-Netwerk
- Vogelrichtlijngebied
- Habitatrichtlijngebied Vlakte van de Raan
- Habitatrichtlijngebied Vlaamse Banken
- Zoekzone bodemintegriteit
- Monitoringgebied
- Zoekzone zandwinning
- Controle- of exploitatiezone
- Ankergebied
- Te vermijden gebied
- Zone installatie transmissie van elektriciteit
- Zone hernieuwbare energie
- Uitbreidingszone haven
- Scheepvaartroutes
- Scheepvaart
- Scheepsrouteringssysteem
- Zone baggerstorten
- Zoekzone baggerstorten
- Munitiestortplaats Paardenmarkt
- Zone voor militaire activiteiten
- Basislijn

MARIEN RUIMTELIJK PLAN

VISIE

N


THANK YOU

Session 1: MSP implementation process in North Sea

Leo de Vrees, Dutch Ministry of Infrastructure and the Environment

Ministry of Infrastructure and the Environment

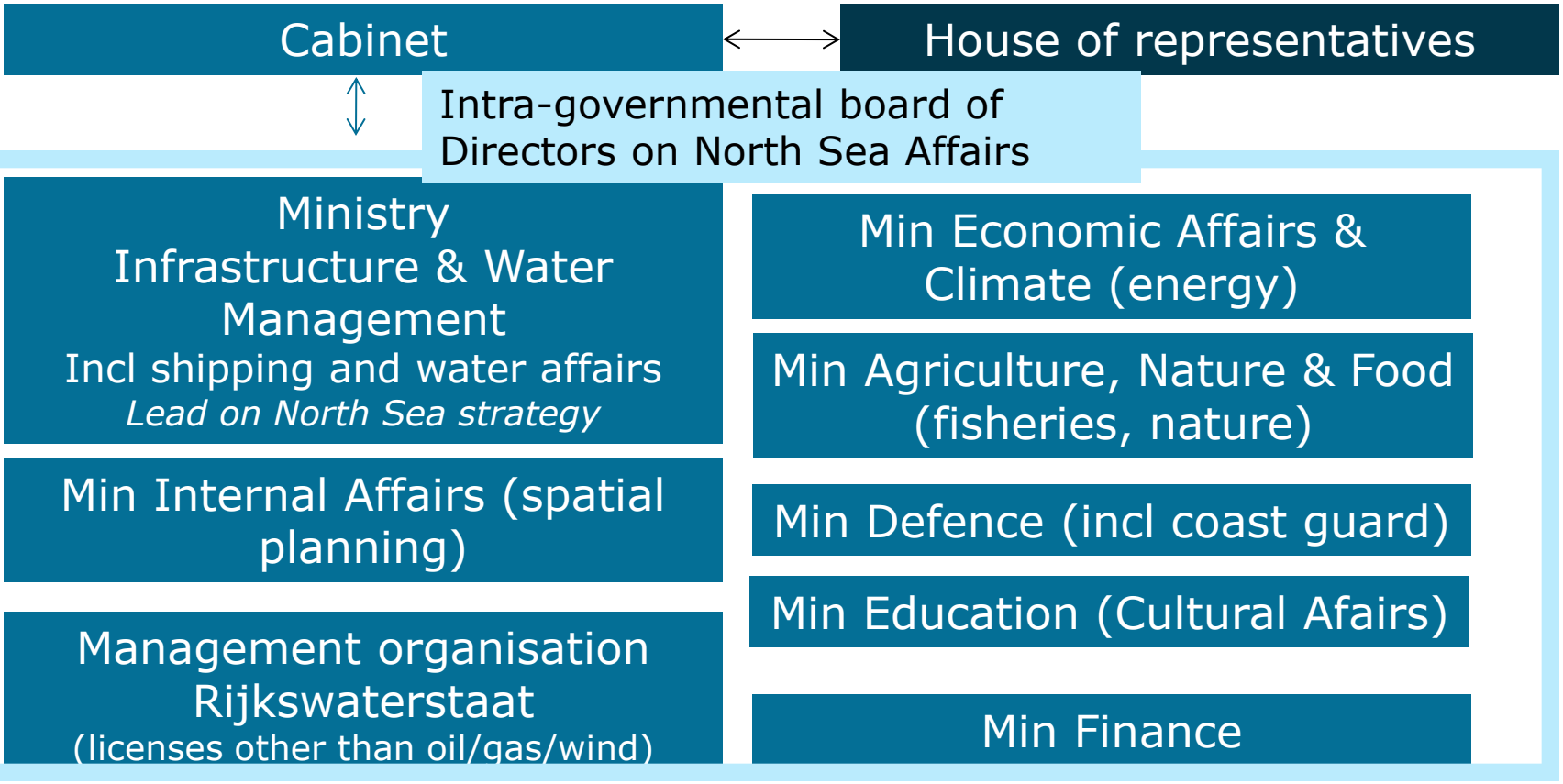
Challenges with regard to North Sea Maritime Spatial Planning

Leo de Vrees

International context: legislation and cooperation

- **UN level**: UN Law of the Sea (UNCLOS); Sustainable Development Goals (nr 14); Paris Climate Agreement; Intergovernmental Maritime Organisation; London Conventie/Protocol
- **European level:** Marine Strategy Framework Directive; Maritime Spatial Planning Directive; Common Fisheries Policy; Natura 2000; CO2 emission reduction targets; Blue Growth Strategie
- **OSPAR:** Regional Seas Convention to protect the marine environment in the North East Atlantic region (15 countries)
- **North Sea countries**: Political declaration cooperation offshore renewable energy; EU sponsored projects SEANSE and NorthSee; BONN Agreement (cooperation combatting oil spills)
- **Bilateral exchange**: Belgium, the UK and Germany

Governance structure for Integrated Maritime Policy in Netherlands



MSP in the Netherlands

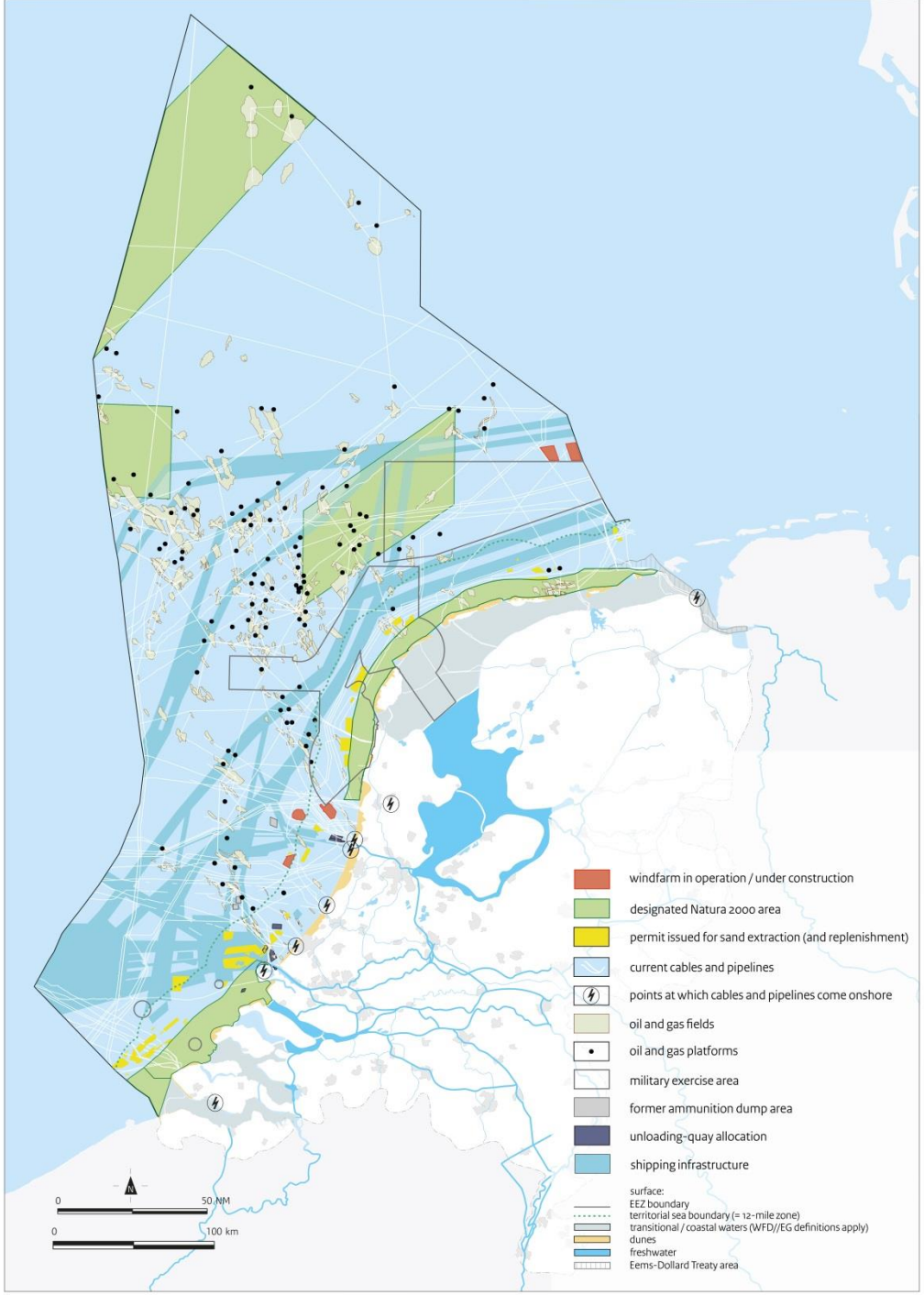
- Marine or Maritime Spatial planning is a political decision making process designed to address issues concerning the use of maritime space and establish policy for it
- Policy decisions concerning use of maritime space lead to a policy statement or –document which gives clarity of the foreseen use of certain areas at sea
- Since it concerns space a visualisation on a map is helpful
- The legal status of the Dutch Maritime Spatial Policy Plan:
  - Status is a framework vision as defined by the Spatial Planning Act
  - The Dutch central government is the only competent authority as from 1 km off shore.
  - The Dutch MSP is self binding for the Government
  - It gives clarity for private industry and seafarers where certain activities are taking place and new ones are foreseen

Successive plans and implementation

- 2009: First *Policy Plan* for the North Sea 2009 – 2015
  - 'Structural vision' which obliges Government to act accordingly
  - Finding space for 6000 MW (1000 km2)
  - Reserving sand mining areas parallel to coast to meet Climate Change/SLR demand for beach nourishment
  - Recognizing the other priority activities: shipping, oil & gas, defence and CCS
- Evaluation 2009 - 2015:
  - Need for further arrangements between activities of national importance
  - Dynamic system of management: the importance of monitoring and 'learning by doing'
  - Development planning rather than comprehensive spatial plan
  - International: learning and acknowledging the differences
    - Distance between parks and shipping routes, borders N2000

Present situation

- Surface: 57.800 km2
- 3874 km shipping route
- 260.000 ships per year
- Offshore wind around 750 km2:
  - 5 operational (1000 MW)
  - 5 in pipeline (3500 MW)
- 160 oil/gas platforms
- 4500 km pipe lines
- 3300 km cables
- 6 N2000 areas (11.400 km2)



2016: Second Policy Plan 2016 - 2021

- It is an integrated policy plan with a long term vision (2050)
- Includes a *Maritime Spatial Plan which complies with* 2014/89/EU
- Spatial focus on activities of national importance:
  - Oil&gas, CCS, defence, shipping, wind, sand mining
- Demand for:
  - More specific wind areas for 3450 MW in 2023
  - Integrated plan with measures for the MSFD (incl. marine litter and extra seafloor protection)
  - Sand mining strategy with cross-cutting preferred routes for cables and pipes
- Transparent Assessment Framework for other activities
- International cooperation

➢ Detailed arrangements in management plans for specific areas

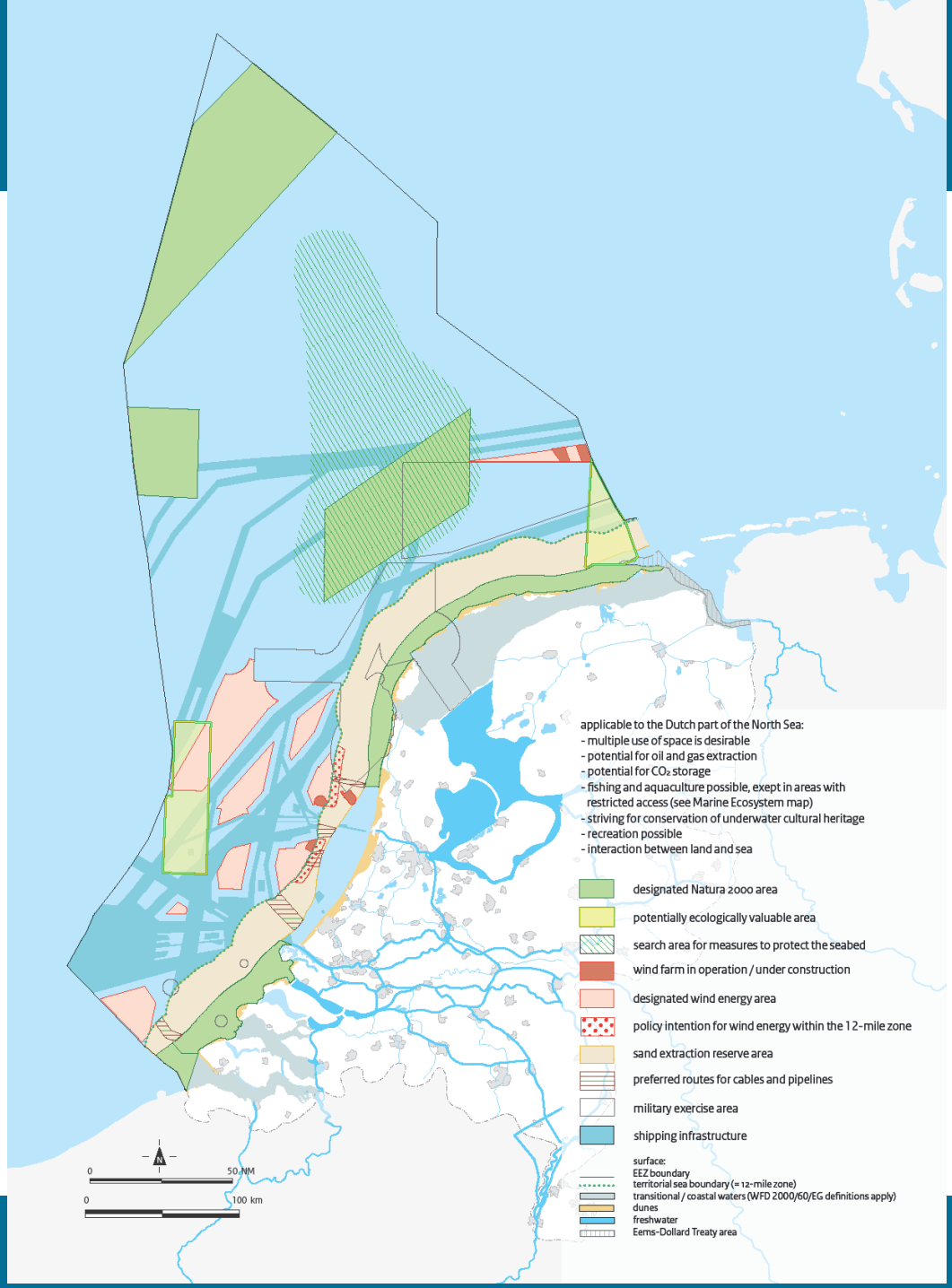
Overview arrangements between activities of national interest

	Renewable energy (4450 MW= 750 km² plus cables)	Oil & gas (160 platforms plus pipelines)	CCS (pilot)	Sand extraction (zone-20m –12 mile)	Shipping (TSS and clearways)	Defence (exercise areas)	Nature (N2000 MPAs)
Renewable energy							
Oil & gas	5 NM helideck/ customized; prospects; > 500 m						
CCS(CO_2)	500 m	re-use platform					
Sand extraction	500 – 750 m; corridor for cables	500 m; corridor for pipelines	500 m; corridor for pipeline				
Shipping	1,24–1,54 NM 1,57-1,87 NM (300/400m ships; ps-ss)	>500 m	> 500 m	dredging			
Defence	excluded	customized	excluded	time sharing	yes		
Nature	excluded	possibly	excluded	excluded	yes	customized	
Ecosystem	Accumulation						

Structural vision 2016-2021

Priority for national interests:

- Oil- and gas extraction
- CO2 storage
- Shipping
- Sand extraction
- Renewable energy
- Defence (military)



Third Policy Plan: North Sea Strategy 2030

- To be ready by December 2021
- Long term vision (2050): Safe, clean, healthy and ecologically diverse North Sea that contributes to the country's economic and social needs

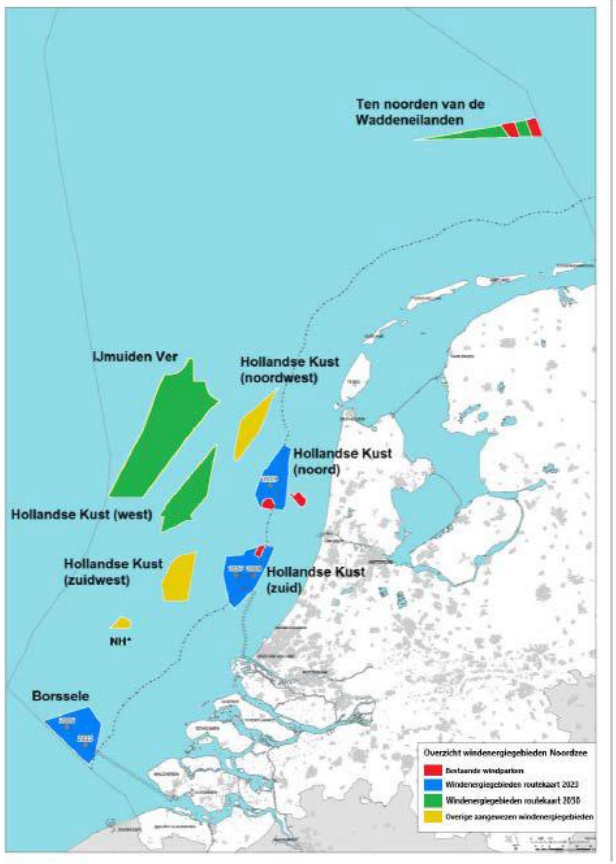
North Sea Strategy 2030 focusses on:

- Energy transition and roadmap 2.0: ca 1 GW/yr between 2024-2030
- Increase food production (aqua- and mari-culture) and consequences for fishery sector
- Effective management of Natura 2000 areas

2018: Road Map offshore wind 2030

- Accelerate implementation offshore wind CO2 reduction targets (~50% by 2030)

Red: operational
Blue: roadmap 2023
Green: roadmap 2030
Yellow: reserved

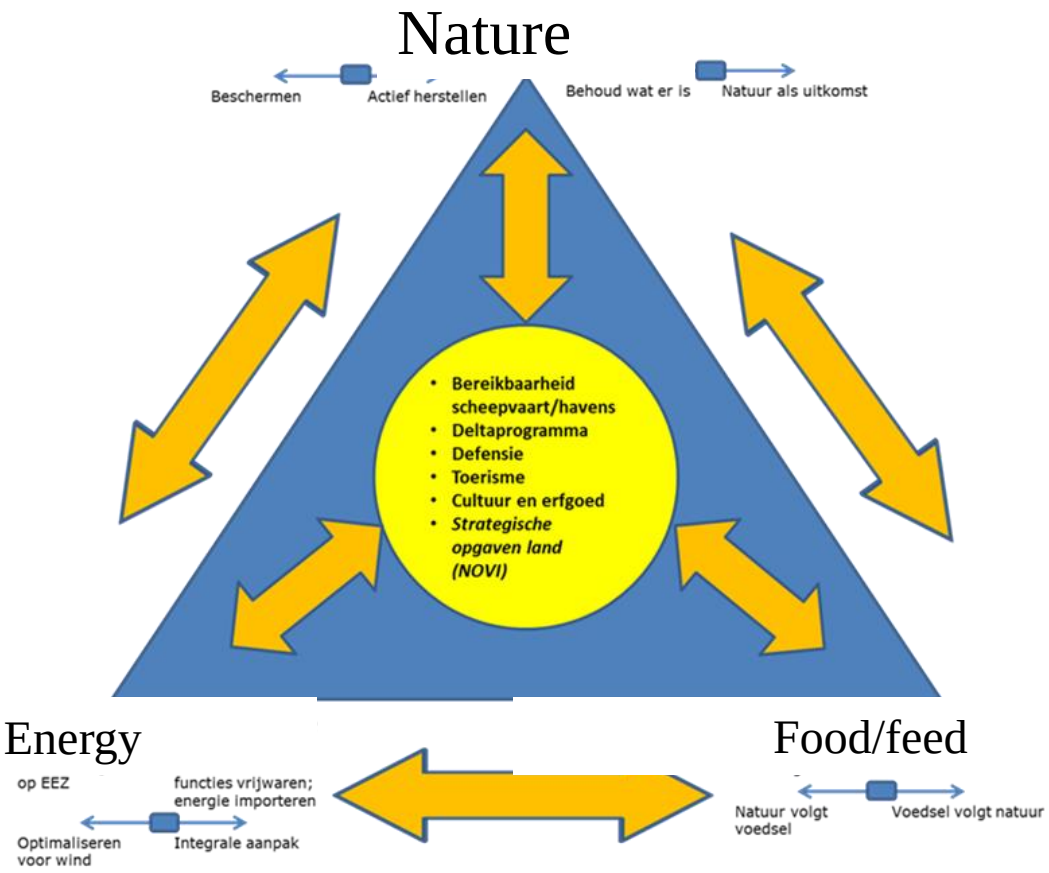


*Map listing existing wind farms (red), wind farm zones corresponding to the Roadmap 2023 (blue), wind farm zones corresponding to the Roadmap 2030 (green) and all other designated wind farm zones (yellow). *NH: wind farm zone north of the North Hinder junction.*

(Informal) Public participation

- Started December 2017 with stakeholder discussions
- NGO started negotiation table to come to an agreement with main stakeholders and Government
- Mid 2018: NGO asked Independent chair to take over
- Minister asked advice and gave task to independent chair in January 2019 to address the conflicts within the triangle Energy, Nature and Food (including Fisheries)

North Sea Strategy 2030



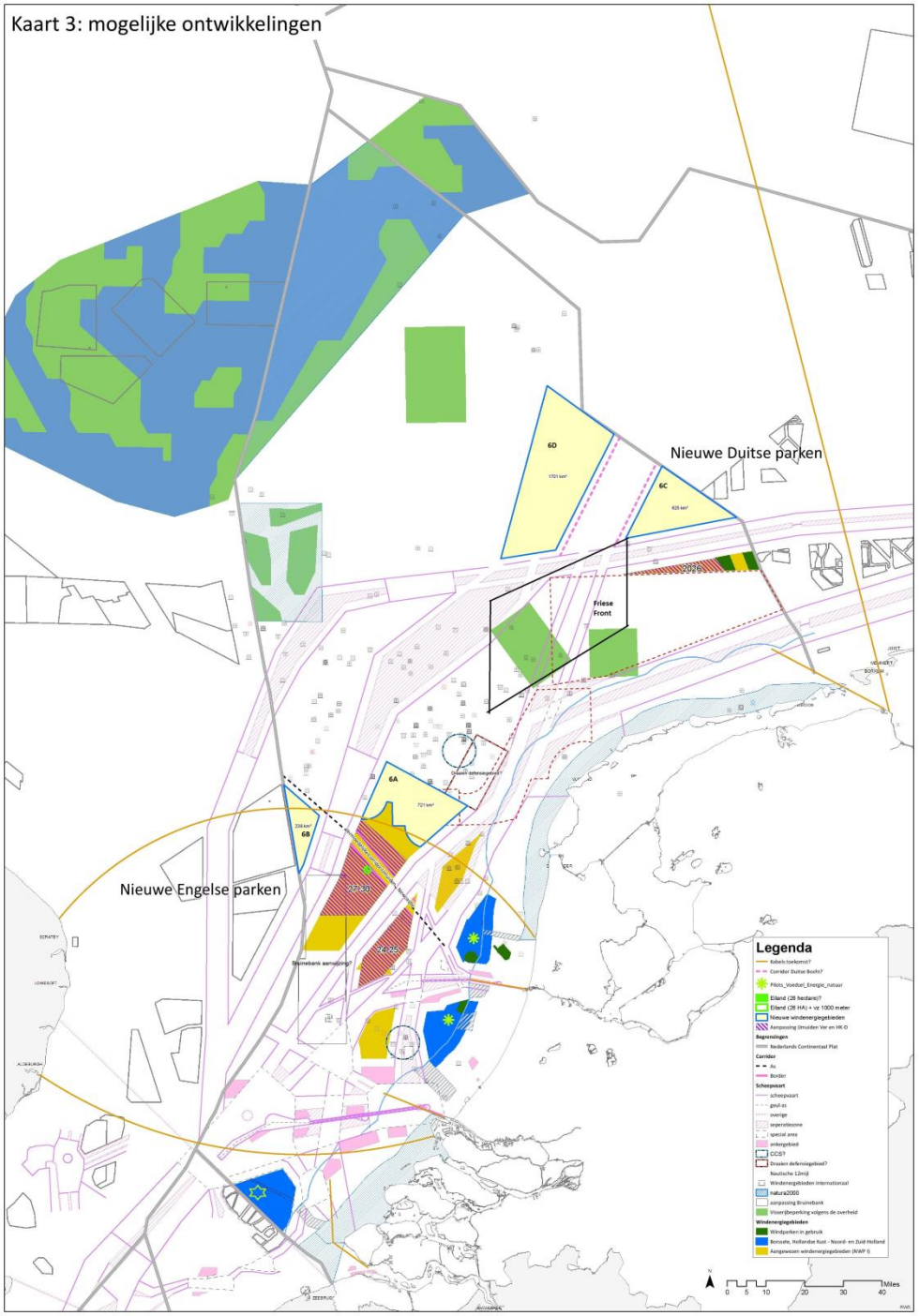
OFL advise

- OFL (= Overlegorgaan fysieke leefomgeving) is an independent advisor of the Ministry of I&W.
- Chair Jacques Wallage (former deputy Minister and major of Groningen) advised the Minister to let him chair the negotiations on a North Sea agreement with societal groups which are relevant for the triangle Energy, Nature and Food.

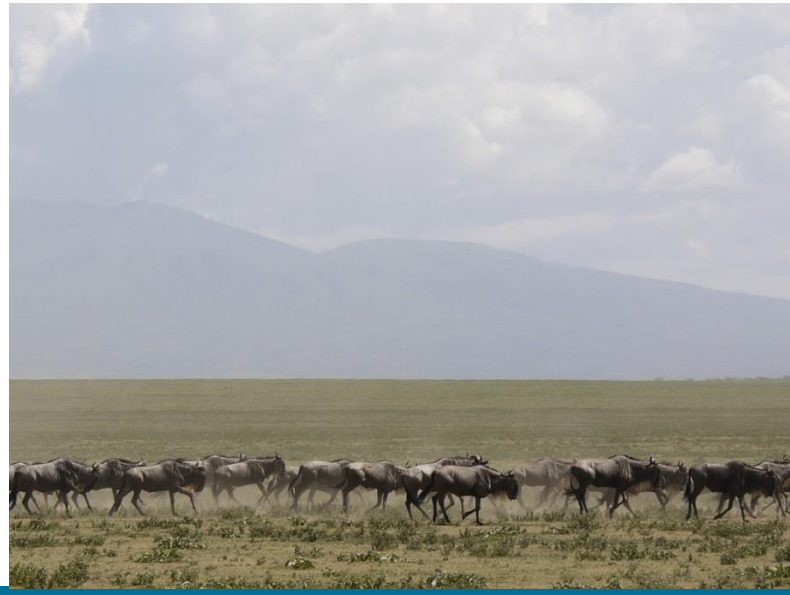
Adviesrapport
Verkenning Noordzeestrategie 2030

Possible developments 2030

- New wind areas
- Interconnections
- Changed defence areas
- Sea floor protection areas
- Ferry and shipping corridors
- Decommissioned platforms
- Man-made island?



If you want to go fast, go alone



If you want to go far, go together

https://www.noordzeeloket.nl/en/

https://ec.europa.eu/energy/en/topics

Session 2: Land-sea interactions and smart grids in the North Sea

Session 2: Land-sea interactions and smart grids in the North Sea

Mattia Cecchinato, Sustainability and Offshore Analyst, WindEurope

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KNOWLEDGE SHARING WORKSHOP

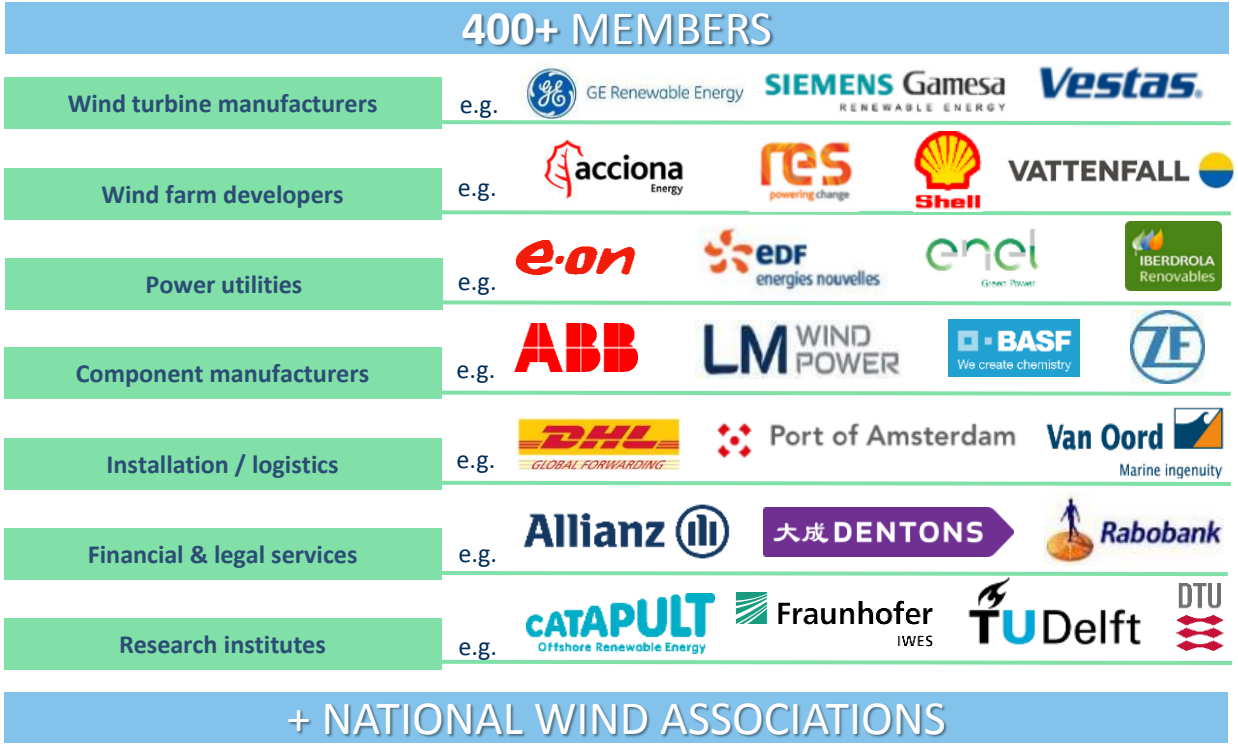
Mattia Cecchinato, Offshore and Sustainability Analyst

Wind EUROPE

windeurope.org

May 2019

WindEurope: the European Wind Energy Association



Wind EUROPE

Wind energy in Europe

189 GW

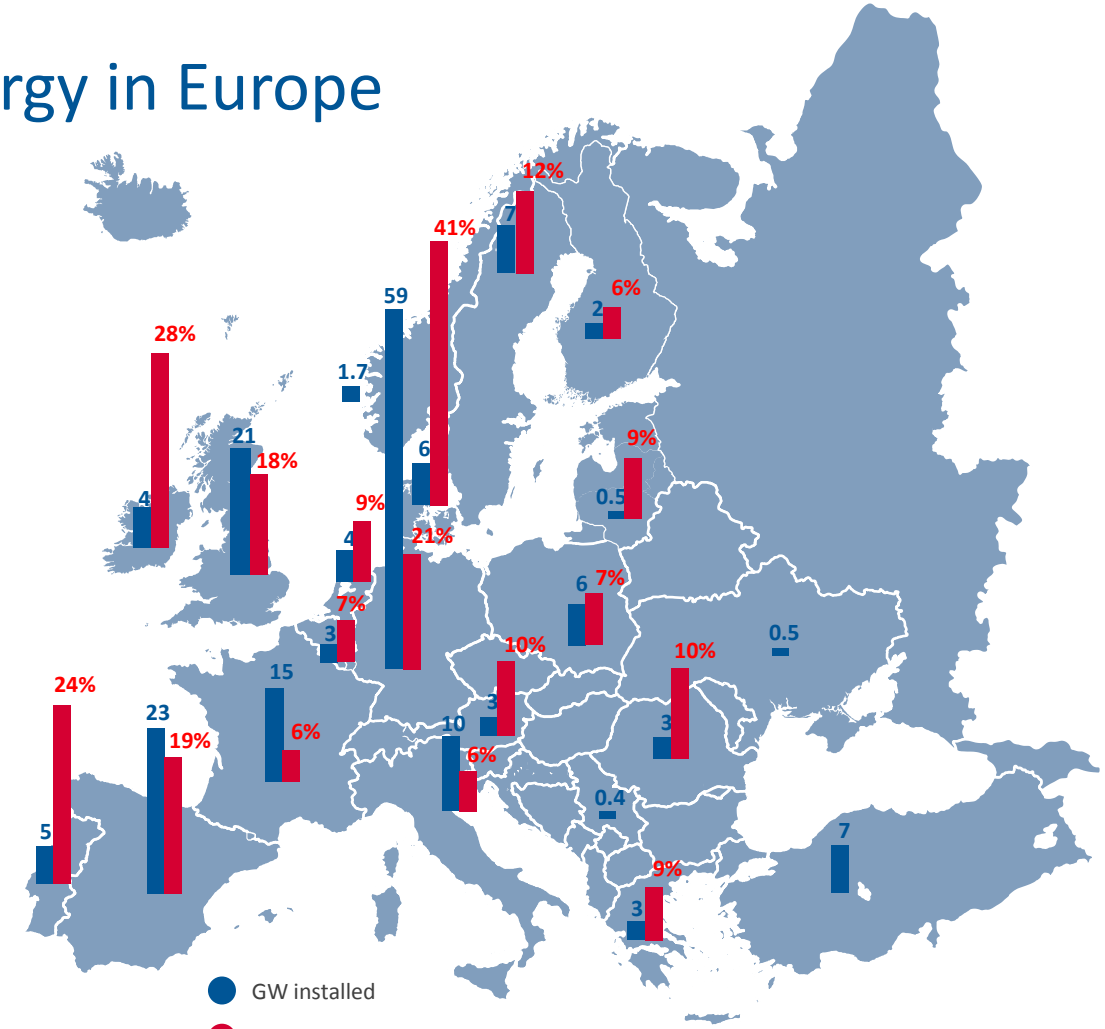
Of which:

18.5 GW

offshore

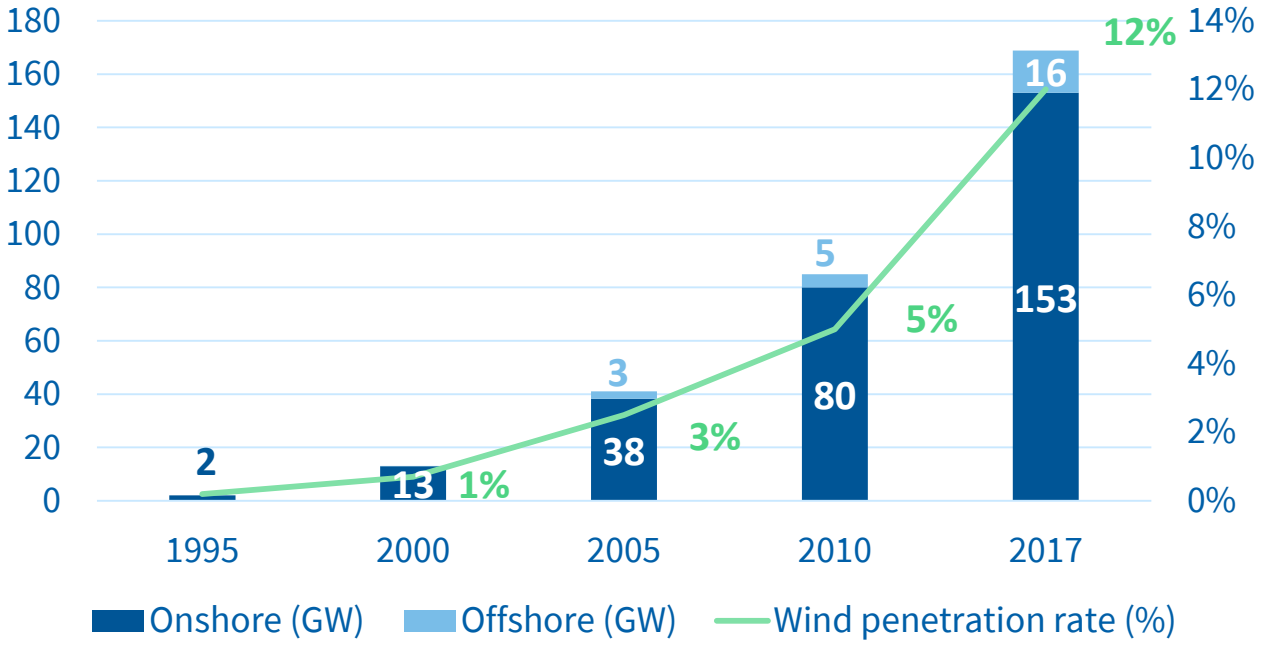
14%

of 2018 EU power demand



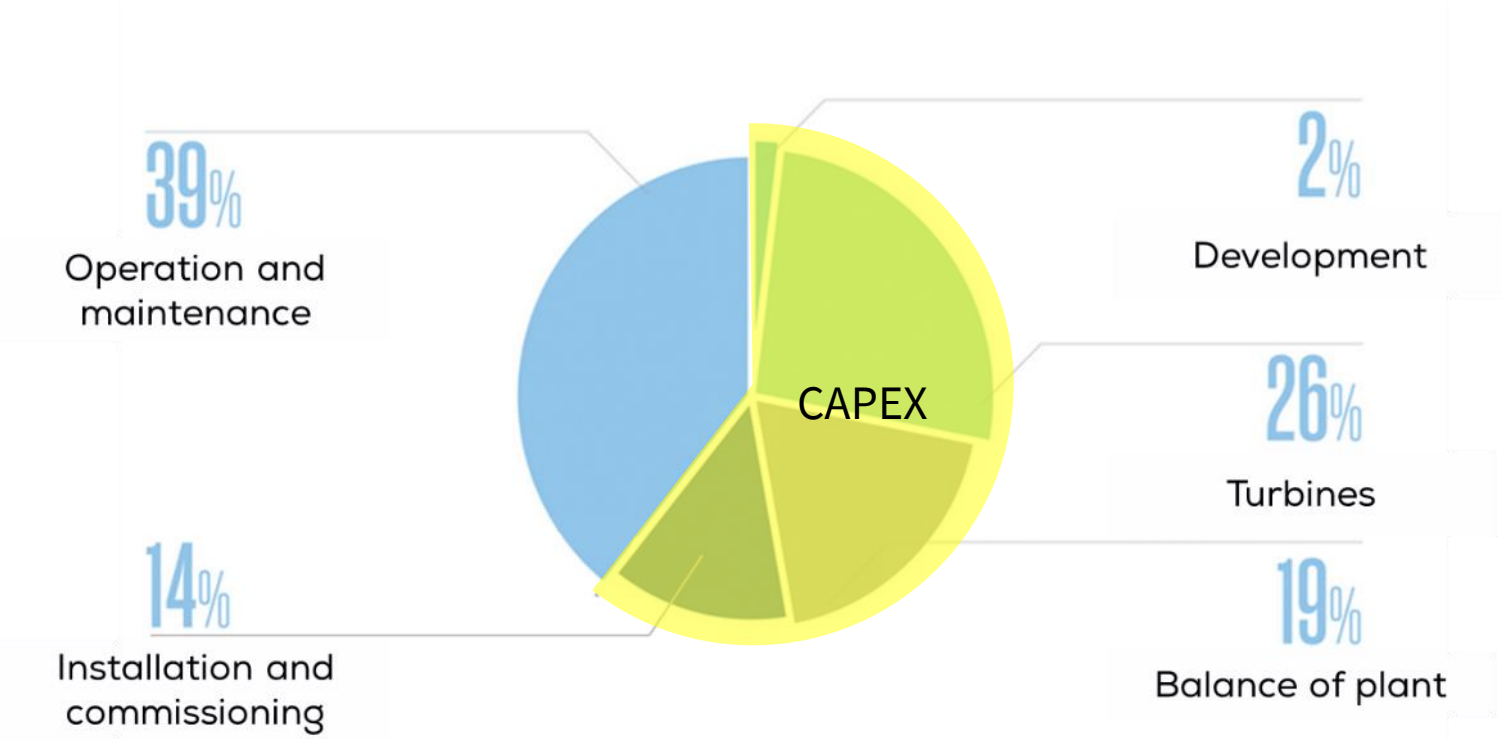
Wind EUROPE

Growth of wind energy in Europe

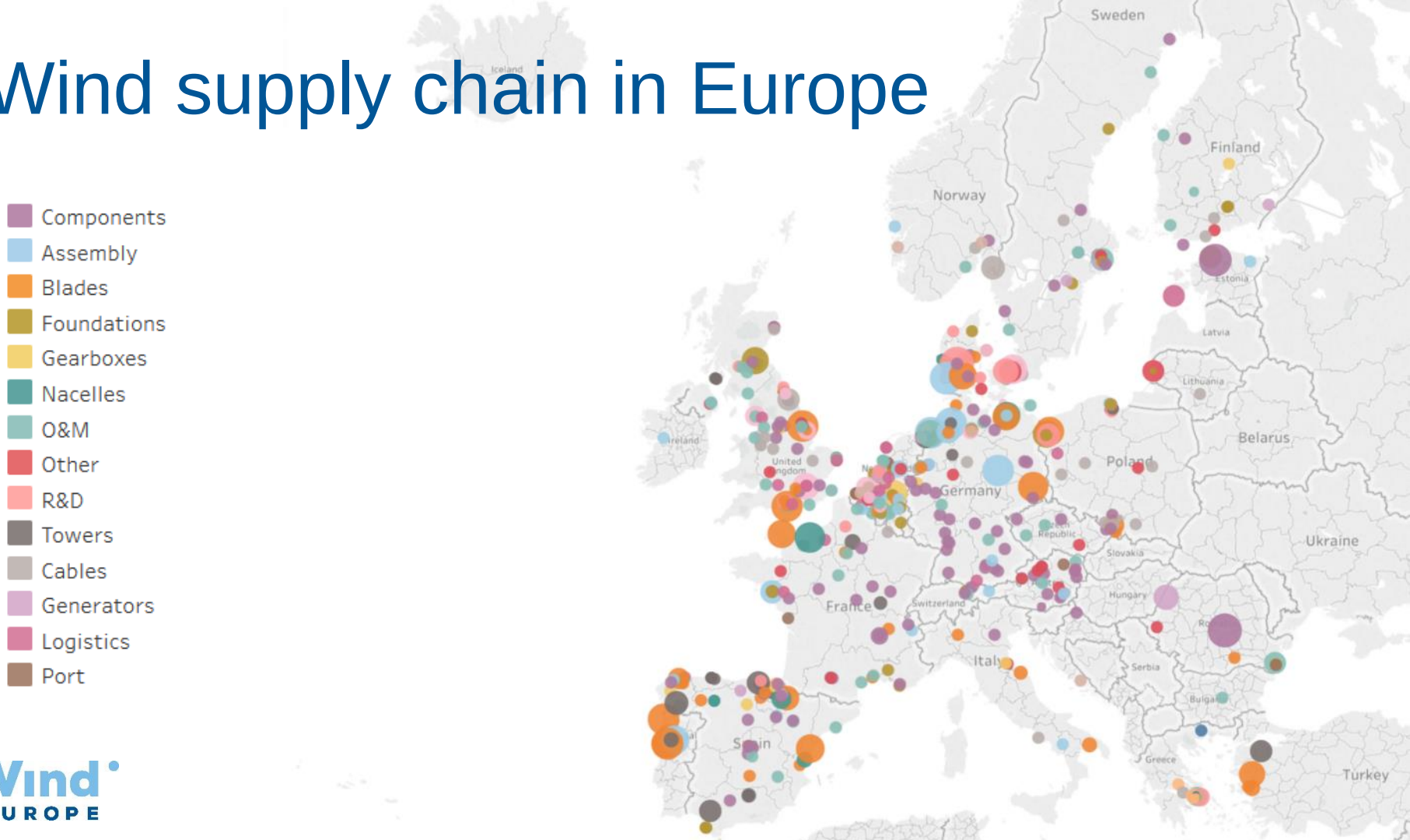


Wind EUROPE

Breakdown of CAPEX & OPEX



Wind supply chain in Europe



Wind EUROPE

Key role of Ports: WE Ports Platform

- 14 Ports in the platform;
- 4 meetings per year;
- Publication "**A statement from the offshore wind ports**" (2017);
- Internal report "**Ports and port services for offshore wind in 2030**" (2018);
- Infographic launch in Hamburg 2018.

Wind EUROPE

A VISION FOR EUROPEAN PORTS

Total installed offshore wind in Europe

2020	2025	2030
28 GW 6,000 turbines	49 GW 8,000 turbines	70 GW 10,000 turbines

Source: WindEurope

PORTS SERVICES IN 2030

BY 2030, PORTS WILL NEED TO ANNUALLY SUPPORT:

O&M	Installations	Repowering	Decommissioning	Life Extension
70 GW 10,000 turbines	7 GW 460 turbines	1 GW 70 turbines	750 MW 600 turbines	1.5 GW 500 turbines

PORTS' CONTRIBUTION TO LCOE REDUCTION

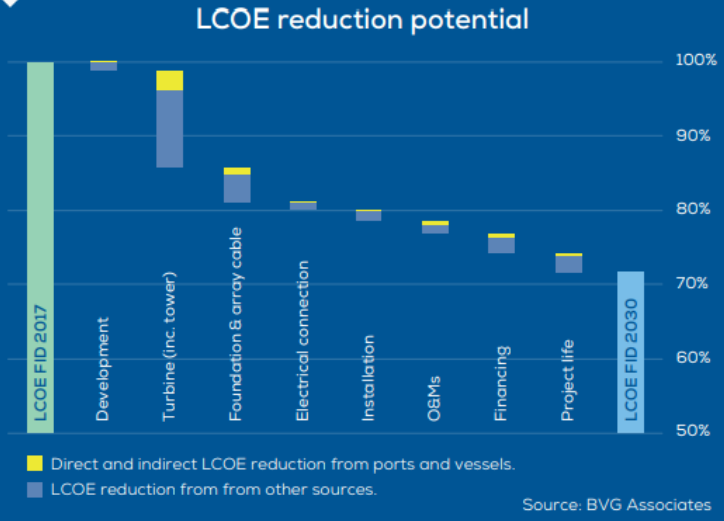
SAVINGS POTENTIAL FROM 2017 TO 2030

***5.3%** Total LCOE reduction

1.8% Direct

3.5% Indirect

*The 5.3% LCOE saving is equivalent to what would be achieved by a project CAPEX reduction of €185,000/MW of new wind farm capacity.



Source: BVG Associates

INVESTMENT REQUIREMENTS

INVESTMENTS IN PORT INFRASTRUCTURE DRIVE COST REDUCTION IN OFFSHORE WIND

Ports will use this money for upgrading, redesigning and adapting existing facilities combined with new infrastructure

€0.5 - €1bn Investment

10% - 20% CAPEX saving

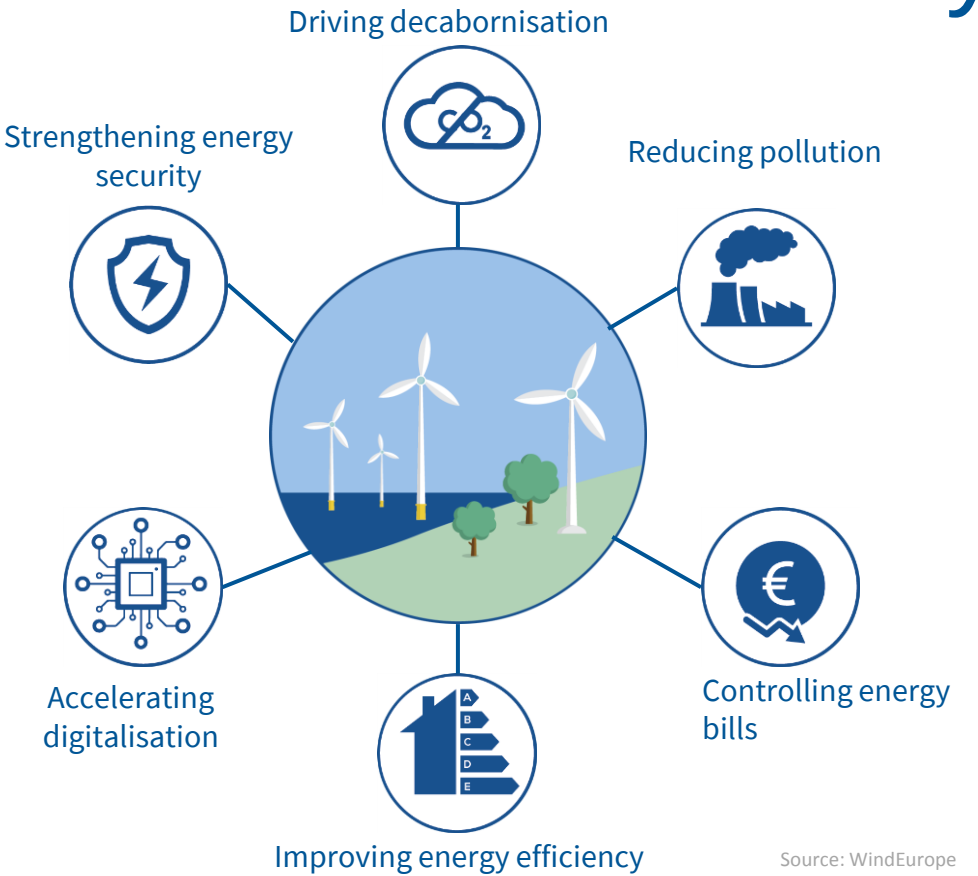
These investments would save the equivalent **CAPEX of €5.5bn** for 30 GW of new offshore installations.

Eemshaven, Netherlands

Leading Offshore Wind Logistics and O&M services

Wind Europe

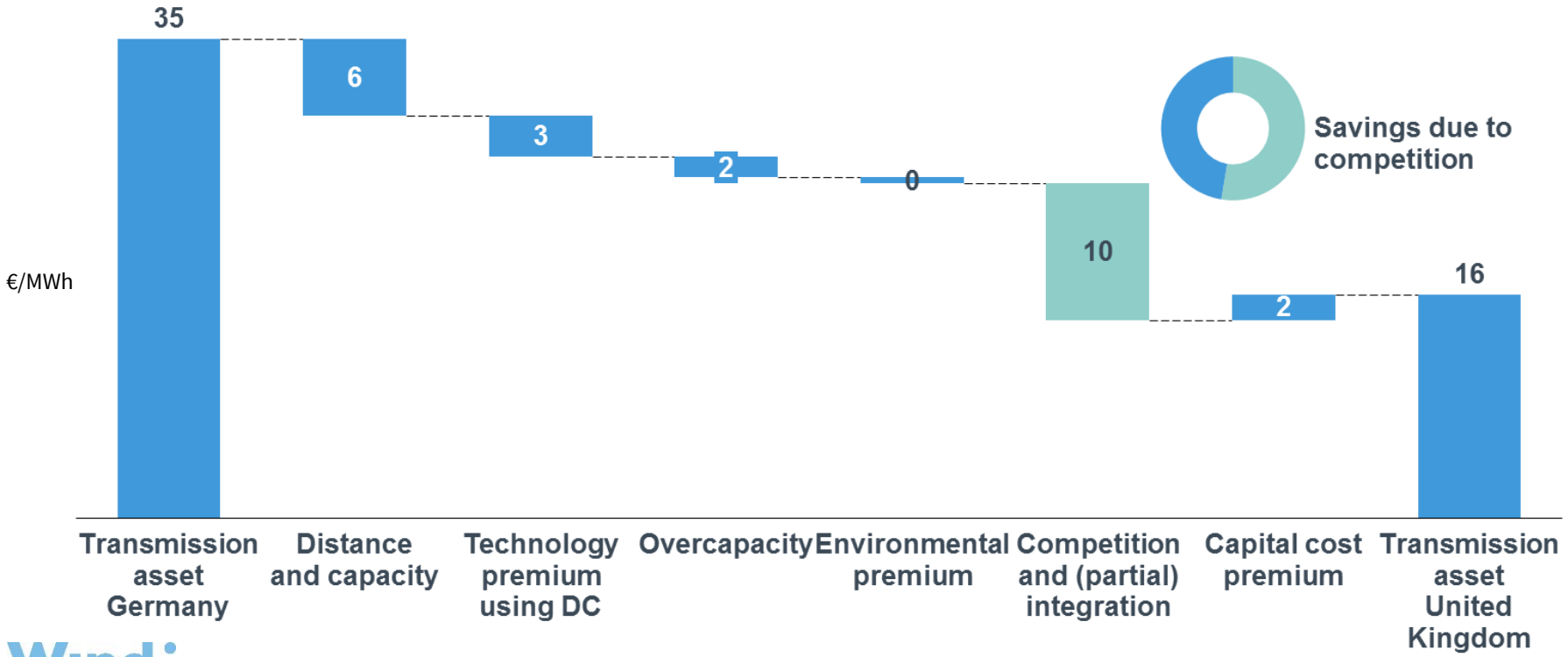
Electrification benefits society



Source: WindEurope

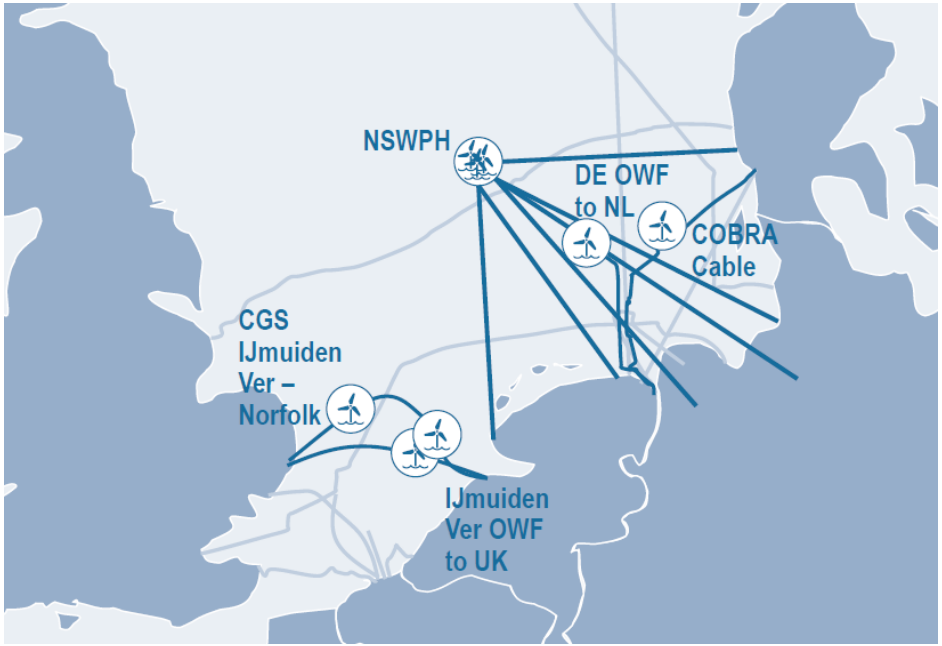
Wind EUROPE

Potential for cost reduction in offshore grid



Source: DIW for Ørsted

Offshore hybrid projects



Source: Roland Berger

Art. 14 Electricity Regulation

- Up to 70% of interconnection capacity available for power flows
- Derogation for a hybrid project negotiated but only included in the legal text as recital 44

Wind EUROPE

Need to align regulations

Get permitting right and co-existance

THANK YOU

MCE@WINDEUROPE.ORG

Session 2: Land-sea interactions and smart grids in the North Sea

Rhona Fairgrieve for Andronikos Kafas, Marine Scotland

Land/Sea Interactions & Smart Grids in the North Sea

Rhona Fairgrieve, on behalf of Marine Scotland Science

22 May 2019

North SEE
A North Sea Perspective on Shipping, Energy and Environmental Aspects in Maritime Spatial Planning

Interreg North Sea Region NorthSEE

Representing: Andronikos Kafas, Malena Ripken, Kirsty Wright, Dominic Plug & Erik Ooms

Land/Sea Interactions

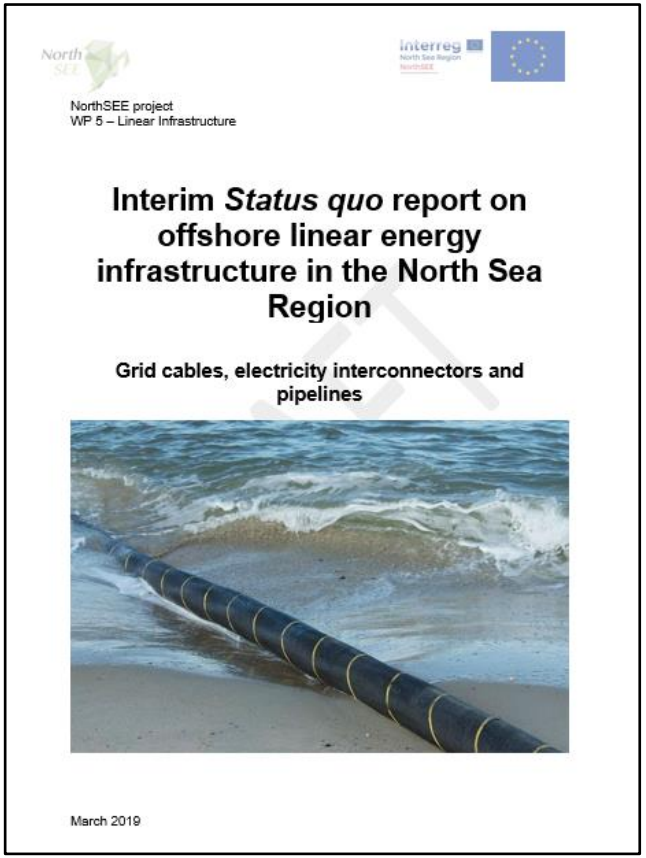
- Surrogate for “ICM” in MSP Directive but not same thing
- Means something different to everyone
- ESPON Project just completed:
  - How can LSI be defined & operationalised for MSP?
  - Potential territorial consequences of MSP on development of energy
  - How to best manage LSI in MSP according to the MSP Directive?
  - How to ensure a proper consultation of relevant stakeholders, authorities & public?

Interreg North Sea Region NorthSEE

Grid Report: Finalised!

Main Findings

- Differences exist in level of established grid planning including planning provisions between NSR countries; barriers are grid connectivity & integration.
- Differences exist between NSR countries in terms of planning criteria and between criteria being Government-led or Industry-led.
- No over-arching regulatory regime facilitating the association of offshore grid with offshore renewable projects across national sea basins in the NSR.
- Role of MSP in grid development involves identifying areas of least constraint to locate cable corridors, which match up offshore energy resource to suitable grid connection points on land & avoid environmentally sensitive areas.
- MSP will become more important as coastal space in the (southern) North Sea becomes more congested; priority planning and spatial designations (e.g. cable corridors) will be required. **LSI will, therefore, come into play as an enabling mechanism for MSP.**

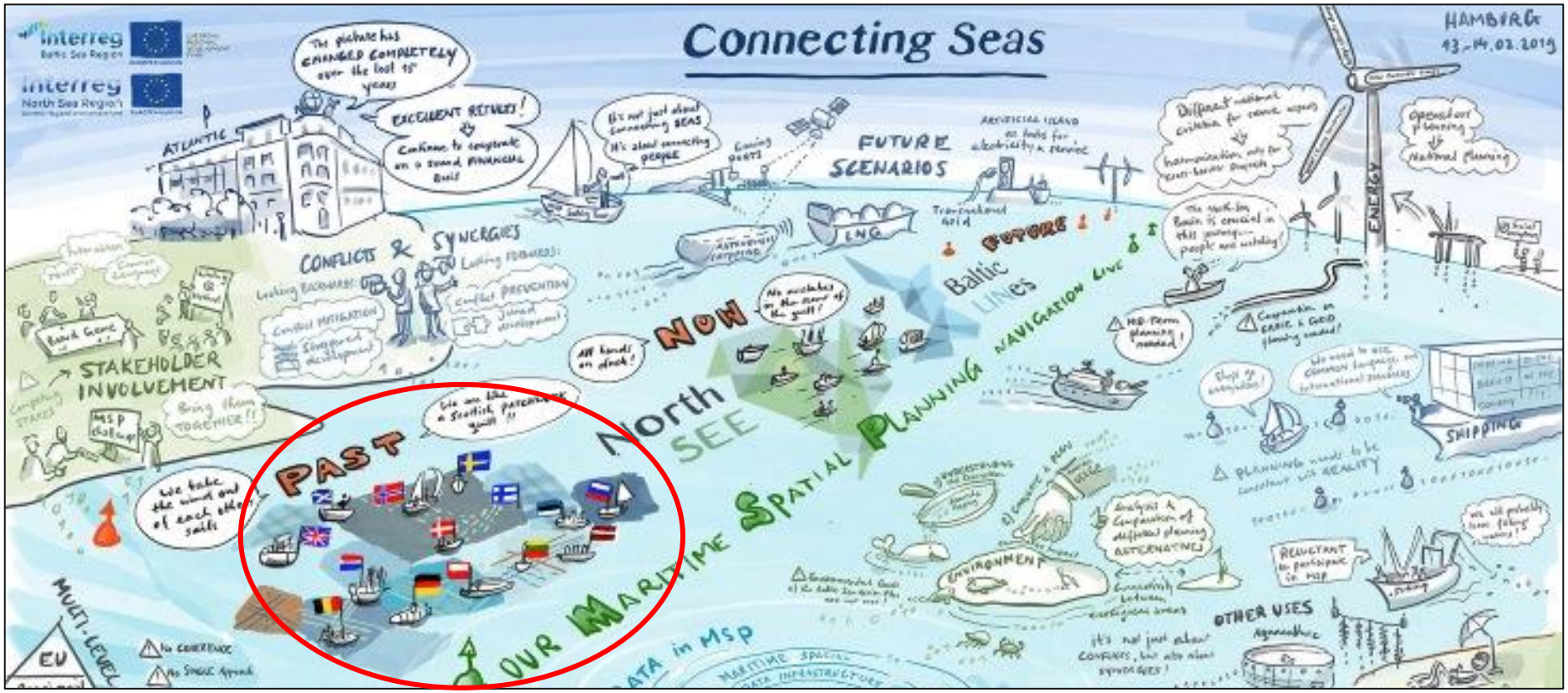


Main Findings continued:

- So far, most NSR wind farms have been connected to shore by an individual electricity cable (a ‘radial’ connection). In future, a ‘meshed’ hub/interconnector approach may facilitate transnational coordination of a NS offshore grid. This may have implications for landward interests in coastal zones & hinterland.
- Fishing, shipping and recreation don’t overlap with cables when properly buried or protected but sediment extraction and cultural heritage do.
- Differences in planning approaches regarding cable routing and gates for transnational interconnectors between neighbouring countries (“over-planning vs “non-planning”) could lead to conflicts.
- NSR needs more landfall points in the Northern North Sea order to meet future needs and more interconnectors are required in the UK and Germany to help them achieve their 2020 and 2030 interconnection targets. However, despite higher interconnection demand in the future, there might be less of a requirement for landfall points if a meshed or more integrated grid solution is implemented. **Changes in technology need to be factored in to LSI requirements.**
- Full Grid Report available shortly from www.northsee.eu

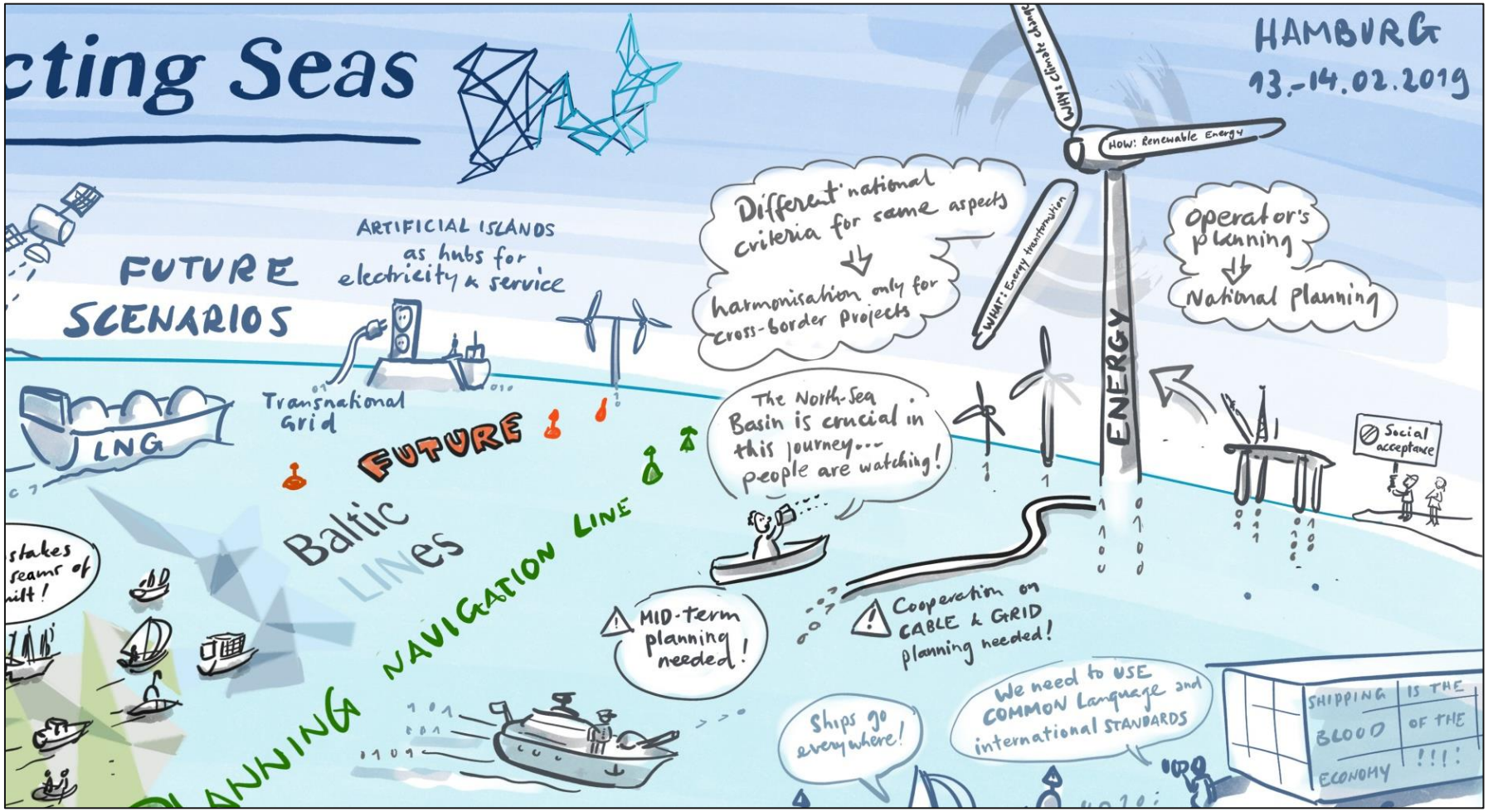
Interreg North Sea Region NorthSEE

Connecting Seas conference – NorthSEE & BalticLINes, Hamburg, February 2019



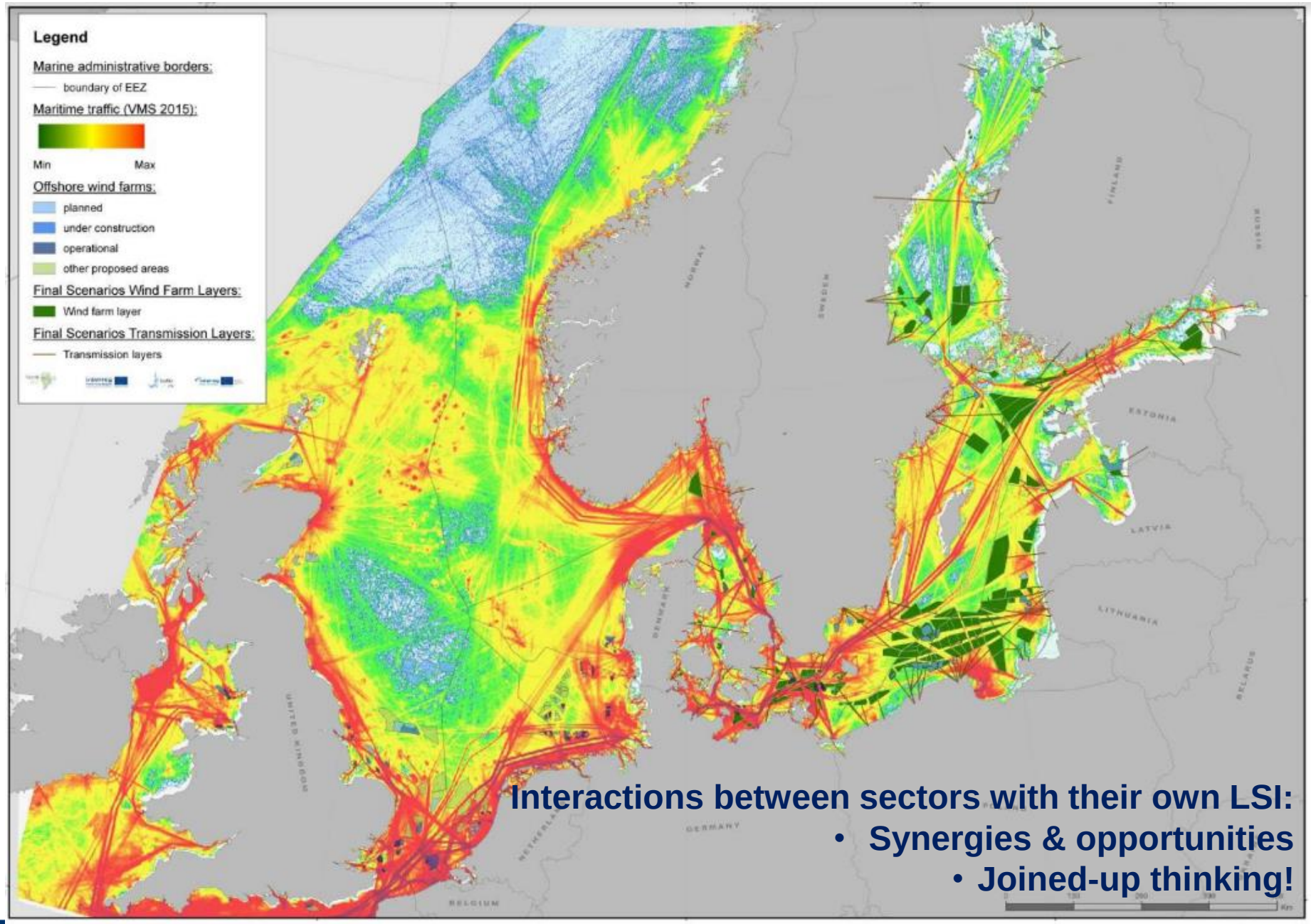
Connecting Seas – Hamburg, February 2019

Energy Main Messages



Future Scenarios

Shipping
&
Energy



Interactions between sectors with their own LSI:

- **Synergies & opportunities**
- **Joined-up thinking!**

Thank you!

Andronikos Kafas: andronikos.kafas@gov.scot

Malena Ripken: malena.ripken@uni-oldenburg.de

Kirsty Wright: kirsty.wright@gov.scot

Dominic Plug: dominic.plug@bsh.de

Erik Ooms: eo@sustainable-projects.eu

Rhona Fairgrieve: rhona.fairgrieve@gov.scot

Interreg North Sea Region NorthSEE

Session 2: Land-sea interactions and smart grids in the North Sea

Jeroen Van Overloop, Policy Advisor, Maritime Security, DG Shipping

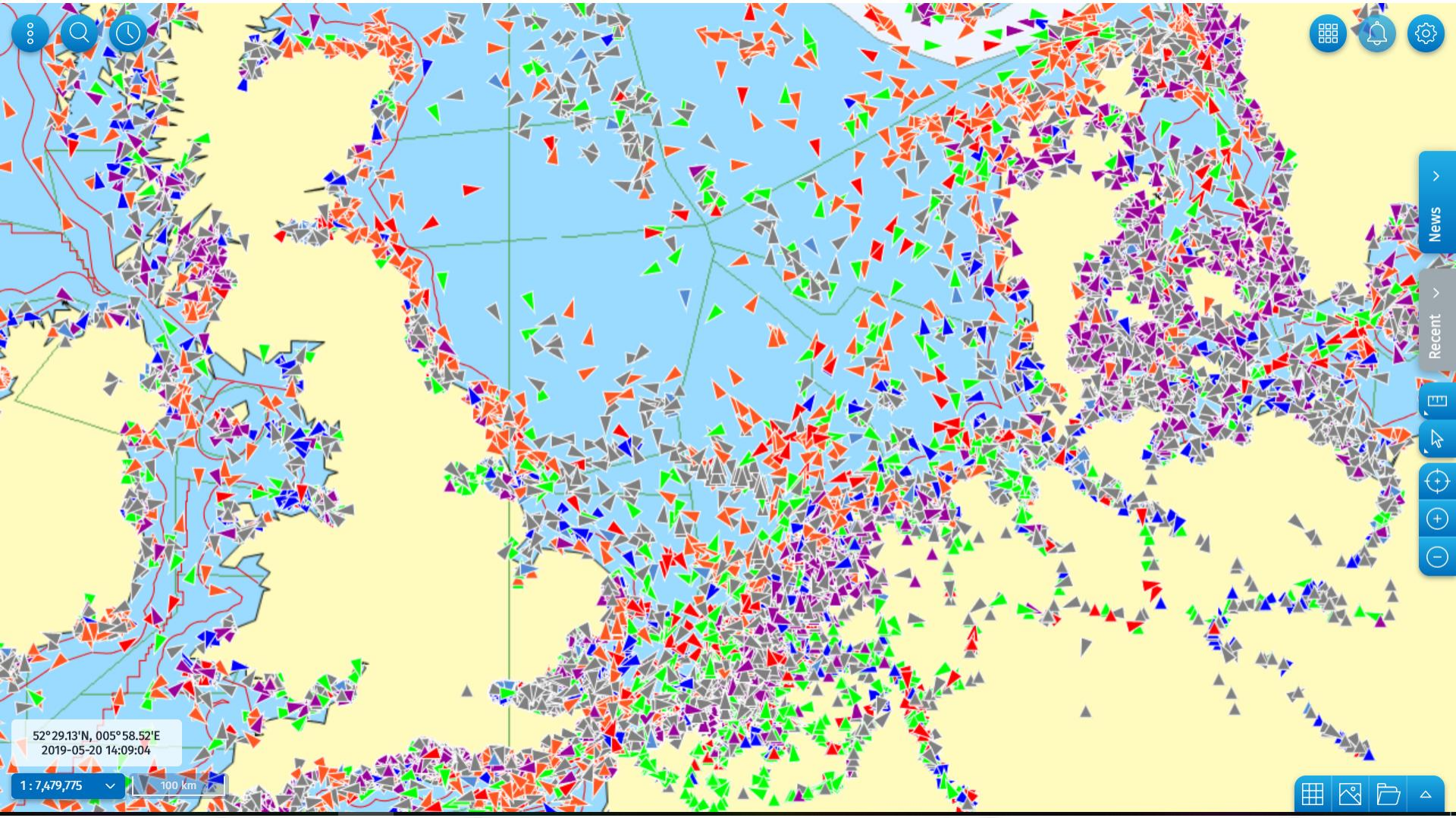
Shipping in the Northsea

Jeroen van Overloop
Directorate – general Shipping

Federale Overheidsdienst
Mobiliteit en Vervoer

.be

What are we talking about?


News
Recent
52°29.13'N, 005°58.52'E
2019-05-20 14:09:04
1 : 7,479,775
100 km

The oldest land – sea interaction

Why?

- Fisheries bring the sea to land, literally;
- Commercial vessel bring goods from everywhere to everywhere;
- Offshore constructies are build on land, brought to see by ships;
- …

Land activities

- Development of ports;
- Chain of supply;
- Shipbuilding activities;
- Hinterland connections

- Education;
- Tourism;
- …

Why is this important to MSP?

- Freedom of navigation and innocent passage
- Ship are free to go where they want to so why do I need to take them in consideration?
- International shipping routes according to UNCLOS
- Ships are not free
  - Money driven

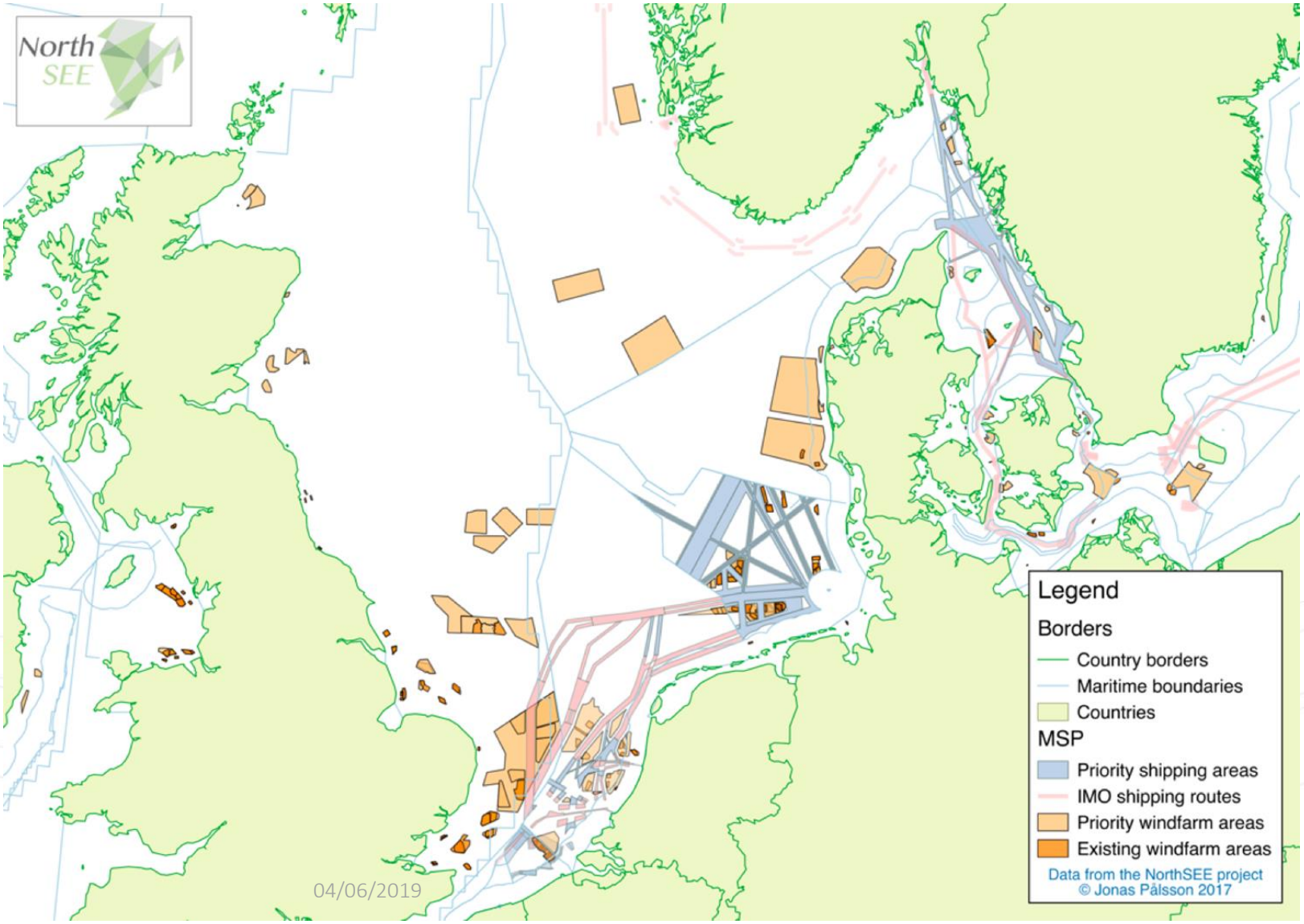
  Small ship uses 1,6 ton of fuel/hour. 600 euro's a ton. Making a detour if one hour is 960 euro extra.

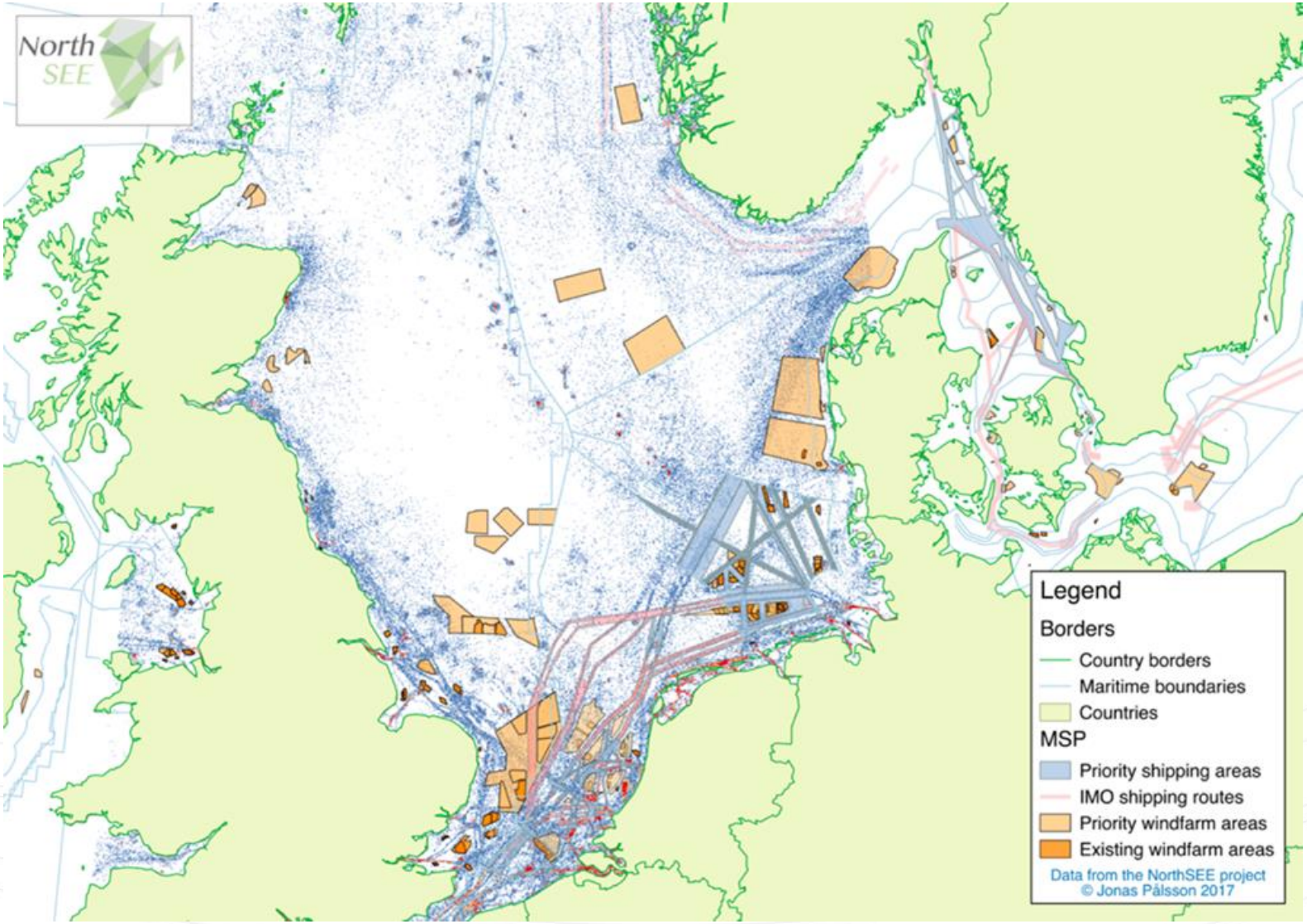
  Belgian windfarms, 3 hours detour, daily operated ship, more than a million a year.

Whatever you do

- Tacle it on an interantional level
- Make sure you speak the same language as your neighbours and the shipping community
- Involve ports in your decission

Some results from NorthSee




North SEE
Legend
Borders
Country borders
Maritime boundaries
Countries
MSP
Priority shipping areas
IMO shipping routes
Priority windfarm areas
Existing windfarm areas
Data from the NorthSEE project
© Jonas Pålsson 2017

Sustainable sollutions

- Transnational cooperation
- Use same techniques/terminology
- Close the gaps
- Use same criteria

Session 2: Land-sea interactions and smart grids in the North Sea

Sarah Holsen, Interreg North Sea Region Programme Representative, Sustainable North Sea Region

North Sea Region Programme projects on MSFD & MSP, coastal areas, and blue-green economy

Knowledge Sharing Workshop: Maritime spatial planning challenges in the North Sea

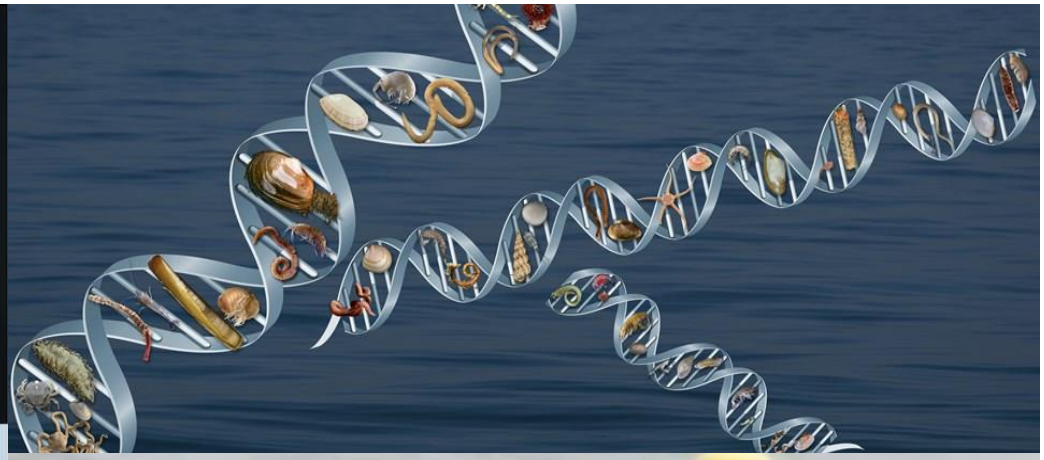
Antwerp

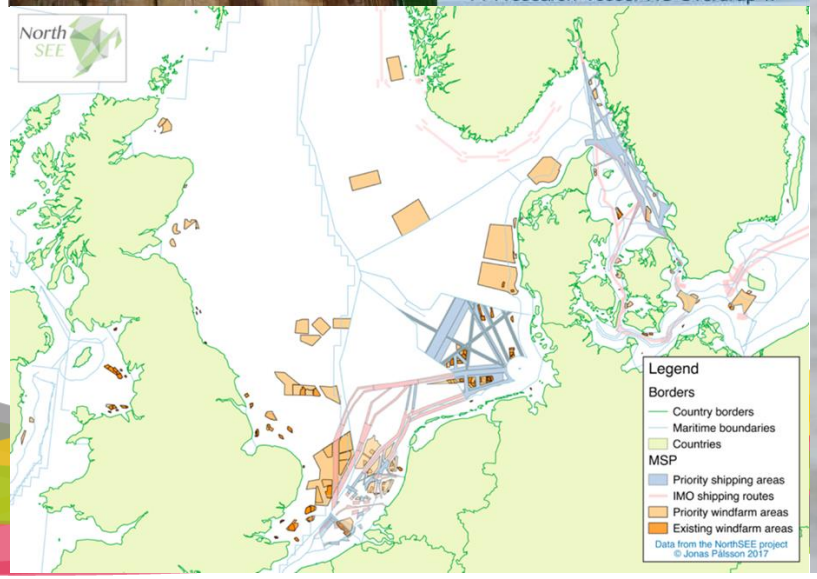
22 May 2019

Sarah Holsen

Interreg VB North Sea Region Programme Area 2014-2020

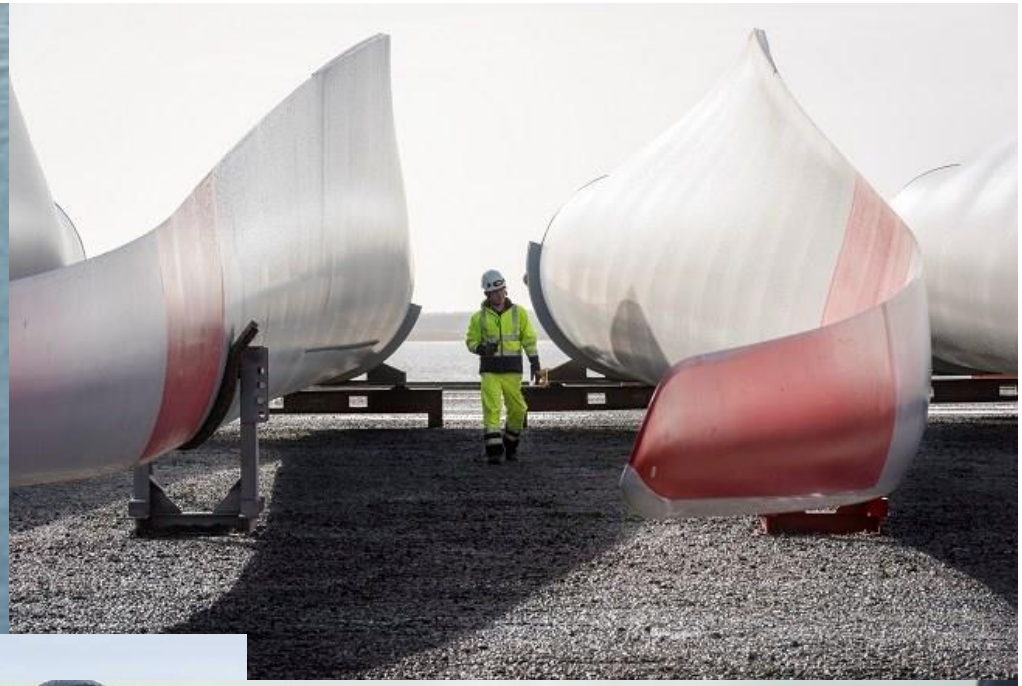
Marine Strategy Framework Directive & Marine Spatial Planning





Coastal areas/zones

Blue-green economy, SMEs & innovation



Conclusions

- North Sea Region Programme supports several projects focusing on MSP, Maritime Strategy Directive, coastal area protection and innovation in blue-green economy
- Much of funding for 2014-2020 has been allocated
- Steering Committee has signaled interest in receiving project applications on MSP issues

Session 3: Data sharing at marine basin for integrating an Ecosystem-Based Approach in MSP

Session 3: Data sharing at marine basin for integrating an Ecosystem-Based Approach in MSP

MSP data exchange through INSPIRE in the Channel and North Sea, Ronan Jarno, Shom

Co-funded by the European
Maritime and Fisheries Fund

SEANSE

SHOM L'océan en référence

MSP data exchange through INSPIRE in the Channel and North Sea

Ronan JARNO, Shom

On data use and sharing (article 10)

- The best available data has to be used to establish the marine plans
- The Member States decide how to organise data and how to share it

On cross-border cooperation (article 11)

The Member States cooperate in order that **the issues of a transnational nature** are taken into account and that the **plans are coherent** at the sea basin level

>> Link between these requirements

The organisation of the data and their sharing can contribute to transboundary cooperation

>> INSPIRE Directive: a framework for spatial data exchanges

The INSPIRE Directive 2007/2/EC was created to facilitate spatial data dissemination, availability and use in the European Community. It provides standards and protocols to exchange data and metadata across Europe.

It relies on the major principle that data should be collected only once and kept where it can be maintained most effectively: "**Collect once, Use many**!"
Thanks to INSPIRE roadmap and timeline, an increasing amount of data is made available.

Considering the presented approach

>> The objectives of the study on data in SEANSE project, related to the Channel and North Sea are to

- Identify in what extent the data needs for MSP implementation is available in INSPIRE compliant formats
- Encourage and enhance data sharing in the area

>> The work on data in SEANSE project includes the setting up of a **data portal demonstrator** is based on the concept of **harvesting** spatial dataset and associated metadata from existing data portals

>> Main sources harvested

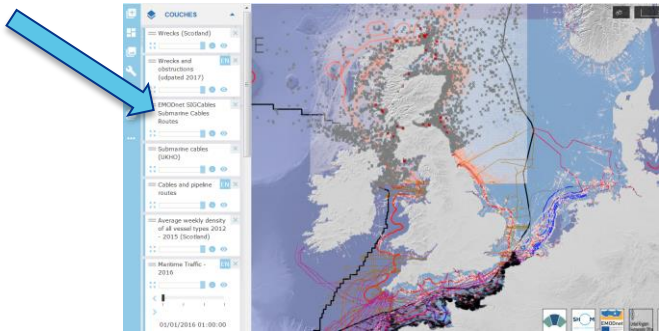
National Marine Data Producers

The Scottish Government
Riaghaltas na h-Alba

SHOM
L'océan en référence

United Kingdom Hydrographic Office

BSH
BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE



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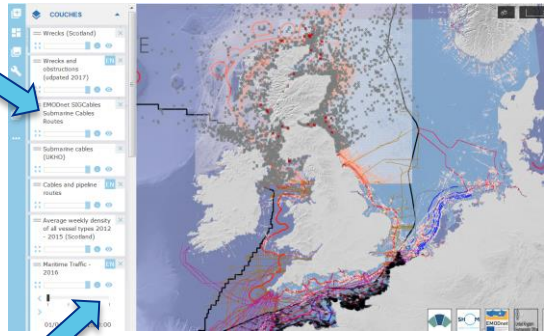

National Marine Planning Portals

marinescotland MAPS NMPI

GeoSeaPortal

marineatlas.be
THE PORTAL TO THE BELGIAN MARINE DATA AND INFORMATION

Marine Management Organisation Marine planning evidence

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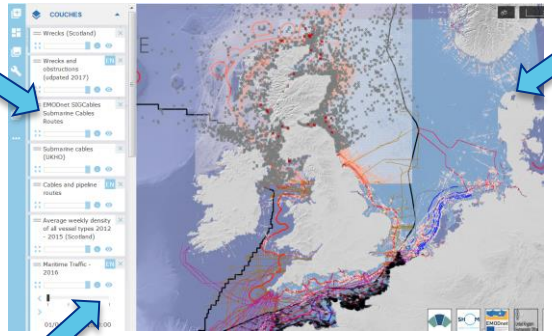

European Sources

EMODnet
European Marine Observation and Data Network

European Environment Agency

INSPIRE - Infrastructure for Spatial Information in Europe

OSPAR COMMISSION

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marinescotland MAPS NMPI

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marineatlas.be
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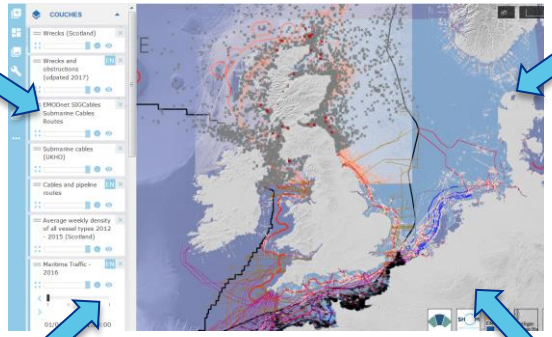

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National Marine Planning Portals

marinescotland MAPS NMPI

GeoSeaPortal

marineatlas.be
THE PORTAL TO THE BELGIAN MARINE DATA AND INFORMATION

Marine Management Organisation Marine planning evidence

Other Sources

PPige NORD PAS DE CALAIS
Plate-forme publique de l'information géographique

DATA GOUV.FR

VLIZ

DATA.GOV.UK Beta
Opening up Government

The data portal

- **Demonstrates the interest of marine spatial data infrastructures** in MSP implementation, in particular to take into account issues of transnational nature, and to share MSP cross-border knowledge

- **Centralises the relevant data from multi-sources**
  - X Ease data access for users
  - X Harvesting process is a way to guarantee that the data is up-to date

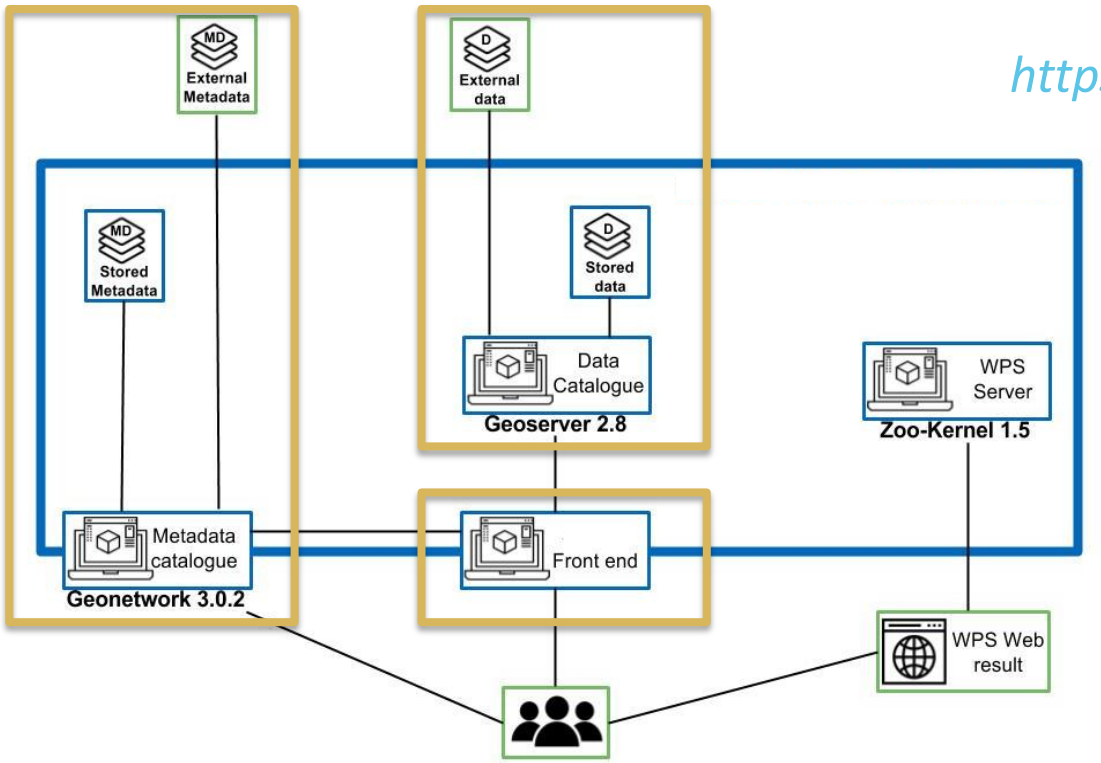
- **Is used to test the feasibility of the harvesting process of the MSP data in the area**

  The implementation of data and metadata into the data portal supports the identification of tehnical gaps, barriers and assets regarding interoperability
  - X between architectures solutions
  - X between datasets from the different sources

Concept : the infrastructure can be easily replicated by other institutions

Technical answer : the portal is based on open-source & already existing components

Items: Geonetwork, Geoserver, Front end based on open-layer



https://seanse.mspdata.eu

Stored data / metadata chart @ viraj from noun project
Software chart @Jemis mali from noun project
WPS Web result @dinosoft labs
User chart @ DTE MEDIA from Noon Project

Improving data and metadata interoperability can be achieved by fulfilling INSPIRE requirements

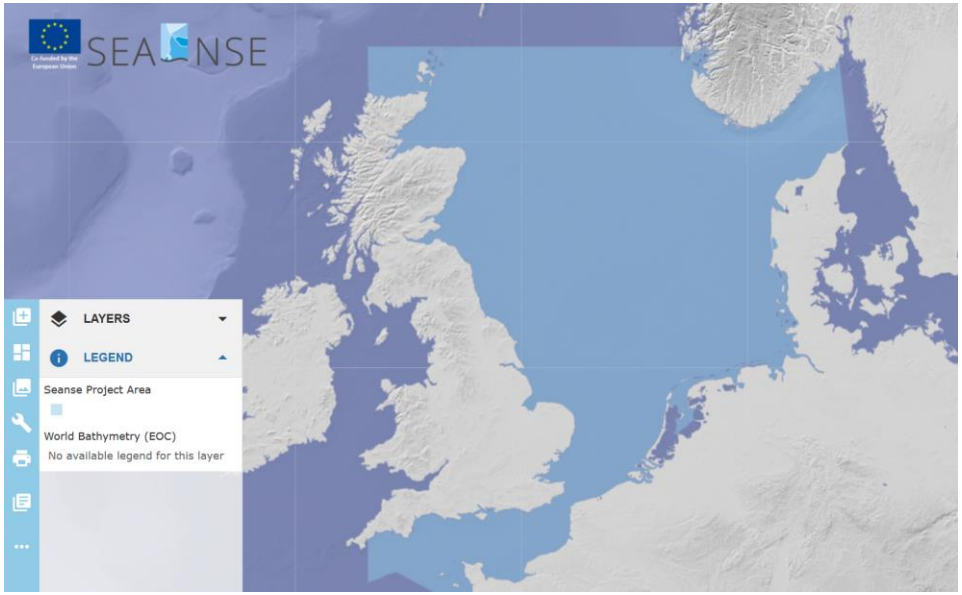
Many datasets themes relevant for MSP are concerned by the Inspire Directive (hydrography, protected sites…)

Inspire Directive compliancy

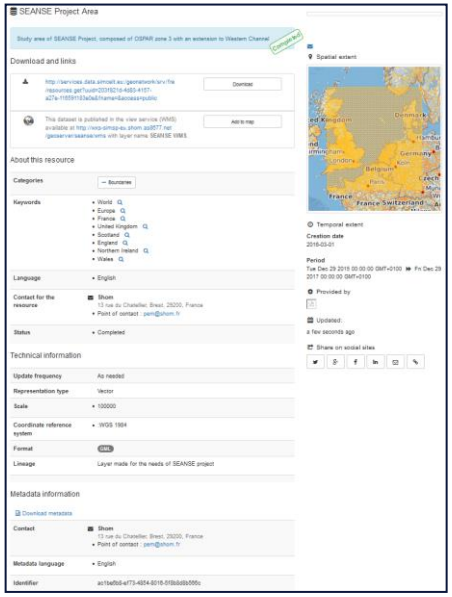
- Data available as Web Services
- Data associated with complete metadata (mendatory fields filled)
- Associated metadata organised in a catalogue
- Data can be dowloaded (WFS or direct download)

INSPIRE compliant data and metadata during the process of creation of the information

Example:



SEANSE project area created during the project
The spatial data can be displayed on the portal
It is available as Web Service (WMS and WFS)



A metadata record is associated with the spatial data
The mandatory fields are filled
The metadata record is available in a catalogue which can be harvested

Internationalisation of geoportals is of great importance:

- identification of data of reference from the different countries of a same sea basin
- language is one of the first barrier to MSP data sharing between countries

Use web page to exploit the full potential of the data

Member States use a number of indicators that can be hard to understand and to compare (Strategic Environmental Assessment, Cumulative Environmental Assessment, …) Some tools can help to understand and compare these indicators like web pages.

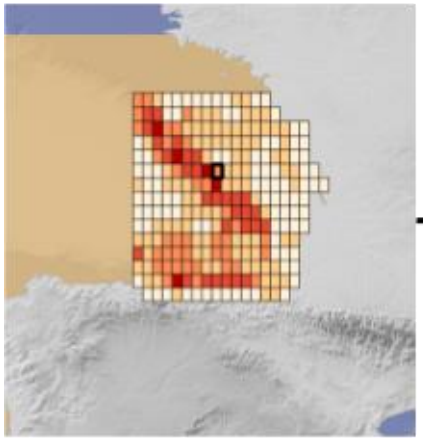
Example of Carpe Diem Cumulative Impacts Assessment Method, French Agency of biodiversity (SIMNORAT project)

- The final indicator is a complex data
- The final indicator is subdivided into sub-indicators

→ Web technology can ease the understanding of complex data

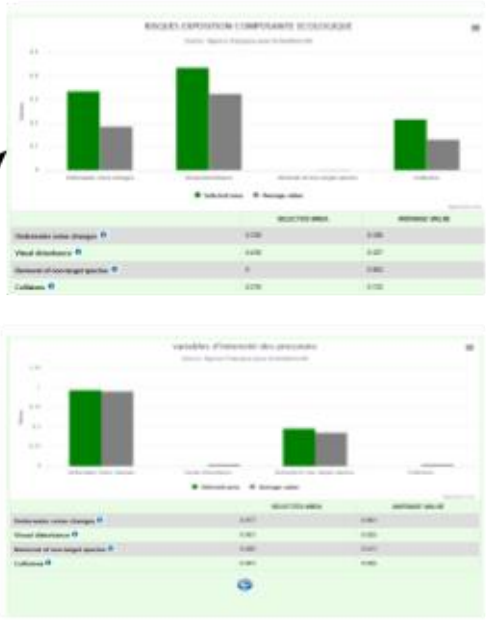
ENHANCING WEB SERVICE QUALITY

USE WEB PAGE TO EXPLOIT THE FULL POTENTIAL OF THE DATA



Map displaying the value of the final indicator

Final indicators of the selected area compared with average indicator



Sub-Indicators explaining the main indicator

https://simnorat.mspdata.eu

On-going in SEANSE project: design of a tool to compare methodologies

- **Ease the understanding of a complex data,** such as a cumulative impact method indicator
- **Test methodologies** : What is the output indicator result when users change calculation parameters and / or input layers?
- **Compare methodologies**

Input pressures (dredging, cables…)

Process tool on the portal

Output : Pressure impact grid

Data work in SEANSE:

Focus on web services harvesting process

Interoperability concerns many issues. The study is resulting in the exploration of specific actions on data, metadata and tools

SEANSE workshop on 22 May 2019:

Shom's expectations: identify

- other initiatives,
- tools for cross-border data sharing,
- challenges of data uses

SIMNORAT and SIMWESTMED key messages/outputs

Stakeholders expect to access to an european MSP platform

THANK YOU FOR YOUR ATTENTION!

Session 3: Data sharing at marine basin for integrating an Ecosystem-Based Approach in MSP

Support of EMODnet to MSP data exchanges, Jan-Bart Calewaert, Head of the EMODnet Secretariat

EMODnet
European Marine Observation and Data Network

Your gateway to marine data in Europe

EMODnet
European Marine Observation and Data Network

SEANSE - Knowledge Sharing Workshop
Maritime spatial planning challenges in the North Sea

seascape BELGIUM

Jan-Bart Calewaert
Head of the EMODnet Secretariat

EMODnet Secretariat
janbartcalewaert@emodnet.eu

The European Marine Observation and Data Network (EMODnet) is financed by the European Union under Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund.

EMODnet
European Marine Observation and Data Network

Conclusions
EMODnet 4 MSP

- Data & data products (maps) accross 7 disciplines: environmental & human activities data and information
  - Mainly useful for **CROSS-BORDER collaboration/exchange**
- **Know how / best practices**
  - Data management & sharing (standards, vocabs, interoper. protocols, etc): **FAIR data sharing principles**
  - Spatial Data Infrastructures (SDIs)
- **Repository for data&products** (e.g MSplans): **data ingestion! DATA IS ONLY AS GOOD AS WHAT WE GET**
- Platform for data exchange accross MStates
- Assist with data adequacy assessments (at regional level)
- Facilitate applying **EBA to MSP**

2

What is EMODnet?

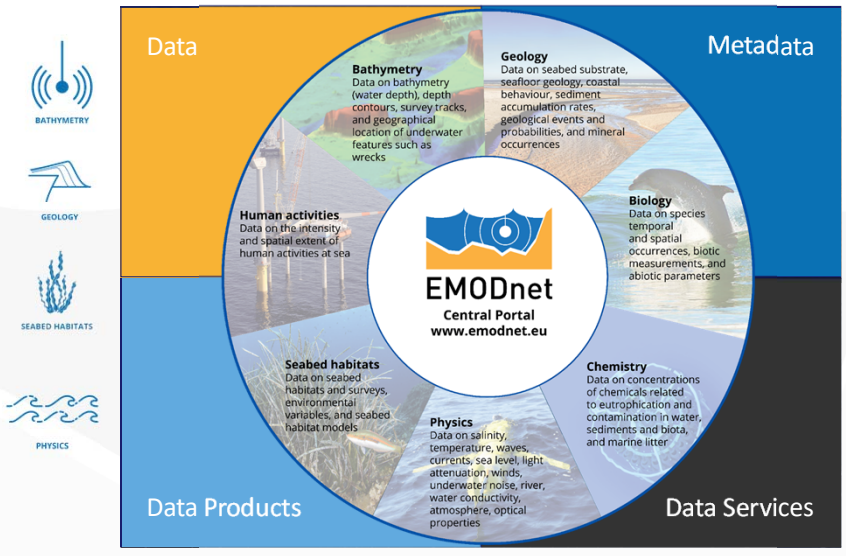
Your gateway to marine data in Europe

- A network of 150+ organisations supporting the EU's Integrated Maritime Policy via its Marine Knowledge 2020 Strategy.
- Partners work together to
  - observe the sea,
  - process the data according to international standards
  - make that information freely available as interoperable data layers and data products.

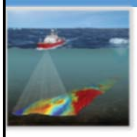
Collect data once and use it many times

3

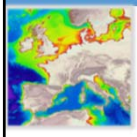
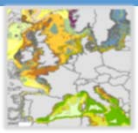
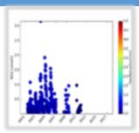
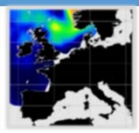
7 EMODnet Data Portals



Thematic DATA coverage by the portals

Bathymetry	Geology	Seabed habitats	Physics	Chemistry	Biology	Human activities
						
Survey tracks	Seabed substrate	Seabed habitat maps (broad-scale and specific per basin)	Wave height and duration	Acidity	Occurrences and abundances of species of:	Aggregate extraction
Water depth and depth profiles	Sediment accumulation rates	Individual seabed habitat maps from surveys	Sea temperature	Antifoulants	Phytoplankton	Aquaculture
Undersea features	Seafloor lithology	Environmental variables influencing habitat type (depth, salinity, currents, light, …)	Wind speed and direction	Chlorophyll	Zooplankton	Cultural heritage
Wrecks	Seafloor stratigraphy		Salinity	Dissolved gases	Macro-algae	Dredging
High resolution bathymetry in coastal areas	Coastal behaviour		Horizontal speed of the water column	Fertilisers	Angiosperm	Fisheries
	Geological events and probabilities		Water clarity	Hydrocarbons	Fish	Hydrocarbon extraction
	Mineral occurences		Changes in sea level	Marine litter (micro, beach, seafloor)	Reptile	Traffic in main ports
			Inflow from rivers	Heavy metals	Benthos	Ocean energy facilities
			Water conductivity / biochemical parameters	Organic matter	Bird	Pipelines and cables
			Atmospheric parameters	Polychlorinated biphenyls	Sea mammal	Protected areas
			Underwater noise	Pesticides and biocides		Status of bathing sites
				Radionuclides		Vessel density
				Silicates		Waste disposal (solids)
						Wind farms
						Other forms of area management/ designation

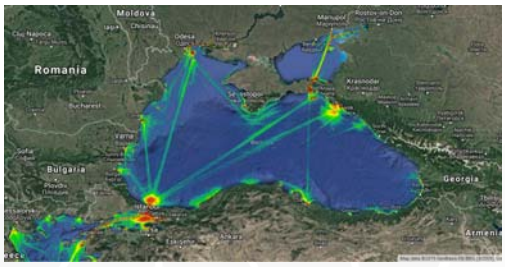
Thematic DATA PRODUCT coverage by the portals

Bathymetry	Geology	Seabed habitats	Physics	Chemistry	Biology	Human activities
						
Digital Terrain Model of:	**Maps** of:	**EMODnet broad-scale seabed habitat map for Europe (EUSeaMap)**	**Time series**	**Concentration maps using DIVA software**	**Map viewer** of:	**Map viewer** of:
Survey tracks	Seabed substrate	**Confidence maps**	**Dynamic plots**	**Dynamics plots**	Phytoplankton	Aggregate extraction
Water depth and depth profiles	Sediment accumulation rates	**Maps** of:	**Profiles**	**Profiles** of:	Zooplankton	Aquaculture
Undersea features	Seafloor lithology	Seabed habitat maps (broad-scale and specific per basin)	**Statistics** (trends, max, min, average, …)	Acidity	Macro-algae	Cultural heritage
Wrecks	Seafloor stratigraphy	Individual seabed habitat maps from surveys	**Maps** of:	Antifoulants	Angiosperm	Dredging
High resolution bathymetry in coastal areas	Coastal behaviour	Environmental variables influencing habitat type (depth, salinity, currents, light, …)	Wave height and duration	Chlorophyll	Fish	Fisheries
	Geological events and probabilities		Sea temperature	Dissolved gases	Reptile	Hydrocarbon extraction
	Mineral occurences		Wind speed and direction	Fertilisers	Benthos	Traffic in main ports
			Salinity	Hydrocarbons	Bird	Ocean energy facilities
			Horizontal speed of the water column	Heavy metals	Sea mammal	Pipelines and cables
			Water clarity	Organic matter	**Dynamic gridded abundance plots showing geographical variability of species** of:	Protected areas
			Changes in sea level	Polychlorinated biphenyls	Benthos	Status of bathing sites
			Inflow from rivers	Pesticides and biocides	Birds	Vessel density
			Water conductivity/biogeochemical parameters	Radionuclides	Fish	Waste disposal (solids)
			Atmospheric parameters	Silicates	Sea mammals	Wind farms
			Ice cover	Marine litter (micro, beach, seafloor)	Micro-organisms	Other forms of area management/ designation
			Underwater noise		Physoplankton	
					Reptiles	
					Zooplankton	

WHY DOES SHARING MARINE DATA MATTER?

Open sharing of high quality marine data is critical to:

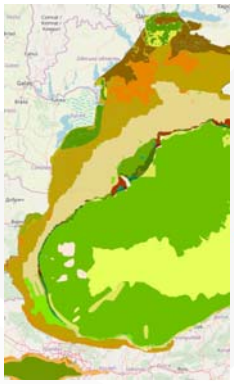
- *Reduce uncertainty about behavior of the sea*
- *Improve our knowledge of the marine environment*
- *Reduce economic operator's costs & stimulate innovation in the blue economy*



Vessel Density map from EMODnet Human Activities portal

EC Marine Knowledge 2020 Strategy:
Knowledge gained by open access to data is needed to deliver smart sustainable growth, to assess the health of the marine ecosystem or to protect coastal communities

WHY DOES SHARING MARINE DATA MATTER *to Generate Knowledge*?



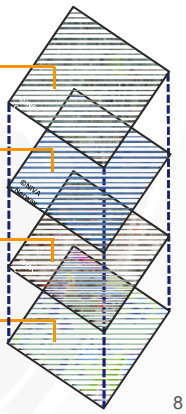
Making EMODnet EUSeaMap

Substrate
E.g. Sand, Mud, Rock

Hydrodynamic Energy
Wave and currents climate at the seabed

Biological Zone
Infralittoral, circalittoral etc

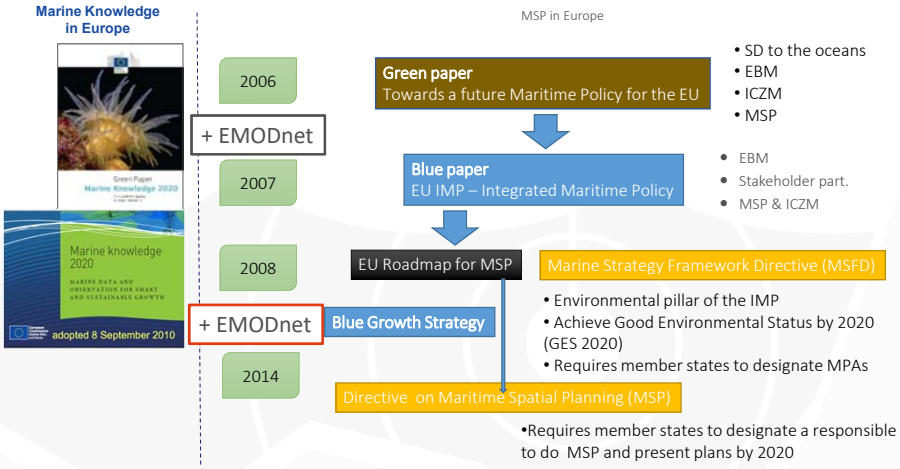
Predictive habitat maps
EUNIS A3.1: Atlantic and Mediterranean High Energy Infralittoral Rock



8

Marine Knowledge in IMP Policy development in Europe

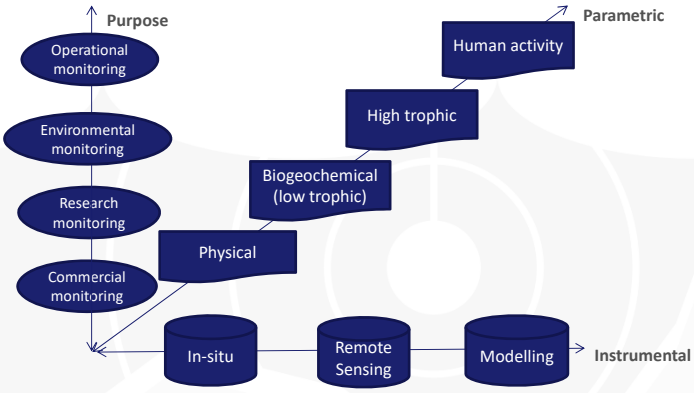
Thanks to Helena Maria Gregório Pina Calado



*To develop their Marine Spatial Plans, Member States are requested to use the '**best available data and information**' and to make use of **'existing instruments and tools for data collection**.'*

Barriers to open marine data: locked & fragmented data

EMODnet
European Marine Observation and Data Network

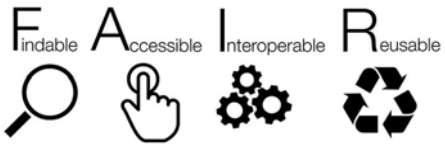


Integrated observing: breaking institutional and community barriers to unlock value of observations

EMODnet
European Marine Observation and Data Network

How to make marine data matter?

Sustainable blue economy and achieving good environmental status require data that are Findable, Accessible, Interoperable and Reusable (FAIR) across multiple parameters, spatial scales and resolutions.



Collect once use many times

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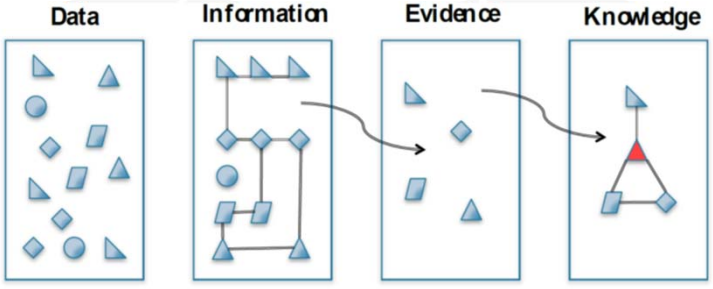
European Marine Observation and Data Network

MSP Data Study – EU MSP platform

Evaluation of data and knowledge gaps to implement MSP

Bronwyn Cahill, Angela Schulz Zehden, Kira Gee, s.Pro GmbH, Germany
Belen Martin Miguez, Jan Bart Calewaert, Seascape Consultants, UK
Emiliano Ramieri, Thetis, Italy

"The demand for actual data for MSP purposes is often overestimated. For actual planning, one does not need much data. What is needed, however, is knowledge about the underlying processes, knowledge to make sound judgements, which indirectly requires data."



https://www.msp-platform.eu/sites/default/files/20170105_data_study_published__0.pdf

MSP Data Study – EU MSP platform (2)

Evaluation of data and knowledge gaps to implement MSP

Bronwyn Cahill, Angela Schulz Zehden, Kira Gee, s.Pro GmbH, Germany
Belen Martin Miguez, Jan Bart Calewaert, Seascape Consultants, UK
Emiliano Ramieri, Thetis, Italy

- *Across European Sea Basins, countries are facing similar issues irt MSP data needs → depends on the scope of activities, and sea uses between Member States and Sea Basins and the type of planning that is being carried out.*
- *Common data gaps are **socio-economic data** for different uses & **socio-cultural information**.*
- *Data and information gaps are not so much about what data is missing but more about **how to aggregate and interpret data in order to acquire the information needed by a planner.***
- *Challenges for Member States lie in **developing second generation plans which require more analytical information and strategic evidence.***
  - *Underlying this is the **need for spatial evaluation tools for assessment, impact and conflict analysis** purposes.*

https://www.msp-platform.eu/sites/default/files/20170105_data_study_published__0.pdf

Marine Spatial Planning

You never start from scratch… and you are not alone

growing marine activities ('blue growth')
and
vulnerable habitats in need for protection

Integrated approach needed (sharing space)

- Users of the sea demand for MSP
- MSP is a participative process;
- MSP = **adaptive management**.
- MSP is legally binding

⇩

Integrated EBA to spatial planning NEEDS DATA

MSP Data Study – EU MSP platform (3)

Evaluation of data and knowledge gaps to implement MSP

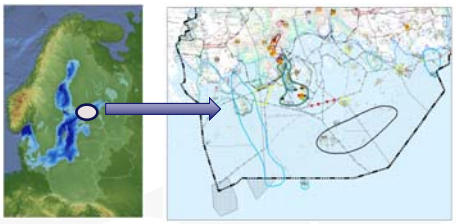
Bronwyn Cahill, Angela Schulz Zehden, Kira Gee, s.Pro GmbH, Germany
Belen Martin Miguez, Jan Bart Calewaert, Seascape Consultants, UK
Emiliano Ramieri, Thetis, Italy

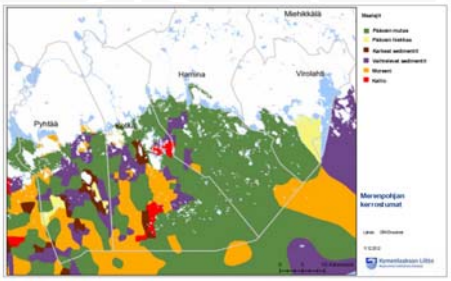
Transnational MSP data needs

- *Transnational MSP data needs are different to national MSP data needs.*
- ***Scope and level of detail of data needed is typically much simpler**, ensuring its **coherence and harmonisation** across boundaries remains a challenge.*
- *Pan-European initiatives, eg. the **European Atlas and EMODnet data portals and Sea Basin Checkpoints have the potential to support transboundary MSP data exchange needs** by providing access to harmonised data sets across European Basins & testing the availability and adequacy of existing data sets to meet commercial and policy challenges.*

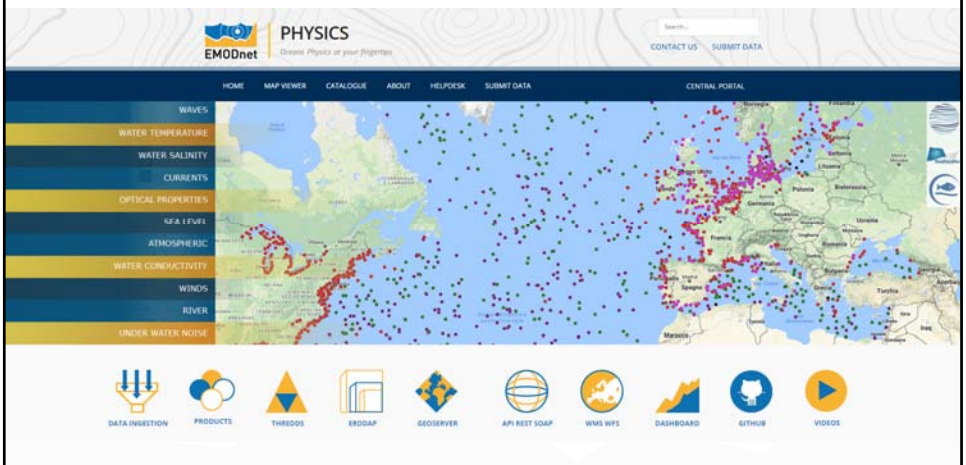
Gulf of Finland Regional Plan for Trade and the Sea Area

- Gulf of Finland Regional Plan for Trade and the Sea Area
- **EMODnet-Geology** seabed substrate data provided to planners.
- Marine geologists (and biologists) interacted with planners to evaluate what is available for marine spatial planning.
- Information can be understood by decision-makers





EMODnet Physics



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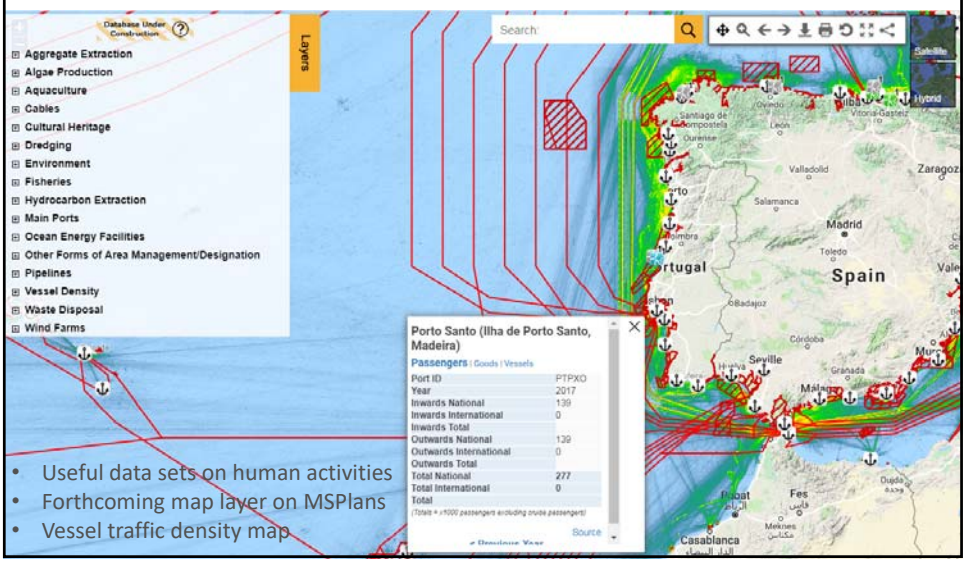
EMODnet Human Activities: View data



- Useful data sets on human activities
- Forthcoming map layer on MSPlans
- Vessel traffic density map

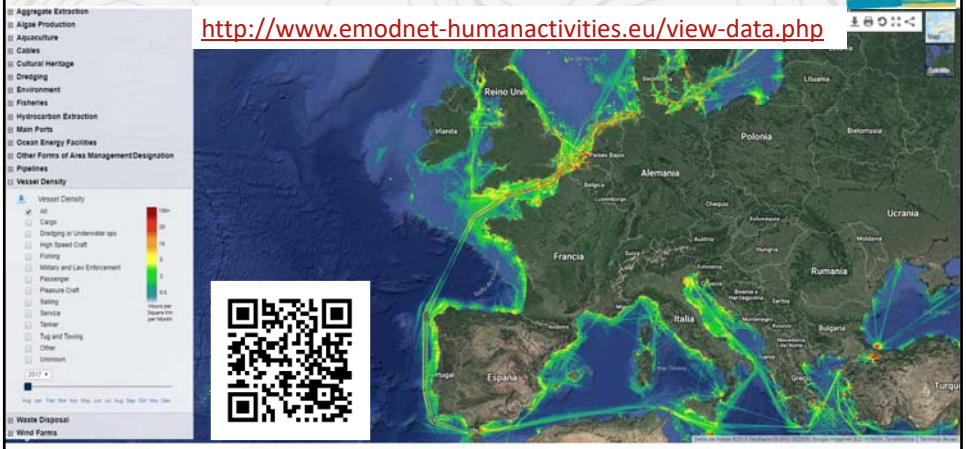
EMODnet

HUMAN ACTIVITIES

Making use of our oceans

European Maritime Day

http://www.emodnet-humanactivities.eu/view-data.php



EMODnet Vessel Density Maps

Vessel density map indicates the monthly location & intensity of several activities:

- ❑ Marine traffic (goods and passengers)
- ❑ Fishing (pelagic and demersal)
- ❑ Tourism, leisure and sports
- ❑ Military, civil protection,
- ❑ Dredging activites
- ❑ Logistic support for:
  - ❖ Mineral & oil exploration and extraction
  - ❖ Marine energy farms (wind, wave, tides)
  - ❖ Offshore aquaculture
  - ❖ Dredging and aggregate disposal.
  - ❖ Marine infrastructures (buoys, cables, pipelines)
- ❑ Others…

What is EMODnet Human Activities

- EMODnet Human Activities aims to facilitate access to **existing marine data on human activity in EU waters**, by building a **single entry point** for geographic information on 14 different themes.
- The information provided through the portal is **collated from a variety of sources**, harmonised and **made interoperable**. Data are **free and free of any restrictions**.
- No new data collection! **Collect data once and use it many times…**

17/05/2019 21

The benefits of *EMODnet HA* for MSP

- **Harmonised data**: same language, same units of measurement, same attributes, same symbols…
- **Detailed metadata**: know the who, what, where and why of our data sets
- **Web services**: direct link from our server to your application. Always up to date
- **Yearly updates**
- **No restrictions whatsoever**: feel free to use our data for any purpose you have in mind
- **No additional effort is requested**
- **Cross-border collaboration is made easier if harmonised data are available**
- **Comparisons with other countries/regions/sea basins are also possible. Very important e.g. for GES!**
- **INSPIRE compliance**

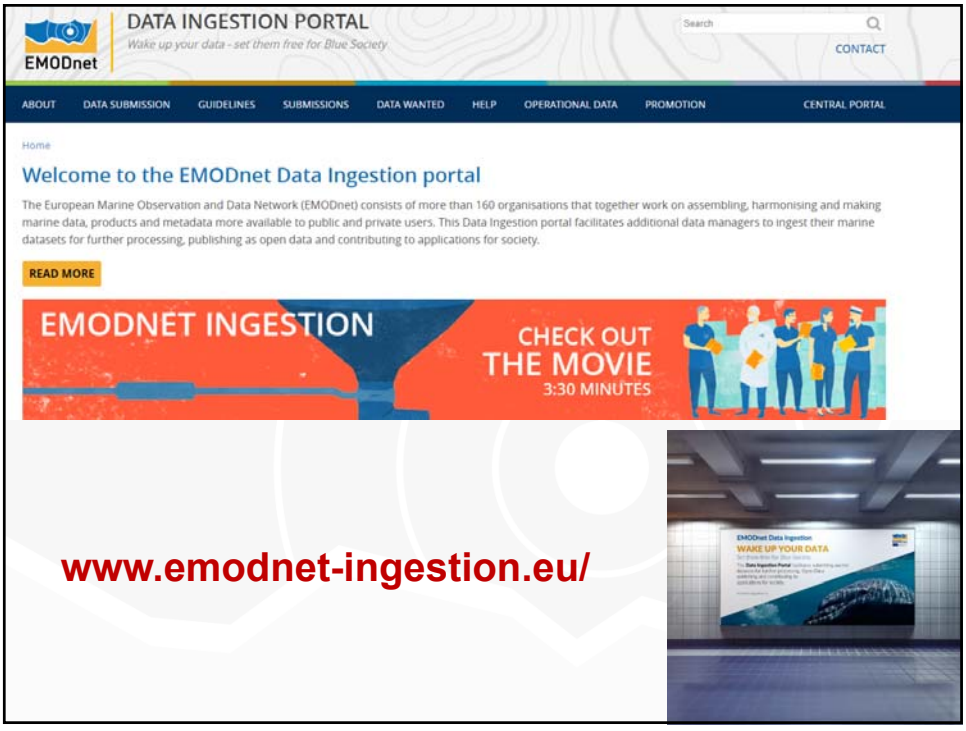
Cross-border MSP!

BUT DATA IS ONLY AS GOOD AS WHAT YOU PROVIDE

Sea-basin Checkpoints challenges

- **Stress tests** → test data against specific end-user challenges
- Examples:
  - *Wind farm siting* challenge: determine the suitability of sites for wind farm development
  - *Oil leak* challenge: speed and direction of the oil?
  - Assess if the network of MPA's consist of a coherent network - connectivity

6/6/2019 23



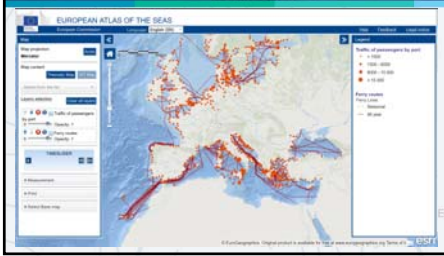
www.emodnet-ingestion.eu/

EMODnet
European Marine Observation and Data Network

Your gateway to marine data in Europe

The European Atlas of the Seas

- Interactive geographic web portal
- from EC/DG MARE
- providing easy access to a large catalogue of maps and statistics
- for anyone seeking marine information



http://ec.europa.eu/maritimeaffairs/atlas/maritime_atlas/

EMODnet
European Marine Observation and Data Network

Conclusions - EMODnet offer for MSP?

- Data & data products (maps) accross 7 disciplines: environmental & human activities data and information
  - Mainly useful for **CROSS-BORDER collaboration/exchange**
- Know how / best practices
  - Data management & sharing (standards, vocabs, interoper. protocols, etc): **FAIR data sharing principles**
  - Spatial Data Infrastructures (SDIs)
- Provide a repository for data and products (spatial plans)
- Platform for data exchange accross MStates
- Assist with data adequacy assessments (at regional level)
- Facilitate applying **EBA to MSP**

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EMODnet
European Marine Observation and Data Network
www.emodnet.eu
Your gateway to marine data in Europe

Session 3: Data sharing at marine basin for integrating an Ecosystem-Based Approach in MSP

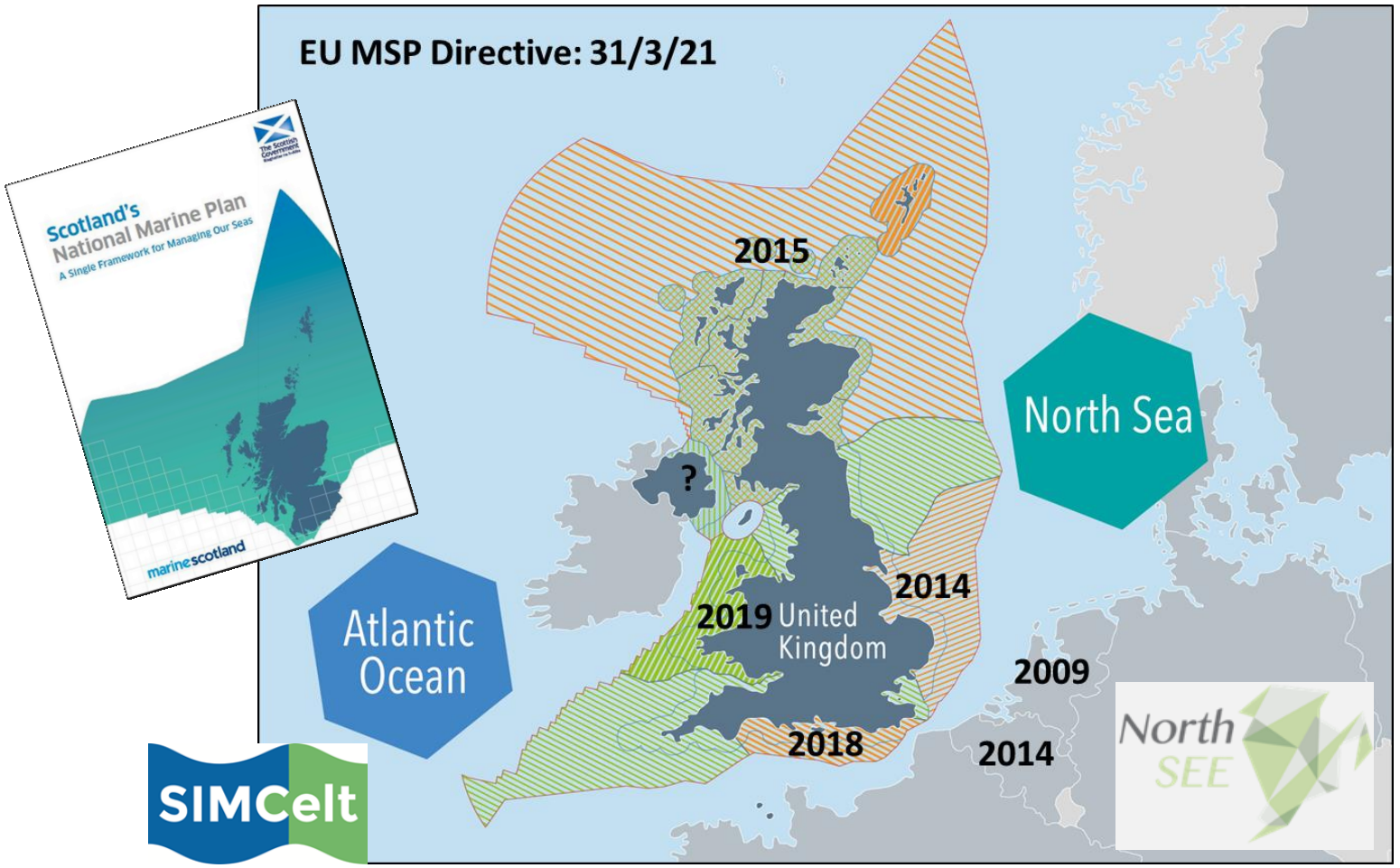
Rhona Fairgrieve, Marine Scotland, NorthSEE project

Data sharing at a marine basin level for integrating an Ecosystem-Based Approach in Maritime Spatial Planning

Rhona Fairgrieve, on behalf of Marine Scotland Science

SEANSE workshop, 22 May, 2019

I am NOT an expert in this!



SIMCelt (2015 – 2018)

- SHOM led technical study to identify, analyse and address technical challenges & gaps for transboundary MSP
- Marine Planners & Geospatial Data experts
- Analysis of data needs & gaps (different stages of MSP)
- Inventory of data: INSPIRE-compliant, published under open or shared licence
- Data portal: enables sharing of transboundary MSP knowledge
- Spatial Data Infrastructure: based on Web Services Data (data harvested from external data services; easily updated)

SIMCelt (2015 – 2018)

Identified challenges:

- Difficulties remain when trying to secure interoperability at transboundary scale
- Differences in data gathered: scale, scope, timescale
- Held in different formats: differences in software used & licence policies
- Neighbours not being mandated to share data with other countries in same sea basin
- Everyone prefers their own symbols & colours!

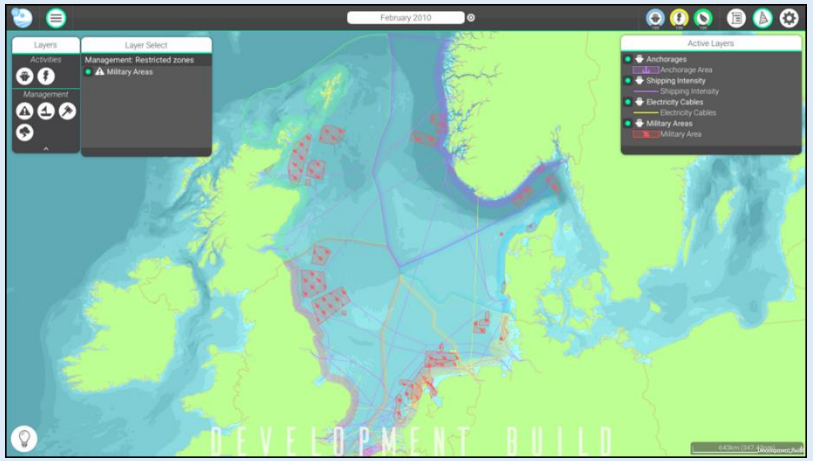
SIMCelt (2015 – 2018)

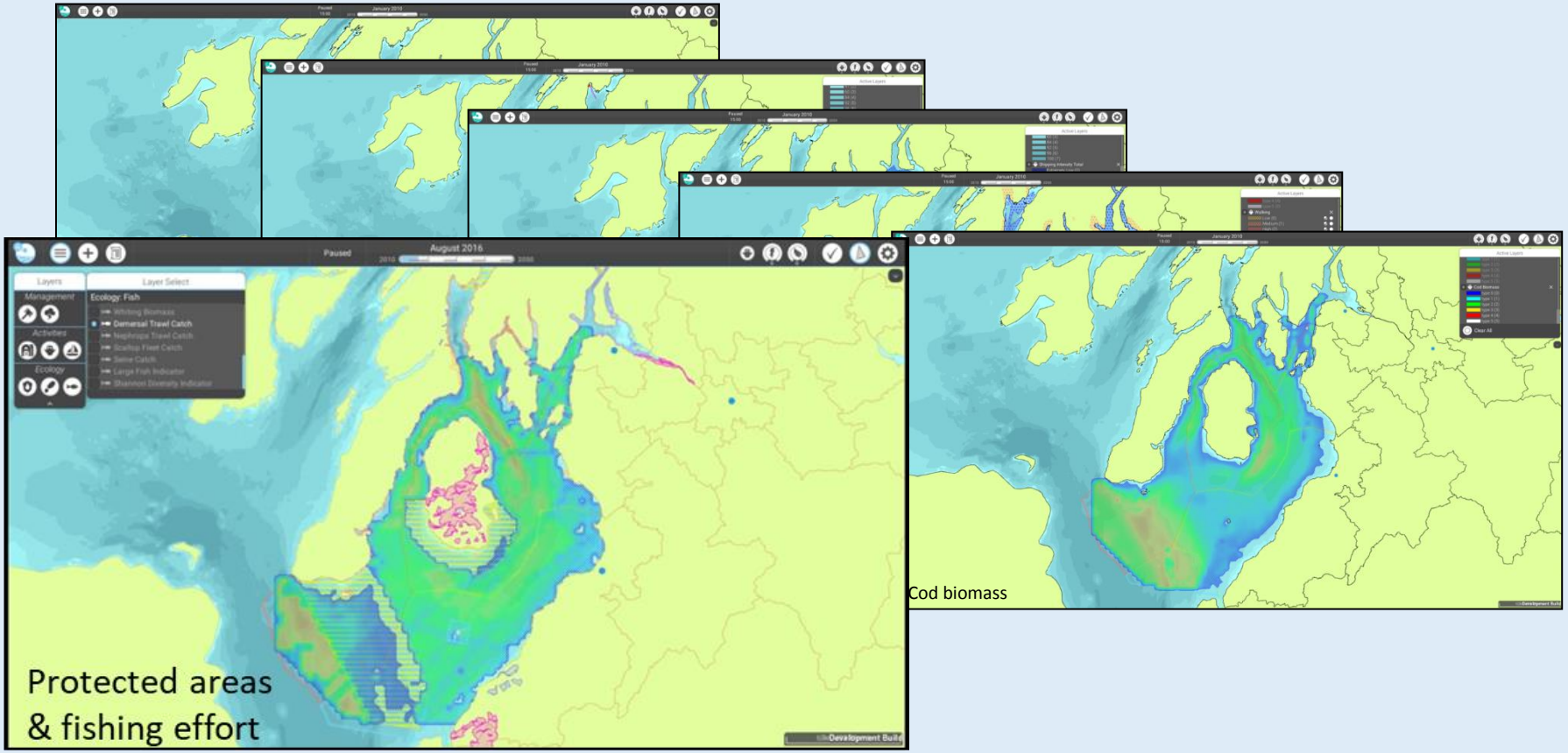
Outcome:

- Data Management Guidance Document
  - Created to share the experience of building a data portal for a transboundary MSP situation
  - Experiment with data interoperability across the Celtic Seas
  - Explains the data management processes through technical topic sheets & describes technical structure of SIMCelt Data Portal
- Possible solutions to overcome the challenges:
  - Metadata containing up-to-date usage constraints for all datasets
  - Agreement between partners on a common data licence

MSP Challenge – ‘The Firth of Colours’

- Developed by NHTV (Breda University) from original game platform for developing transboundary MSP cooperation in the Baltic Sea and North Sea.
- SIMCelt allowed development of a version for the Clyde in Scotland
- NorthSEE allowing for upgrade of Baltic & North Sea versions

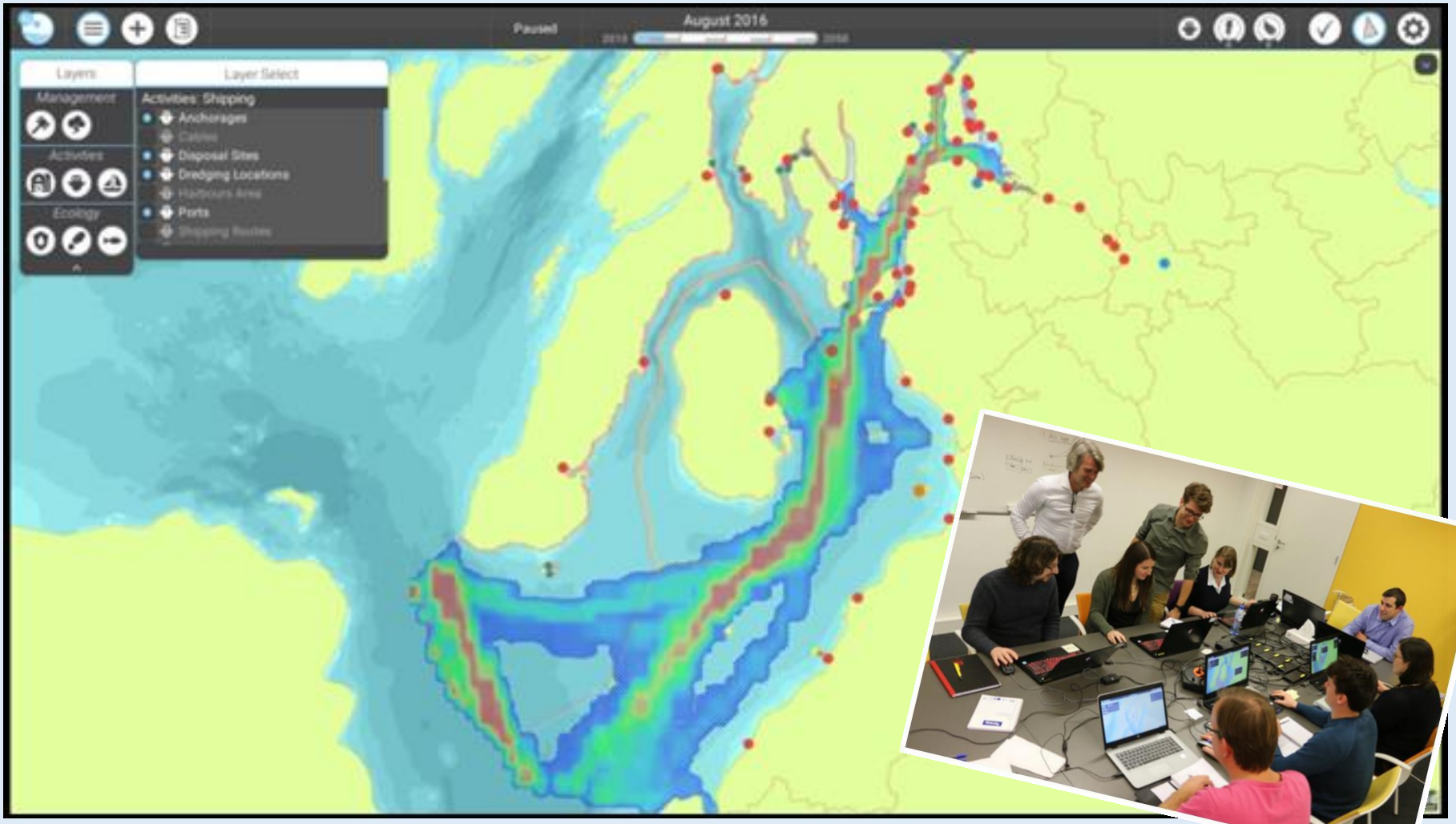




‘In combination’, ‘best available’ data to help with MSP ‘in real life’

SIMCelt

Co-funded by the European Union



Common Map Legends

- Small sub-work package to be completed by end of June
  - Analysis of existing regional planning regulations
  - Identification of differences between North Sea countries' MSP
  - Similarities between different topics in MSP
  - "Investigation of cartographic determinations"
  - "Development of a cartographic presentation of cross-border spatial planning in the North Sea"
- Address different approaches to displaying spatial data in North Sea MSP Plans
- Intention to make MSPs more easily understandable and comparable between countries
  - Leading to more coherent plans overall

Interreg North Sea Region NorthSEE

Scottish reflections

- How can we work with/learn from each other to make MSP more effective in North Sea area?
- How to apply the Common Environmental Assessment Framework (CEAF) at the strategic level & inform MSP?
  - Common standards for indicators (e.g. numbers of porpoises disturbed, etc.)
  - Get the numbers to populate the models and identify the knowledge gaps
- Forth & Tay ornithology case study launched May 2019
  - Considering cumulative impacts at the strategic level
- Political considerations...

The real experts…

NorthSEE data work:

- Ulrich Scheffler, BSH – ulrich.Scheffler@bsh.de
- Tina Scheidweiler, consultant – tina.scheidweiler@cml.fraunhofer.de

Scottish input to SIMCelt:

- Martyn Cox, Marine Scotland – martyn.cox@gov.scot

And me!

- Rhona Fairgrieve – rhona.fairgrieve@gov.scot

Session 3: Data sharing at marine basin for integrating an Ecosystem-Based Approach in MSP

Data organisation sharing in the Baltic, Susanne Gustafsson, Senior Analyst in Marine Spatial Planning, SwAM, Pan Baltic Scope project

Data for Marine Spatial Planning in the Baltic Sea

Susanne Gustafsson
susanne.gustafsson@havochvatten.se

Antwerp, May the 22nd 2019

Swedish Agency for Marine and Water Management


MSP DATA!
Swedish Agency
for Marine and
Water Management

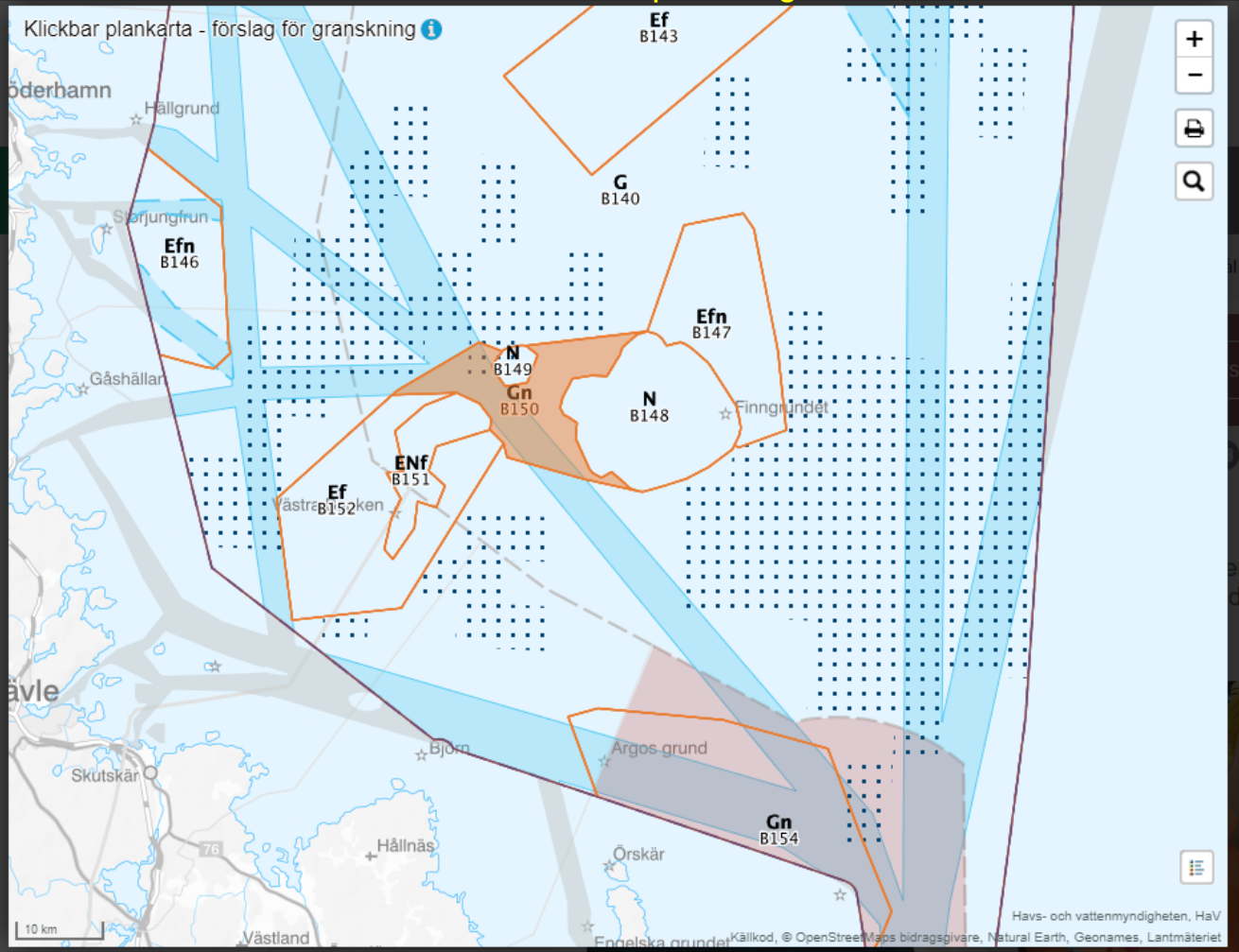

Swedish Agency
for Marine and
Water Management


Klickbar plankarta - förslag för granskning
Norska havet
Vita havet
Luleå
Östersund
Finland
Sverige
Norge
Falun
Oslo
Karlstad
Västerås
Uppsala
Stockholm
Helsingfors
Tallinn
Estland
Ryssland
Örebro
Jönköping
Göteborg
Växjö
Halmstad
Danmark
Riga
Litauen
Moskva
Vilnius
Minsk
Vitryssland
Dublin
Irland
Storbritannien
Nederländerna
Amsterdam
Berlin
Warszawa
Polen
200 km
for Swedish Agency for Marine and Water Management
Havs- och vattenmyndigheten, HaV
Källkod, © OpenStreetMaps bidragsgivare, Natural Earth, Geonames, Lantmäteriet

Stäng stor karta

wwwhavochvatten.se/havsplanering

Sök på webbplatsen



Information om

Finngrunden

Område: B150
Havsplan: Bottniska viken
Havsområde: Södra Bottenhavet
Kommun: NEJ
Län: NEJ

Beteckning

Användning

- G — Generell användning
- Sjöfart
- Utredningsområde för sjöfart
- Yrkesfiske
- Särskilt om kablar och ledningar

Särskild hänsyn

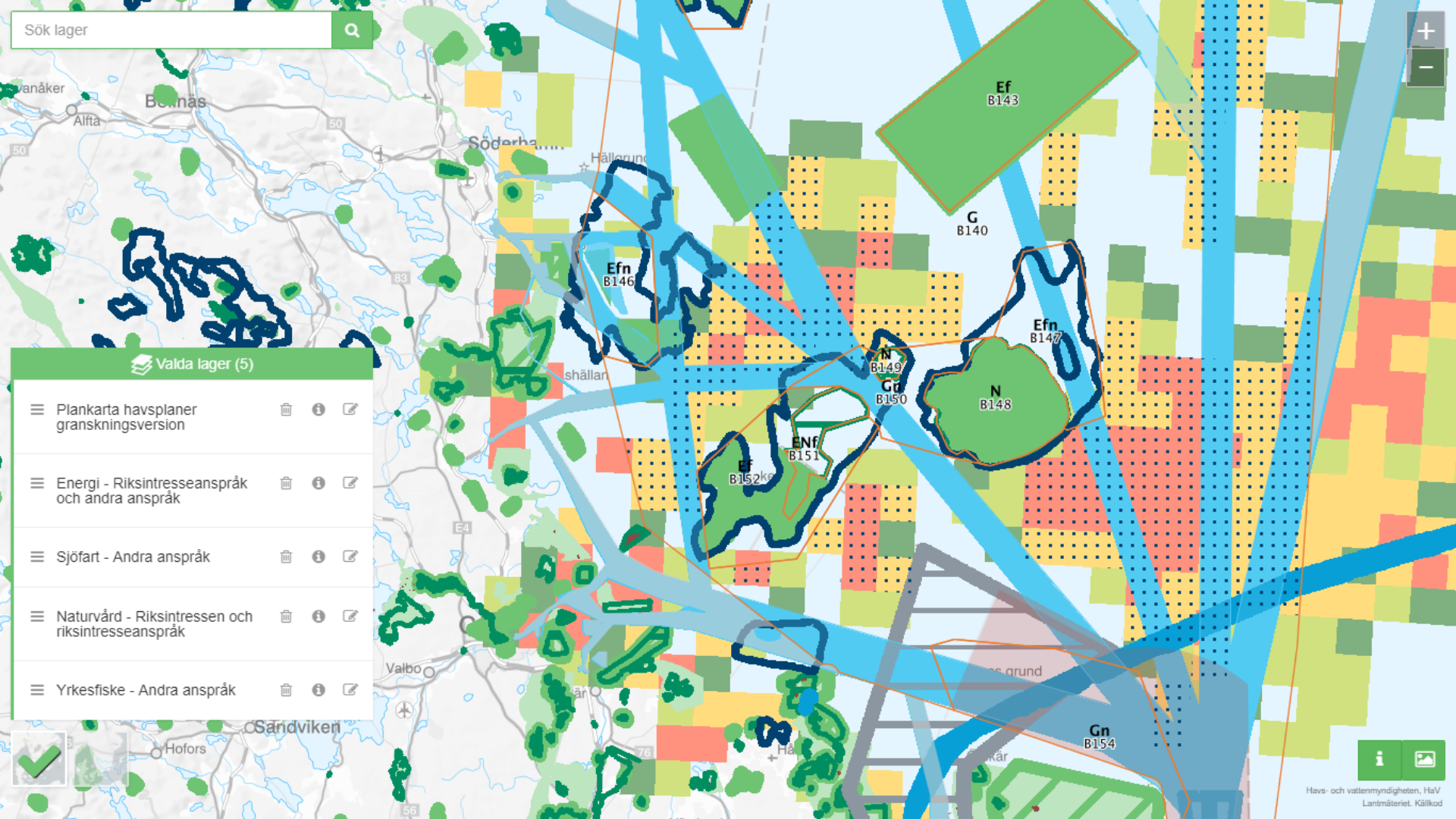
- n — Särskild hänsyn till höga naturvärden

Planeringens huvuddrag i Bottniska

Stäng panel

Lämna synpunkter på

Foto: Maja Kristin Nylander


Sök lager
Valda lager (5)
Plankarta havsplaner granskningsversion
Energi - Riksintresseanspråk och andra anspråk
Sjöfart - Andra anspråk
Naturvård - Riksintressen och riksintresseanspråk
Yrkesfiske - Andra anspråk
Ef B143
G B140
Efn B146
Efn B147
N B149
Gn B150
N B148
ENf B151
Ef B152
Gn B154
Bollnäs
Alfta
Söderhamn
Hällgrund
Valbo
Sandviken
Hofors
Havs- och vattenmyndigheten, HaV
Lantmäteriet. Källkod

Swedish Agency for Marine and Water Management

European Union Strategy for the Baltic Sea Region

- The first macro-regional strategy in Europe, approved in 2009
- Agreement between the Member States of the EU and the European Commission to strengthen cooperation between the countries bordering the Baltic Sea. Objectives:

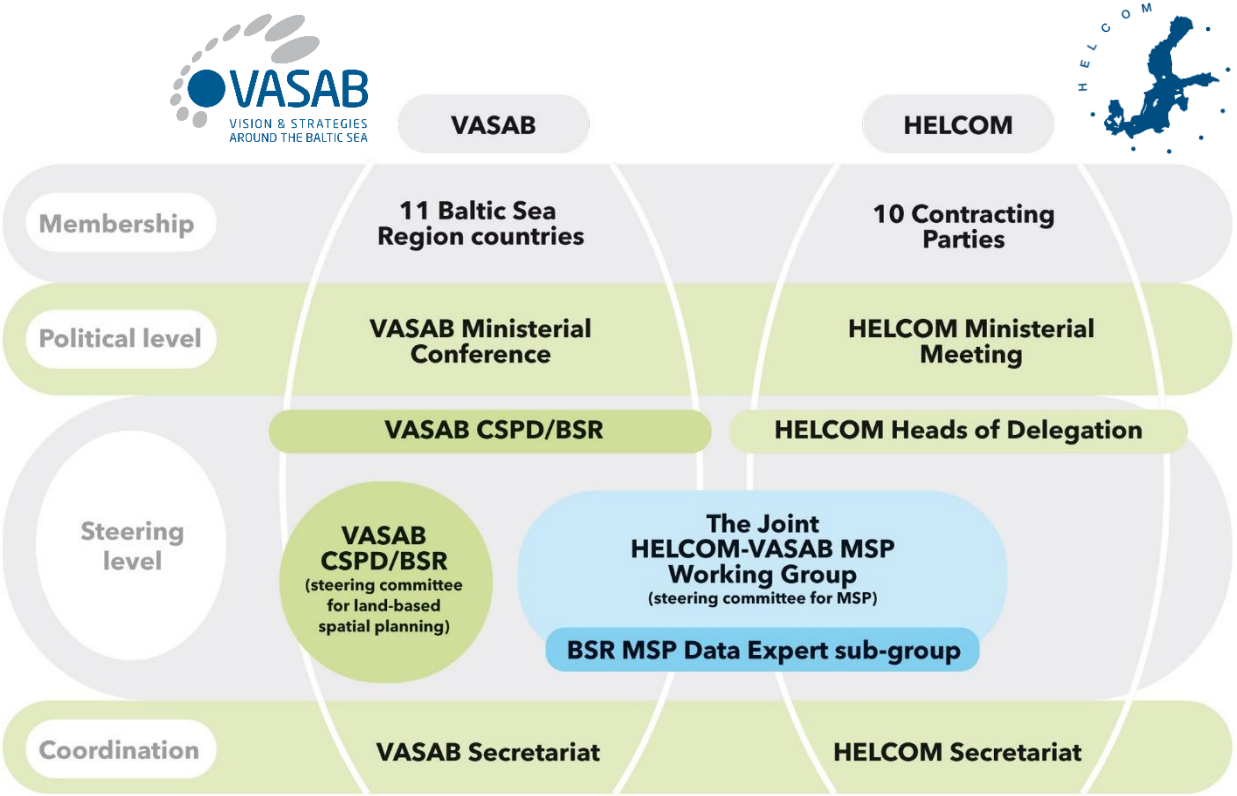
Saving the sea

Connecting the region

Increasing prosperity

Enablers in the Baltic Sea Region

Swedish Agency for Marine and Water Management



- VASAB and HELCOM are jointly coordinators of the EUSBSR Horizontal Action “Spatial Planning” including MSP

EUSBSR
EU STRATEGY FOR THE BALTIC SEA REGION
HORIZONTAL ACTION ‘SPATIAL PLANNING’

Challenges in the Baltic Sea

Swedish Agency for Marine and Water Management

- MSP in an already existing marine governance system
- Coordination – different time schedules (but with the same target year)
- Sovereign nations with domestic targets, goals, priorities and interests
- Different planning systems (from strategic and guiding to detailed and binding)
- Not aligned data and information
- Unsolved issues

Baltic SCOPE collaboration

Baltic SCOPE
Towards coherence and cross-border solutions in Baltic Maritime Spatial Plans

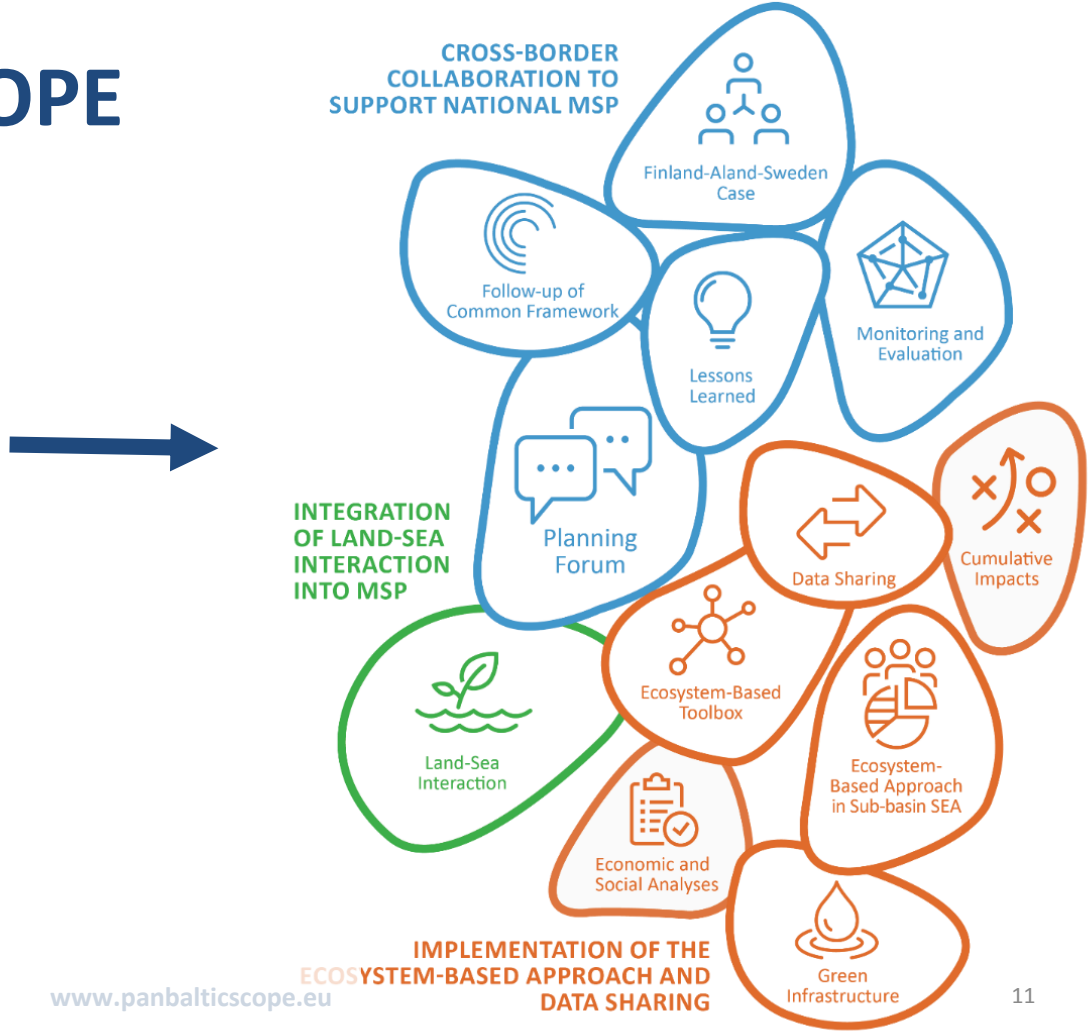
EUROPEAN UNION
European Maritime and Fisheries Fund

Towards coherence and cross-border solutions in Baltic Maritime Spatial Plans

March 2015 – March 2017

Pan Baltic SCOPE

Filling the gaps



We want to

achieve **coherent** national **maritime spatial planning** in the Baltic Sea region

build lasting macro-region **mechanisms** for **cross-border** maritime spatial planning **cooperation**

Organisation of
BSR MSP Data expert sub-group

For each MSP country around the Baltic Sea:

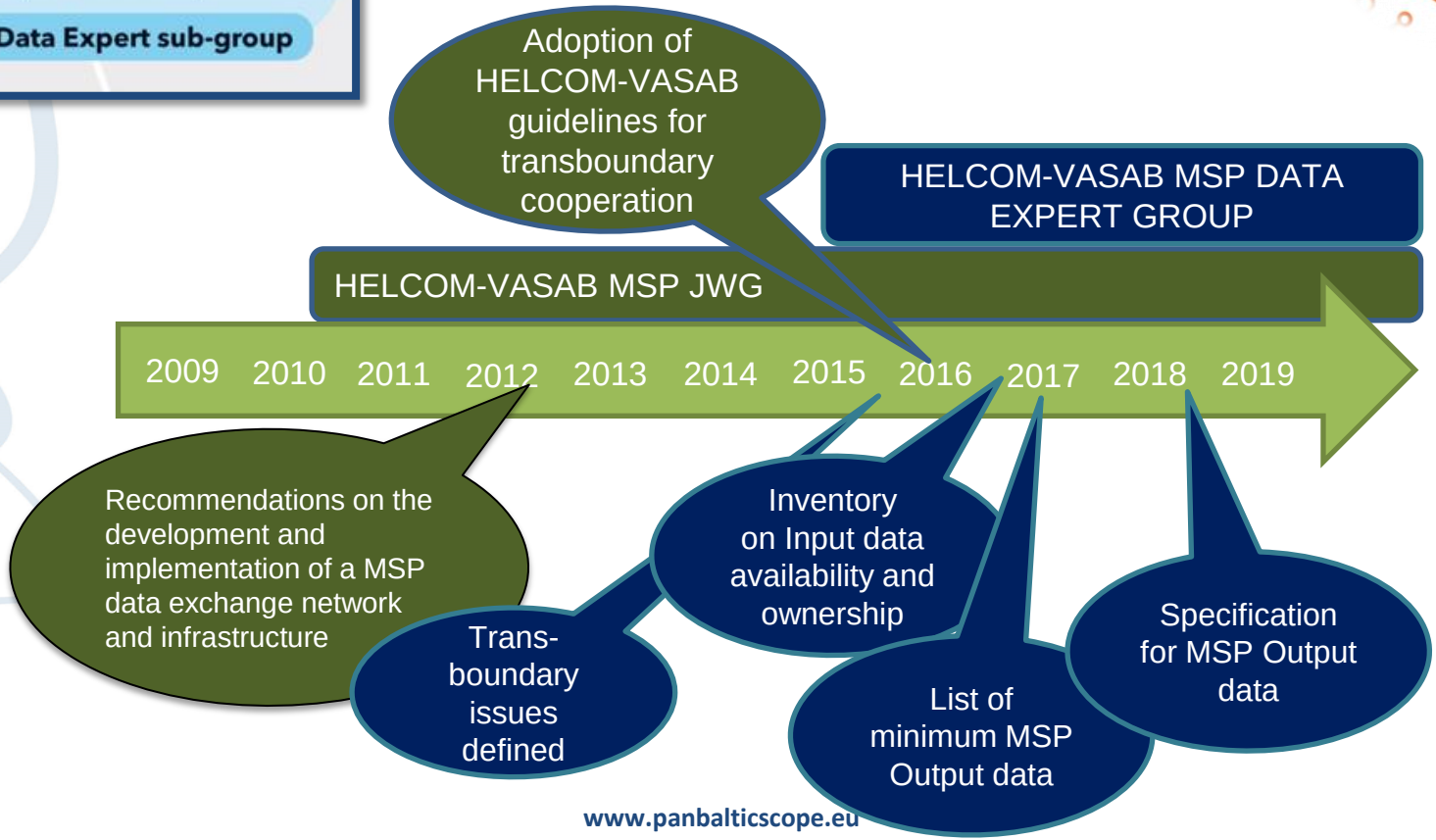
- **1 marine spatial planner**
- **1 data expert**

The Joint
HELCOM-VASAB MSP
Working Group
(steering committee for MSP)

BSR MSP Data Expert sub-group

Work within PanBalticScope and BalticLINes

Data Sharing



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Themes of MSP data - Based on the MSP Directive

- ✓ aquaculture, fishing areas,
- ✓ installations and infrastructure
- ✓ maritime transport routes and traffic flows,
- ✓ military training areas,
- ✓ nature and species conservation sites and protected areas,
- ✓ raw material extraction areas,
- ✓ scientific research,
- ✓ submarine cable and pipeline routes,
- ✓ tourism and underwater cultural heritage
  - ✓ administrative borders
  - ✓ planning zones

52 datasets identified

Too difficult

INPUT DATA

Data used for planning
+ other plans

Standard for harmonisation

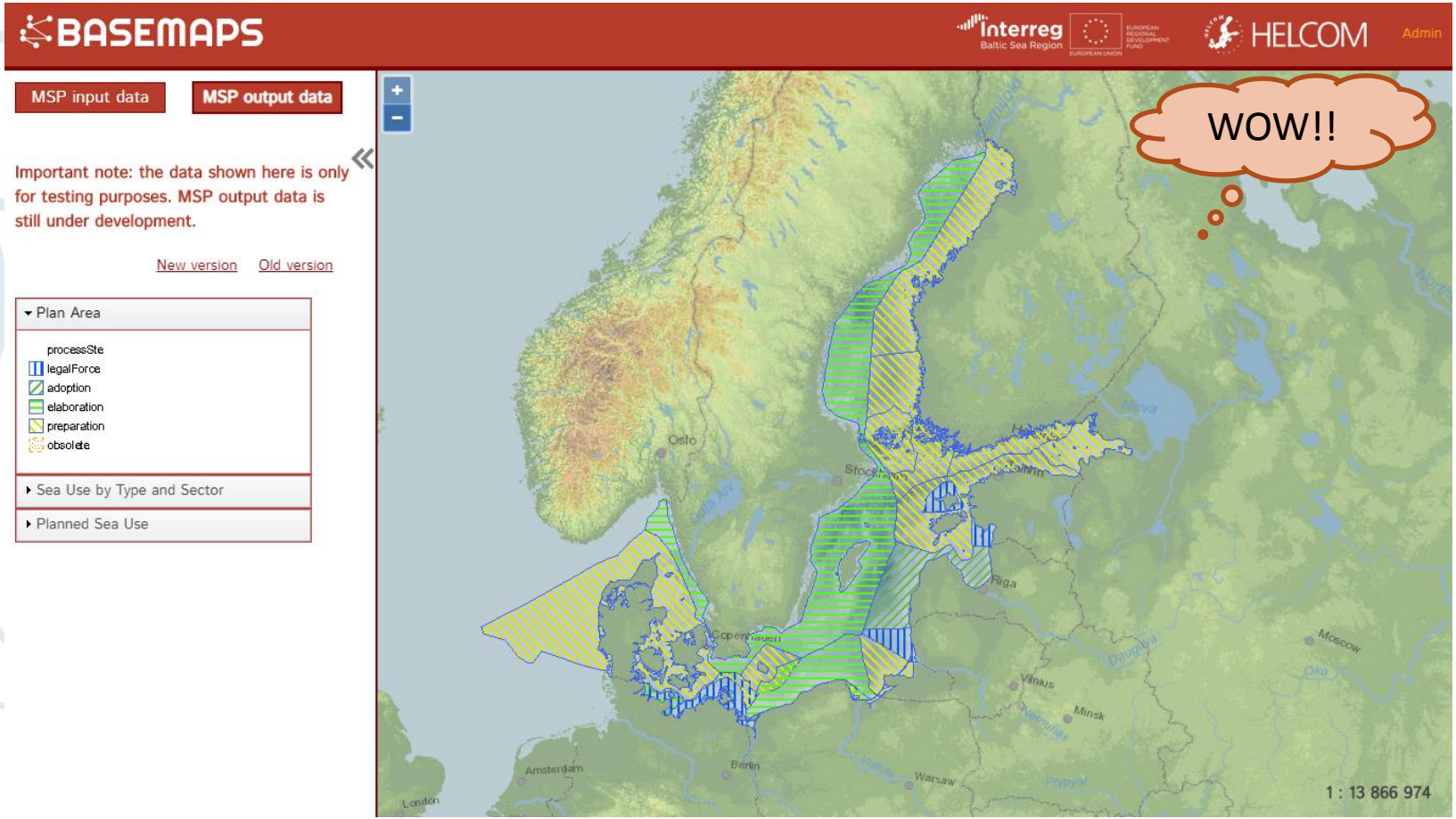
Still difficult, but…

OUTPUT DATA

Outcome of maritime spatial plan
(plan solutions, spatial designations)

Glosary of Sea uses – in all Baltic Sea Regions languages

attribute code	sea use description	swedish description	finnish description	russian description	estonian description	latvian description
aquaculture	aquaculture	akvakultur	vesiviljely	аквакультура	vesiviljelus	akvakultūra
aquaculture-fish	fish	fisk	kala	рыбоводство	kala	zivju akvakultūra
aquaculture-mussel	mussel	musslor	simpukka	аквакультура-бентос	karp (karbi kasvatus)	gliemeņu akvakultūra
aquaculture-plant	plant	växter	levä	аквакультура-фитобентос	?	aļģu akvakultūra
coast	coast protection	kustzonsskydd	rantojen suojarakenteet	берегозащита	Rannikukaitse	krasta aizsardzība
coast-deposit	reserved areas for coast protection (e.g. reserved or prospective sand deposit area)	sanddeponiområden	rantojen suojarakenteet	перспективные месторождени	setete ladestusala	
extraction	raw material extraction areas	materialutvinning	raaka-aineen ottoalueet	добыча полезных ископаемых	maardla	derīgo izrakteņu ieguve
extraction-co2	CO2	koldioxid	hiilidioksidi	CO2	?	CO2 ieguve/NA
extraction-gas	gas	gas	maakaasu	газ	maagaas	gāzes ieguve/NA
extraction-oil	oil	olja	öljy	нефть	nafta	naftas ieguve
extraction-sand	sand and gravel	sand	hiekka ja sora	песок и гравий	liiv ja kruus	smilts un grants ieguve/NA
fishing	fishing	fiske	kalastus	рыболовство	kalastus	zvejniecība
fishing-industrial	industrial fishing	kommersiellt fiske	teollinen kalastus	промышленное рыболовство	tööstuslik kalastus	industriālā zveja
fishing-recreational	recreational fishing	fritidsfiske	vapaa-ajankalastus	любительсткое рыболовство	hobikalastus	atpūtas zveja/NA
fishing-small-boat	small boat fishing	sportfiske	rannikkokalastus	рыбная ловля	rannakalastus	pašpatēriņa zveja
general	future reservation for undefined activities or general use	planerade områden	tulevaisuuden varaus	перспективное резервирование		nākotnes rezervācijas
heritage	underwater cultural heritage	kulturvärden	vedenalainen kulttuuriperintö	подводное культурное наследи	veealune muinsuskaitse	zemūdens kultūras mantoju
heritage-landscape	landscape protection	landskapsskydd	maisemansuojelu	охрана подводного ландшафта	maastikukaitse	ainavas aizsardība/NA
heritage-wreck	wreck	vrak	hylky	затонувшее судно	vrakk	vraks
installations	installations and infrastructures	fasta installationer	rakenteet ja infrastruktuuri	сооружения и инфраструктура	rajatised ja inrastruktuur/ta	būves jūrā
installations-owf	offshore wind farm	havsbaserad vindkraftspark	merituulipuisto	зоны ветровых электростанци	tuulikupark	akrastes vēja parks
installations-platform	platform	plattform	alusta	платформа	platvorm?	platforma
installations-wave	wave energy	vågenergi	aaltoenergia	зоны волновых электростанци	laine-energia	viļņu enerģija
line	submarine cable and pipeline routes	undervattenskablar och olje- oc	kaapeli- ja putkilinjat	подводные кабели и трубопров	veealuste kaablite ja torude	inženierkomunikācijas
line-electricity	electricity cable	elkabel	sähkökaapeli	высоковольтный кабель	elektrikaabel	elektropārvades kabelis
line-pipeline	pipeline	olje- och gasledning	putkilinja	трубопровод	torujuhe	cauruļvads
line-telecom	telecommunication cable	telekabler	tietoliikennekaapeli	телекомуникационный кабель	telekommunikatsiooni kaab	sakaru kabelis
military	military areas	militärområden	sotilasalueet	акватории министерства безоп	militaaralad	valsts aizsardības interese
military-training	military training areas	träningsområden	sotilasharjoitusalueet	зоны военных учений	militaarsed treeningalad	militārie mācību poligoni



https://basemaps.helcom.fi/

Baby steps – or The pragmatic approach to data sharing in MSP

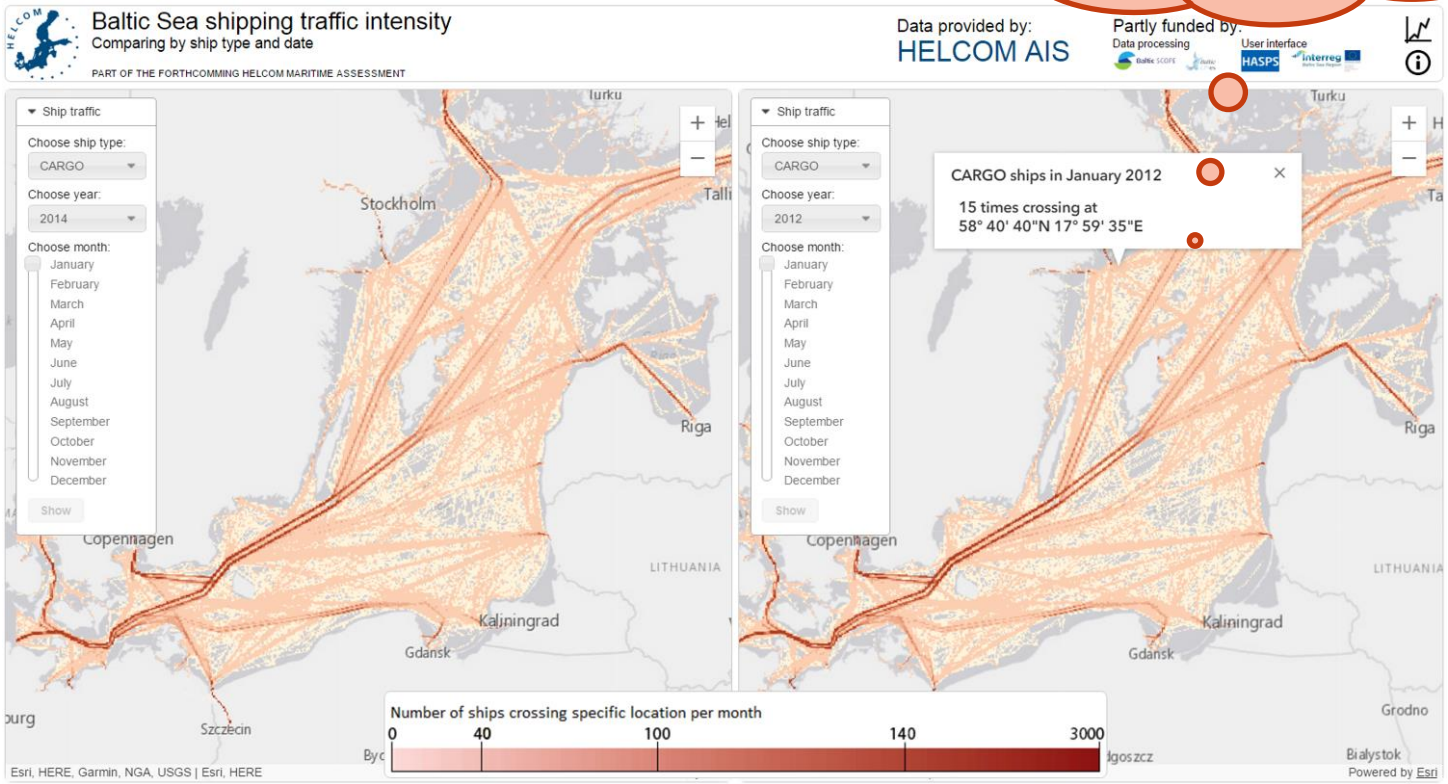
Baltic SCOPE

Towards coherence and cross-border solutions in Baltic Maritime Spatial Plans

EUROPEAN UNION
European Maritime and Fisheries Fund

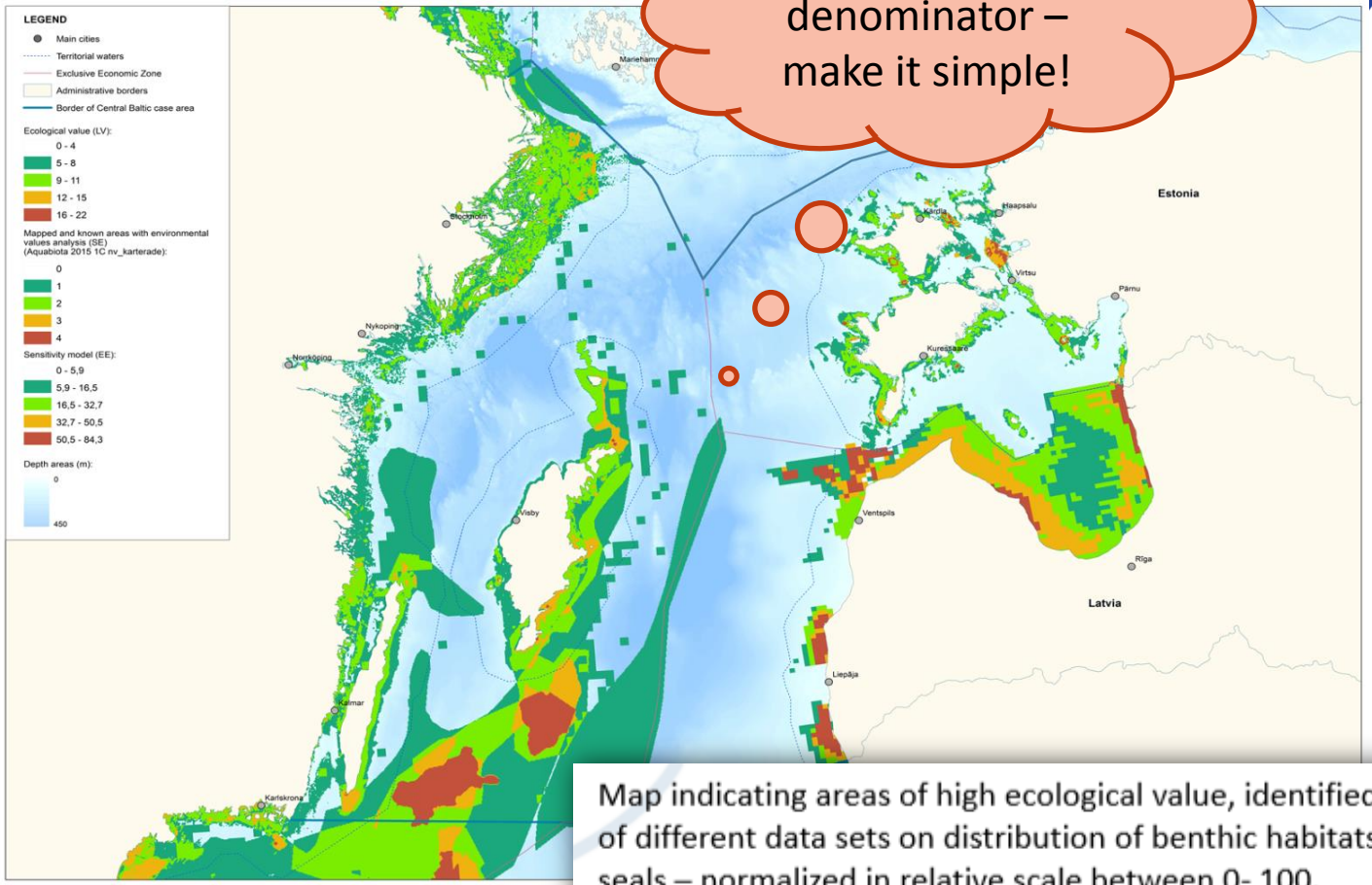
Enormus amount of shipping data (2006-2015) processed & for the first time available online

HELCOM had data already – compile!



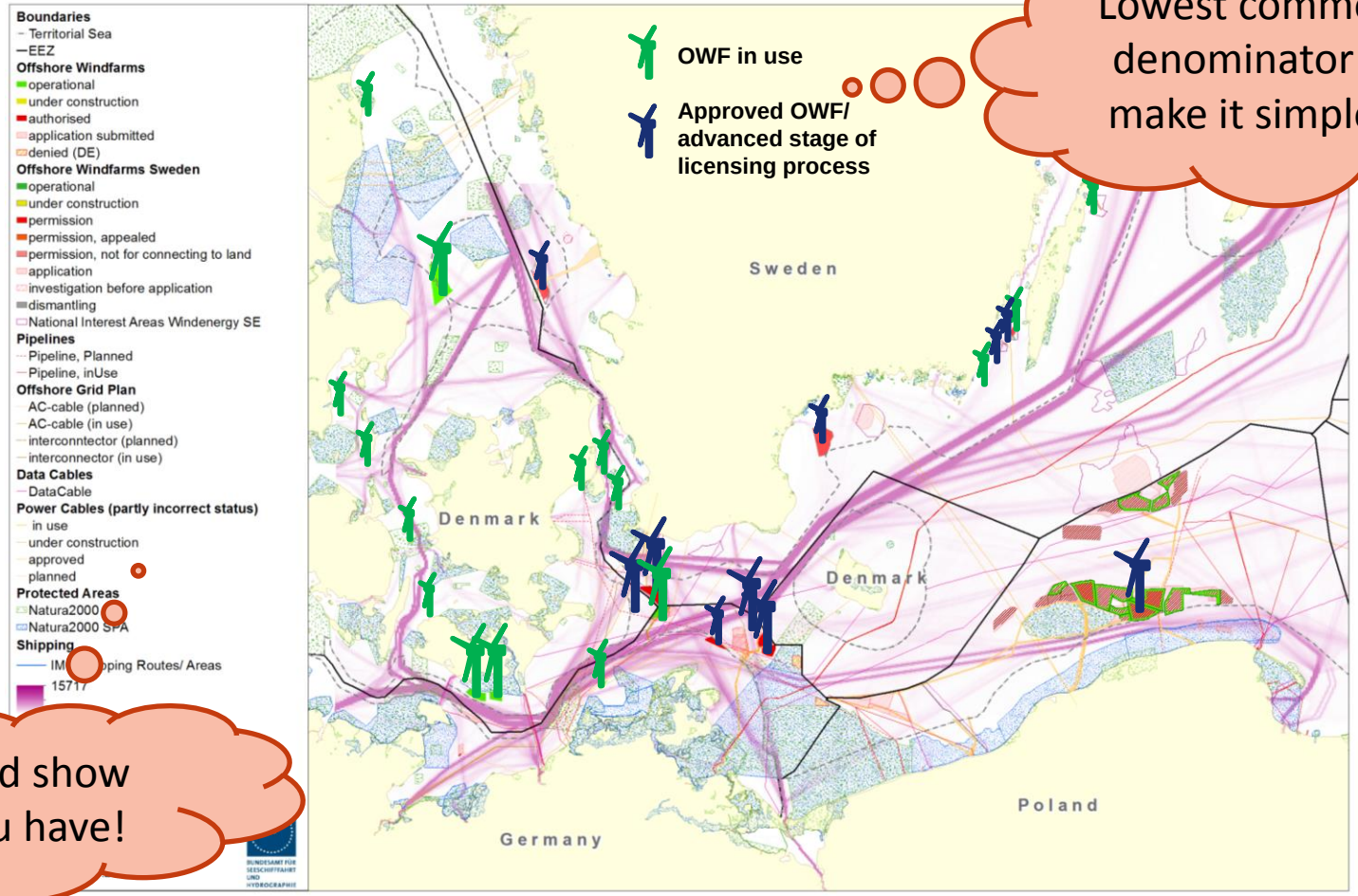
Marine Green Infrastructure

Lowest common denominator – make it simple!



Map indicating areas of high ecological value, identified by aggregation of different data sets on distribution of benthic habitats, birds, fish and seals – normalized in relative scale between 0- 100.

Current Status: Energy

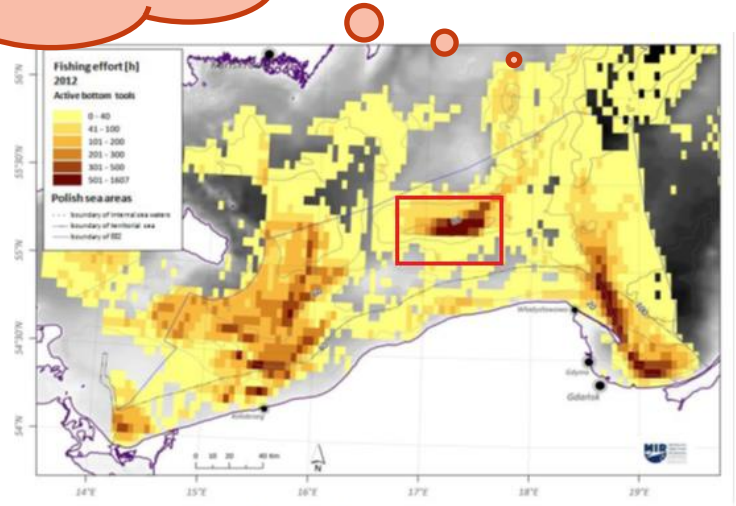


Lowest common denominator – make it simple!

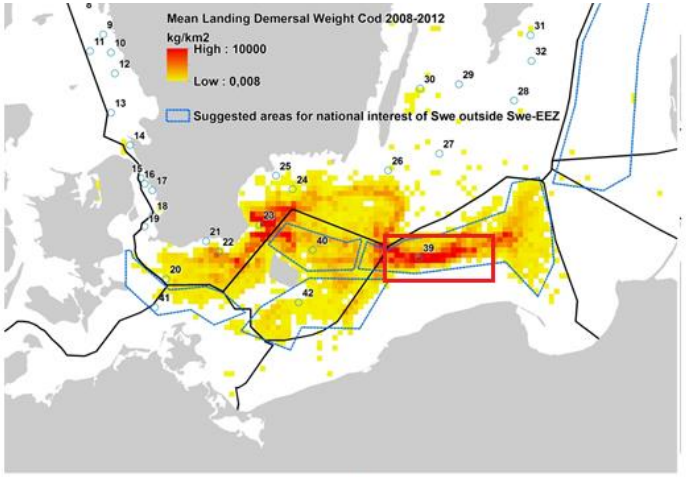
Share and show what you have!

Middlebank: Important fishing ground (SWE, PL and CB case)

Share and show what you have!



Poland

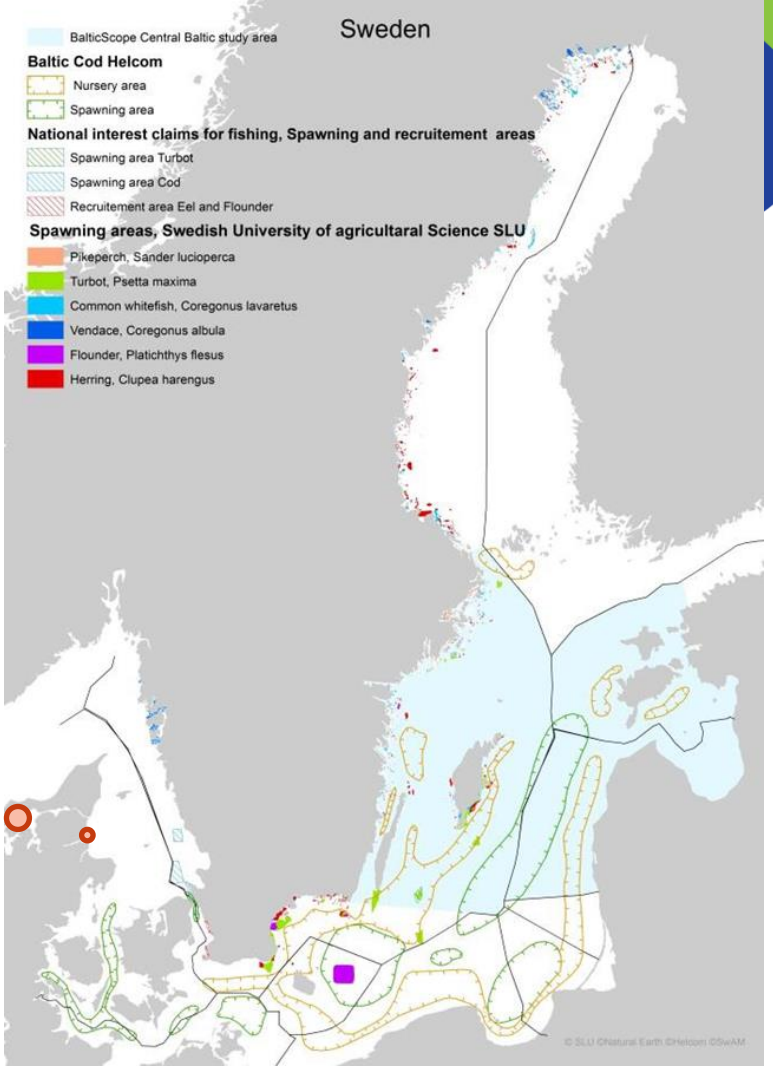


Sweden

Topic: Fishing

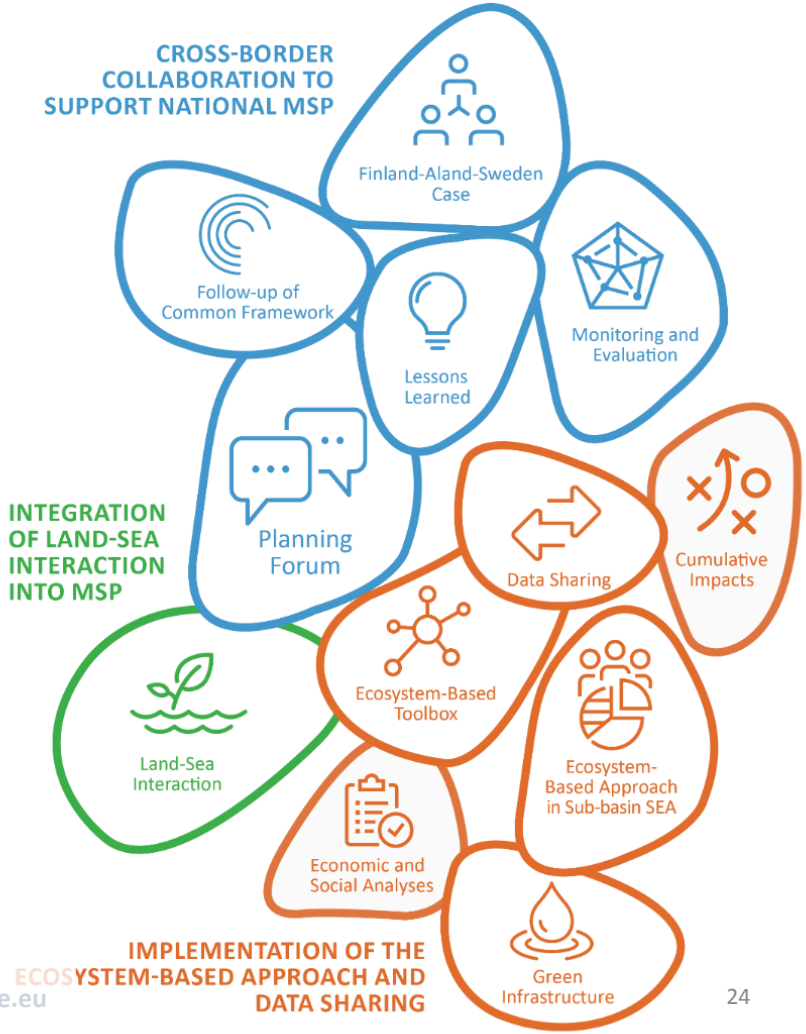
Image of spawning and nursery areas for species of interest to commercial fisheries

Share and show what you have!



Pan Baltic SCOPE

Filling the gaps



Next steps for data in MSP

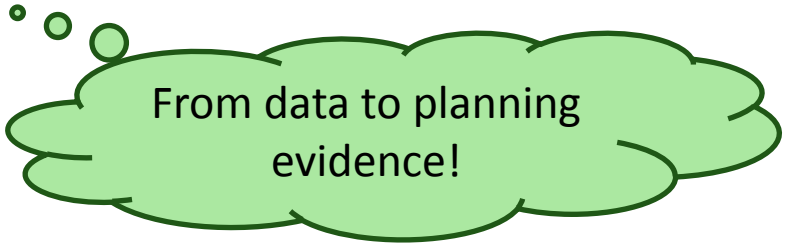
Essential fish habitats

Essential Fish Habitat (EFH) those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity (Magnuson-Stevens Fisheries Conservation and Management Act 1998)

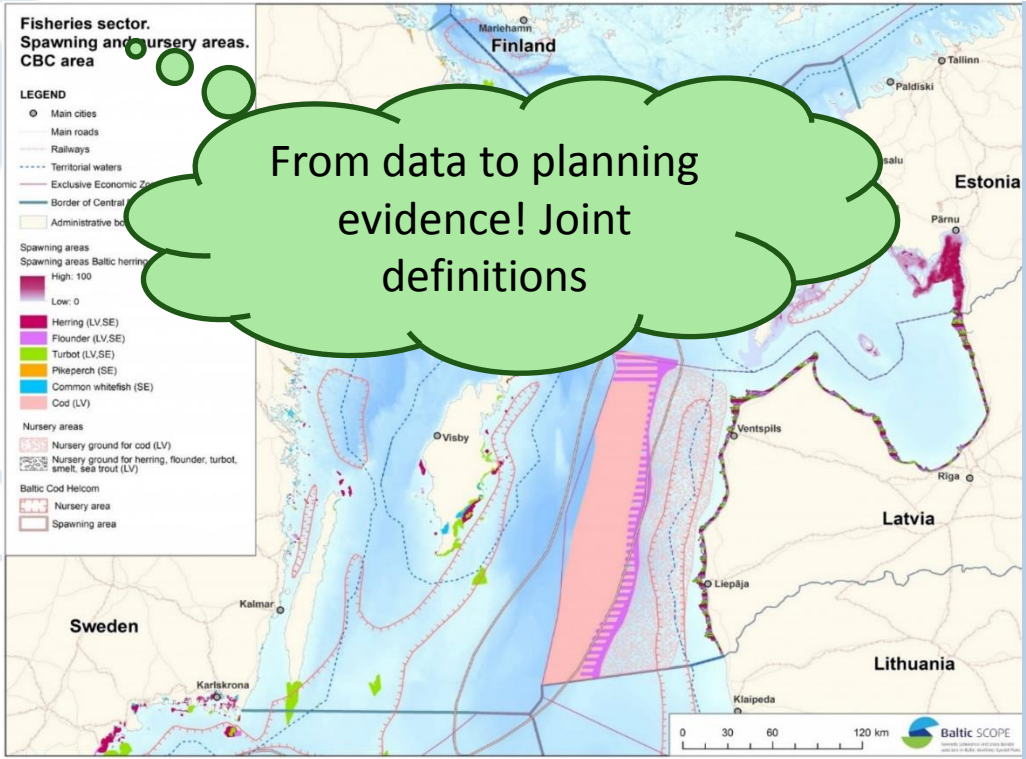
Baltic Scope Recommendations:

Jointly identify essential fish habitat, including spawning, nursery and growth areas, for the whole Baltic Sea for species of interest to fisheries

Jointly for the whole Baltic Sea



Spawning and nursery areas



What we are mapping?

Potential

Observed

Historical

Modelled

Expert judgement

Publications

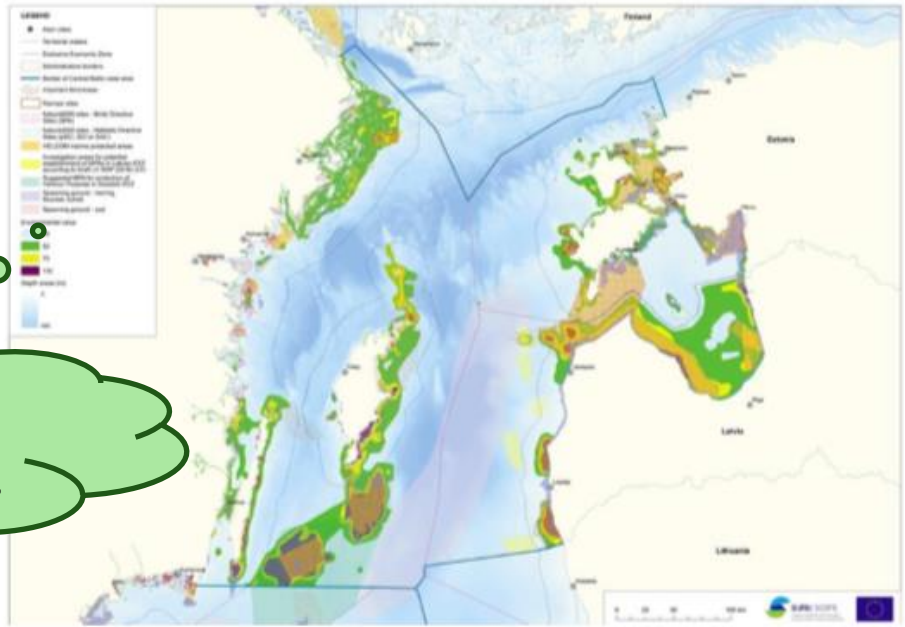
Unpublished reports

Surveys

Green Infrastructure

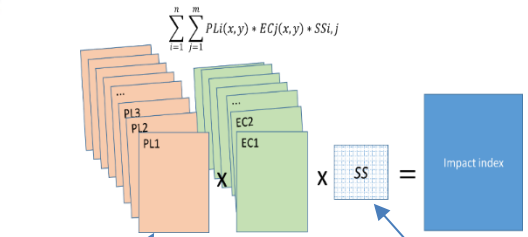
Follow up of the Baltic Scope results

Map indicating areas of high ecological value, identified by aggregation of different data sets on distribution of benthic habitats, birds, fish and seals – normalized in relative scale between 0- 100.



From data to planning evidence! Harmonising.

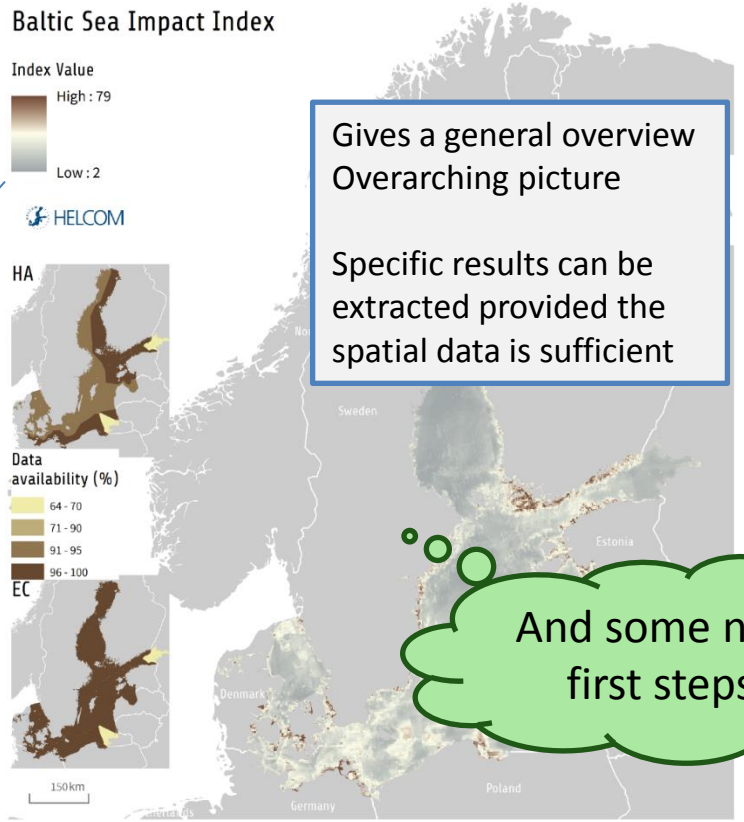
Cumulative impact assessment in HOLAS II: The Baltic Sea impact index



19 pressure layers

36 Ecosystem component layers

Sensitivity scores



Gives a general overview
Overarching picture

Specific results can be extracted provided the spatial data is sufficient

And some new first steps

STATE OF THE BALTIC SEA
- HOLISTIC ASSESSMENT -

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