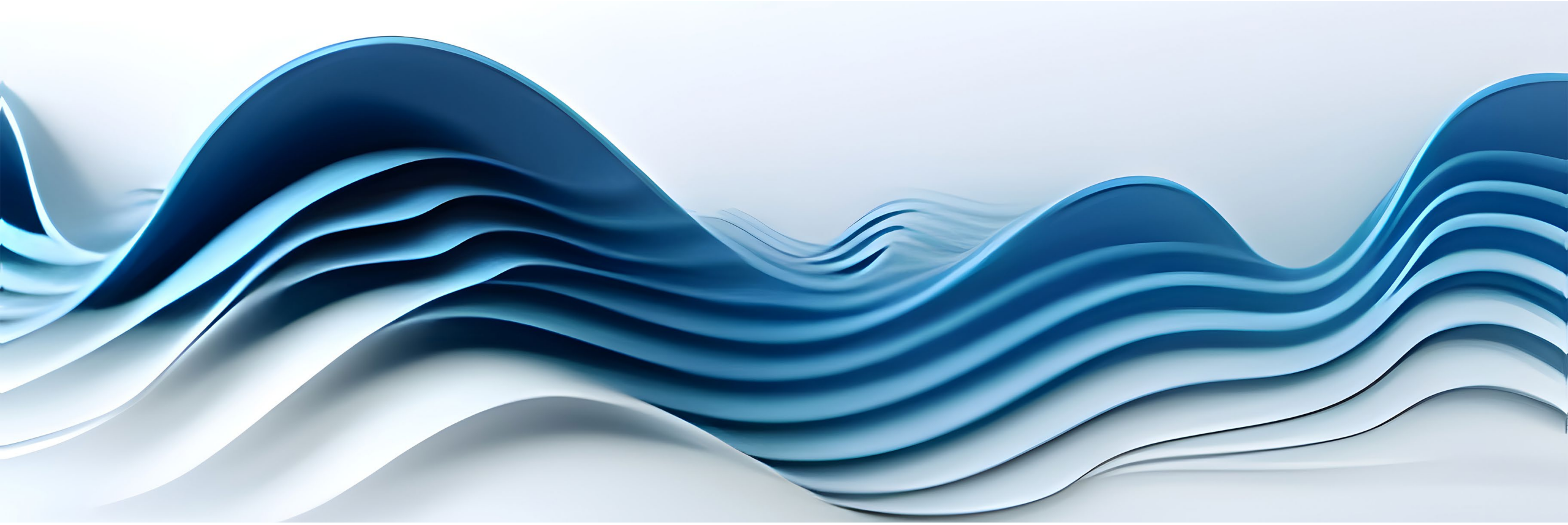


Third HELCOM holistic assessment 2016–2021

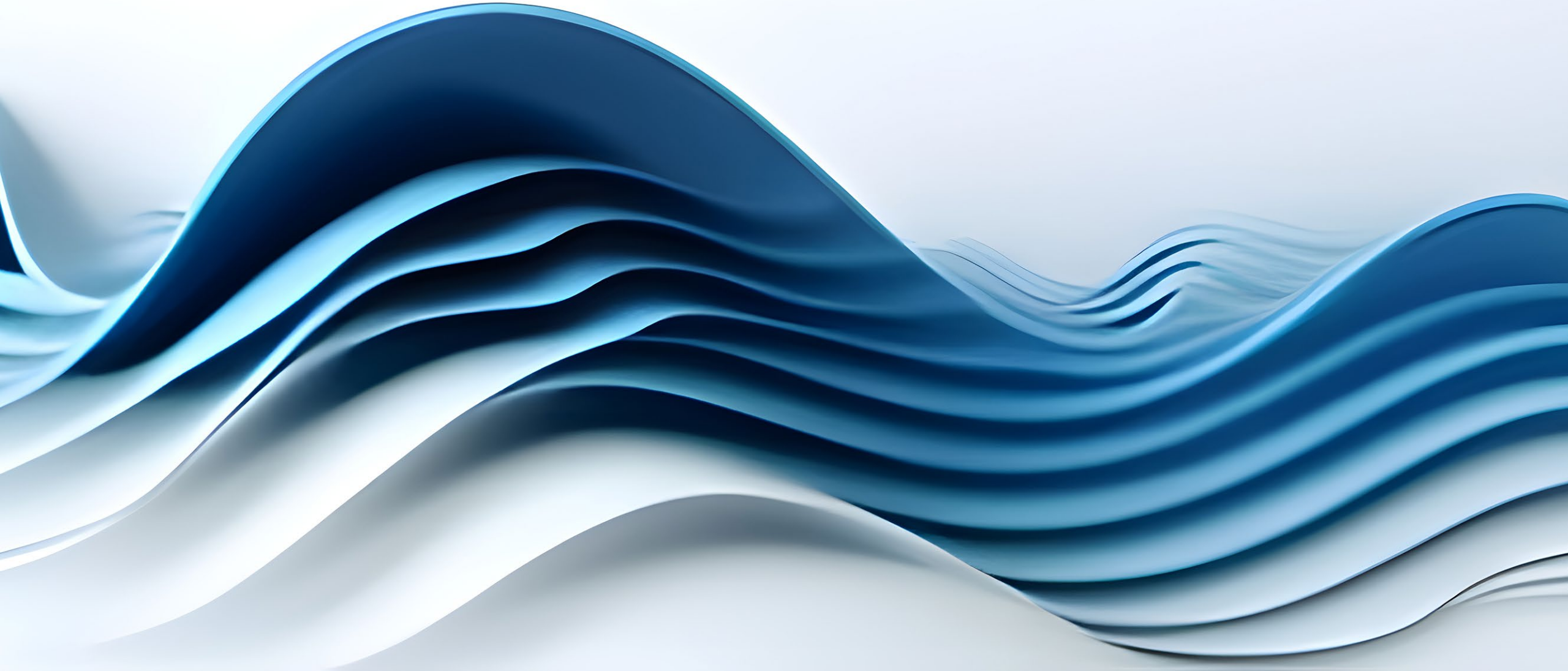
State of the Baltic Sea 2023

HOLAS 3

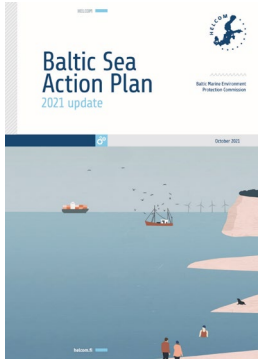
Running order

1. About HOLAS
2. Results summary
3. Next steps

About HOLAS



What is the State of the Baltic Sea report?



The 2021 HELCOM **Baltic Sea Action Plan** (BSAP) includes measures that HELCOM countries have agreed on to halt the deterioration of the Baltic Sea environment.

HELCOM carries out **holistic assessments** every six years to follow up on how well the measures are functioning.

The **third HELCOM holistic assessment** (HOLAS 3) focuses on the years 2016-2021.

The **State of the Baltic Sea** (2023) is synthesis report based on a wide range of assessment products produced within HOLAS 3.

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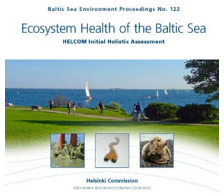
HOLAS 3

HOLAS timeline

Initial holistic assessment 2003-2007

2010



Second HELCOM holistic assessment 2011-2016 (HOLAS II)

2018

Third HELCOM holistic assessment 2016-2021 (HOLAS 3)

2023

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HOLAS 3

HOLAS provides decision-makers and authorities with…

Information on the status of the Baltic Sea environment

Information on the spatial variation of status

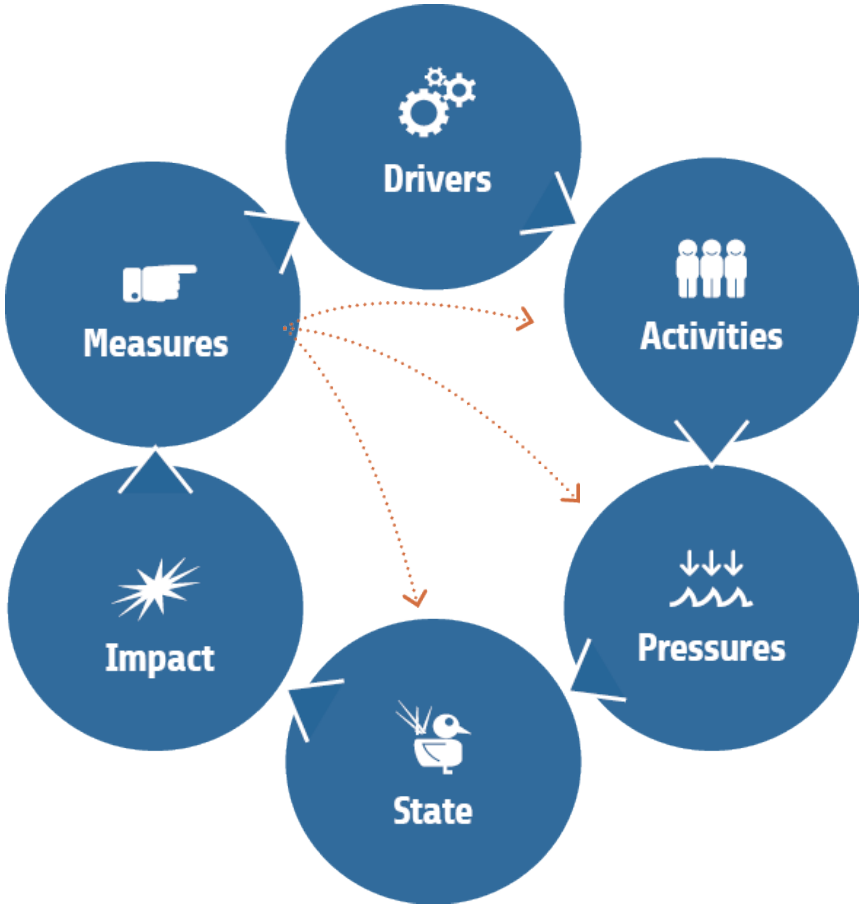
Information trends in development over time

Informs on the distribution of pressures and human activities

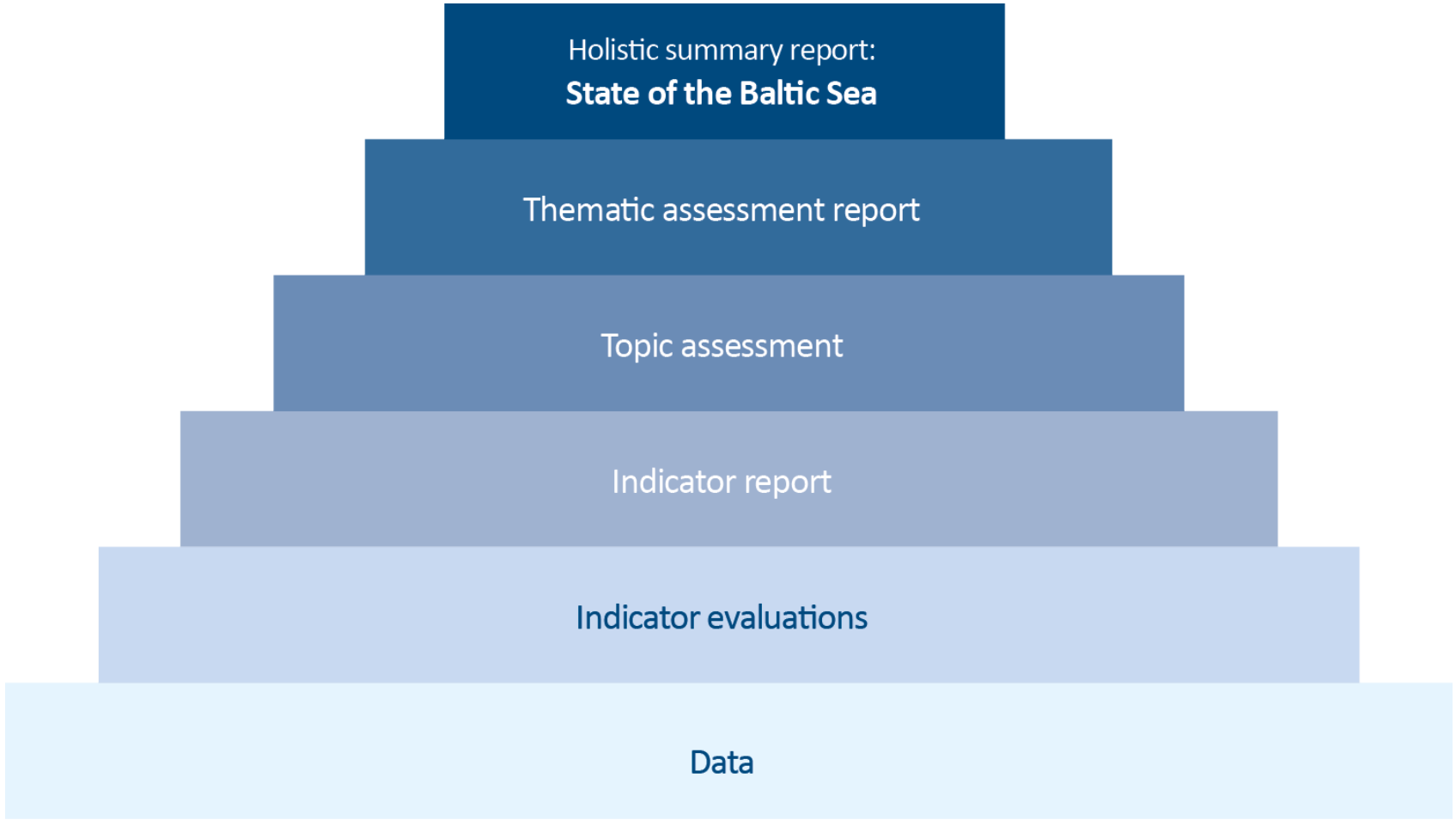
Follow up on the effect of our measures

Data for EU MSFD reporting

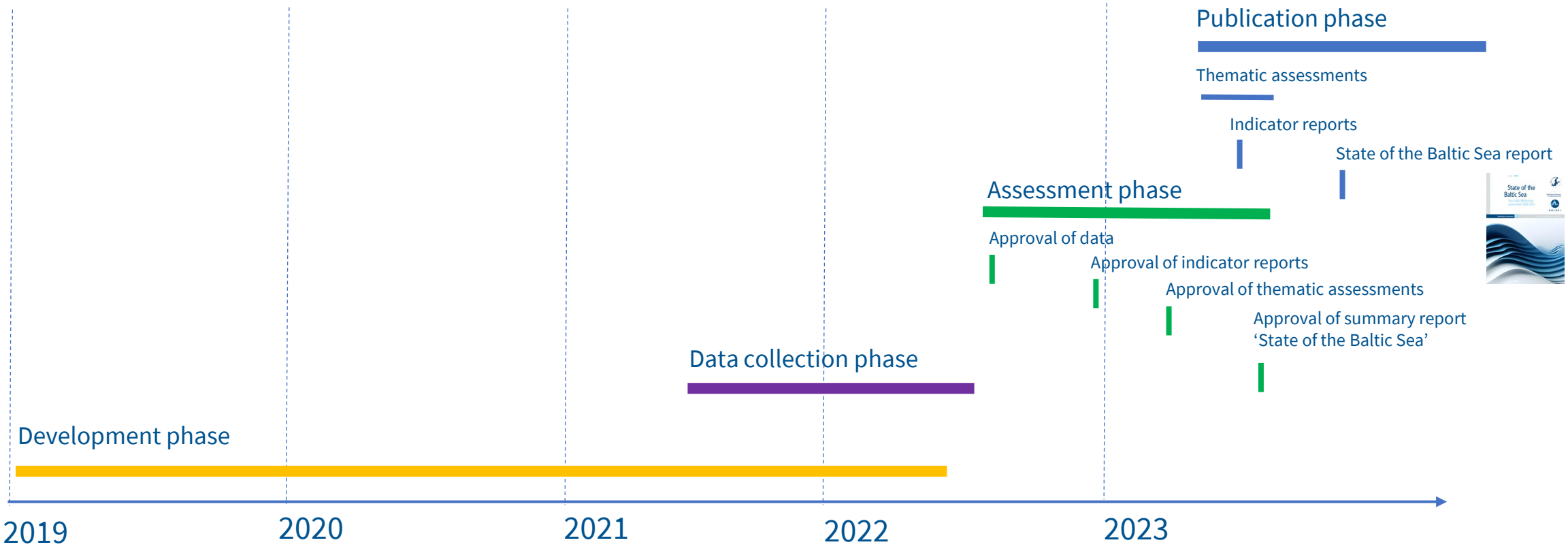
DAPSIM framework



HOLAS products



HOLAS 3 timeline



HOLAS in numbers

5
Thematic assessments

59
Indicators

956
Experts invited in the review process

2956
Comments addressed

290
New maps

3488
Pages of reports

156,940
Cups of caffeinated beverages consumed

2,000,000+
Data points

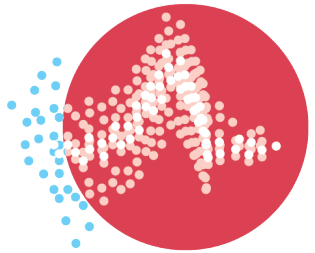
Results summary

Five themes of the assessments

Biodiversity

Eutrophication

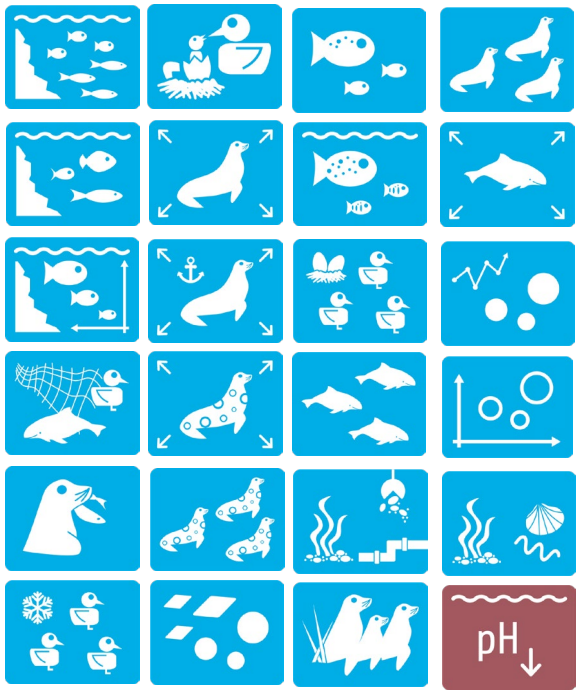
Hazardous substances, marine litter, underwater noise and non-indigenous species

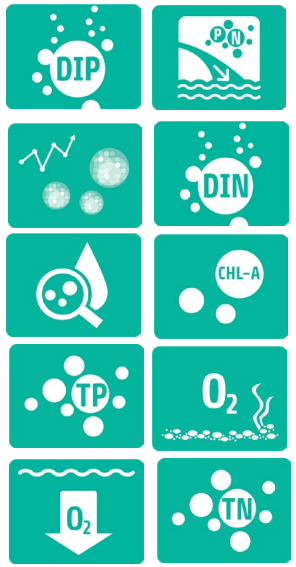


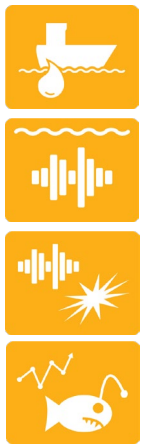
Spatial pressures and impacts

Economic and social analyses

59 indicators (42 core, 11 pre-core, 1 supplementary, 1 element, 4 driver)



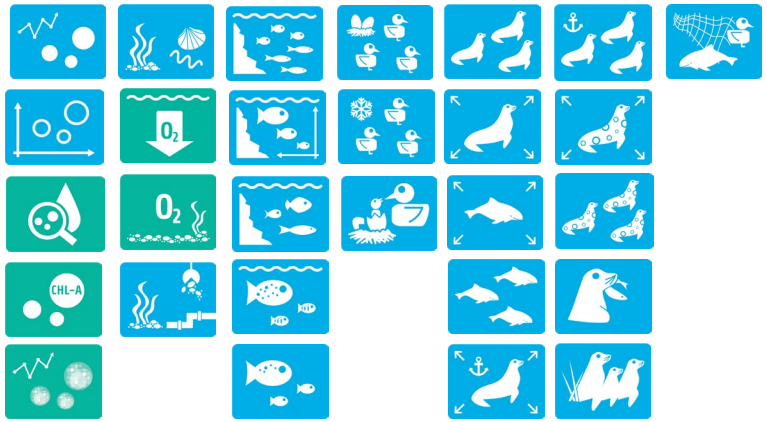




Thematic assessments by topic & sources of data

Biodiversity

Pelagic habitats | Benthic habitats | Fish | Water-birds | Marine mammals | By-catch

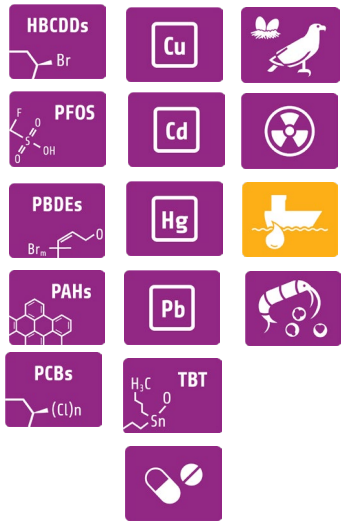


Other assessment methods used for:

Foodwebs
Threatened species
Threatened habitats & biotopes
Spatial protection
Restoration

Hazardous substances, marine litter, underwater noise and non-indigenous species

Hazardous substances | Marine litter | Under-water noise | NIS



Eutrophication

Nutrient levels | Direct effects | Indirect effects

Spatial pressures and impacts

- 28 Human activity datasets
- 17 Pressure layers
- 57 Ecosystem component layers

Economic and social analyses

- Use of marine waters
- Cost of degradation
- Ecosystem services
- Cost-benefit analysis
- Drivers

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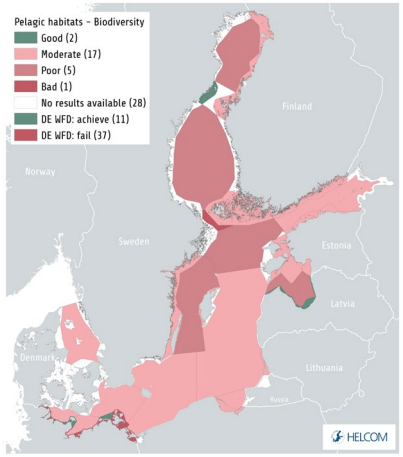
HOLAS 3

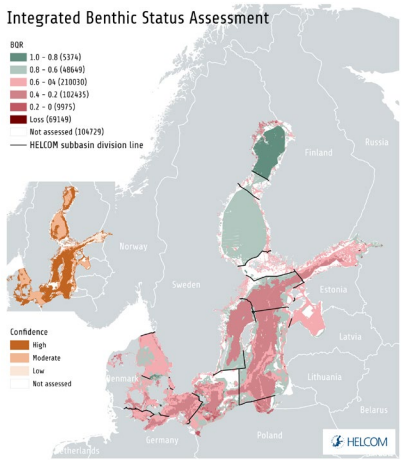
Biodiversity – Key takeaways

Biodiversity

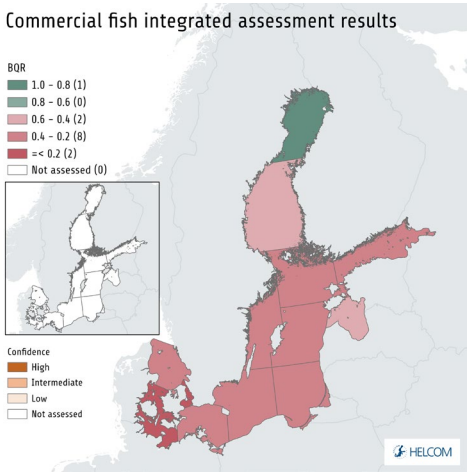
Pelagic habitats

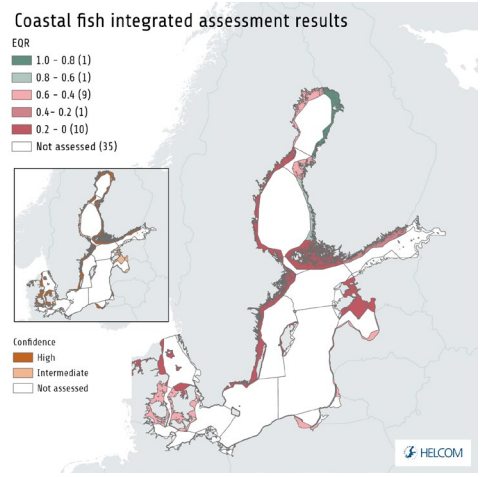


Benthic habitats

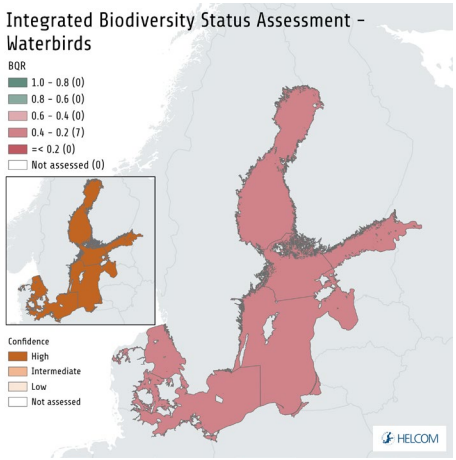


Fish

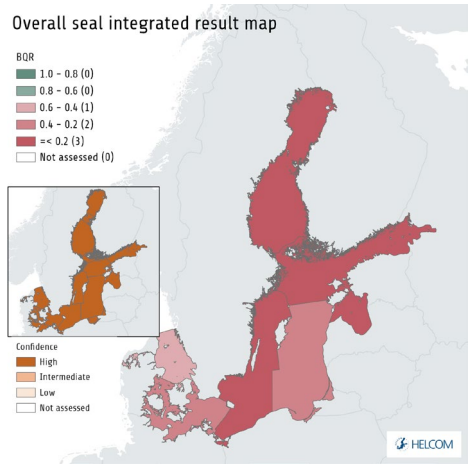


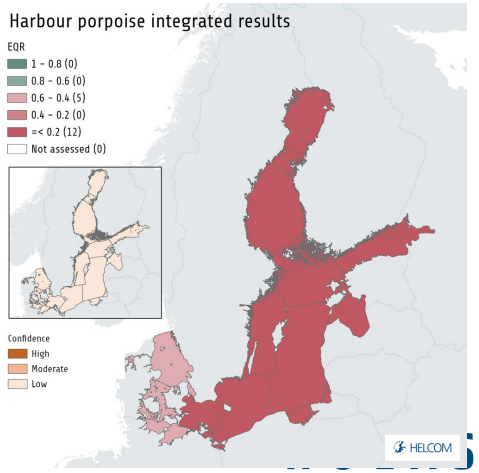


Waterbirds



Marine mammals





Biodiversity – status by topic

Biodiversity

Pelagic habitats do not have good status in any open sea subbasin

Benthic habitats generally do not have good status in the southern Baltic Sea, while their status is good in open sea areas in the northernmost subbasins.

For fish, only 4/15 assessed commercial stocks have good status.

Waterbirds generally do not have good status.

Marine mammals exhibit not good status in the Baltic Sea.

Food webs: Major changes in the abundance and biomass of species, driven by human pressures, have been associated with changes in the food webs of the Baltic Sea.

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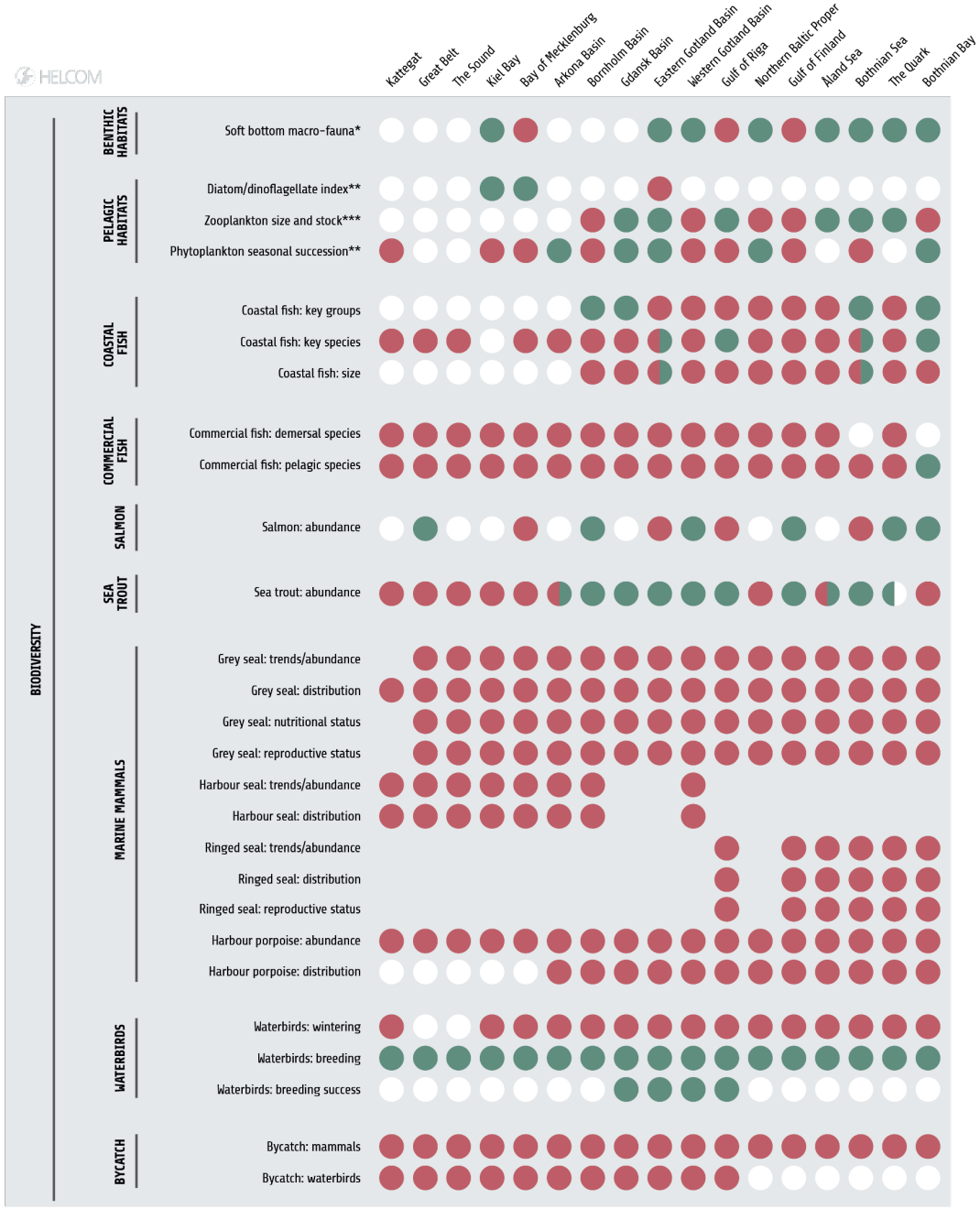
HOLAS 3

Status of biodiversity core indicators by sub-basin



* Core indicator agreed to be tested in this assessment
** Pre-core indicator agreed to be tested in this assessment
*** The indicator 'Zooplankton size and stock' is under testing for the Gdansk Basin

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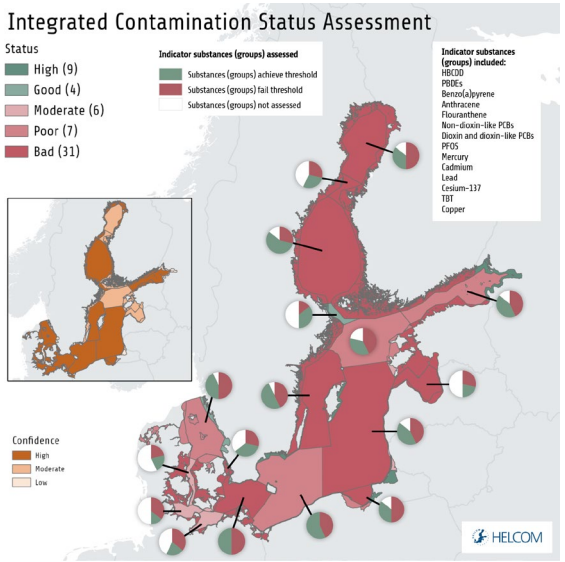
HOLAS 3

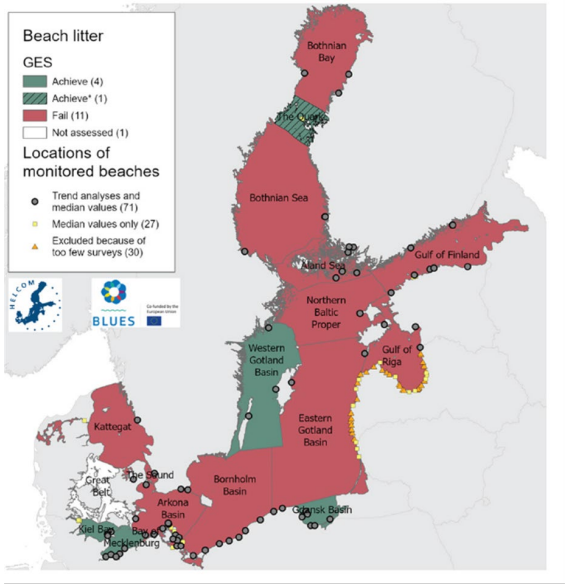
Hazardous substances, marine litter, underwater noise and non-indigenous species – Key takeaways

Hazardous substances, marine litter, underwater noise and non-indigenous species

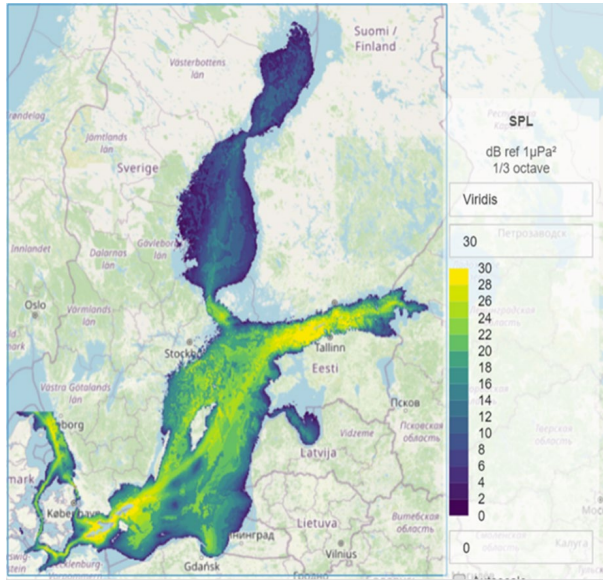
Hazardous substances



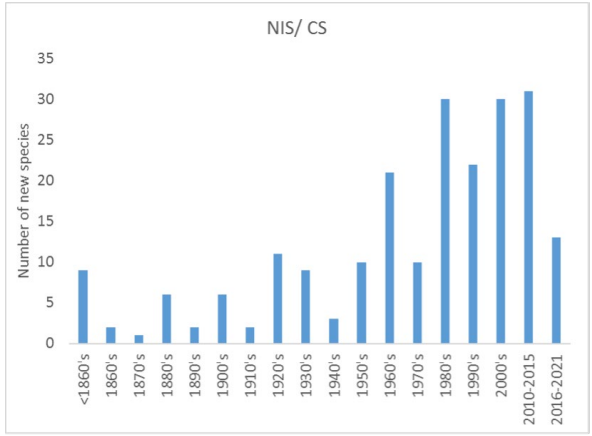
Marine litter



Underwater noise



Non-indigenous species



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HOLAS 3

Hazardous substances, marine litter, underwater noise and non-indigenous species– status by topic

Hazardous substances, marine litter, underwater noise and non-indigenous species

Hazardous substances
Majority of the Baltic Sea show bad or poor status. However, there are decreasing trends in concentrations of several substances.

Marine litter
11/16 sub-basins show not good status for beach litter. Two sub-basins indicate improving environmental conditions. 1 sub-basin shows a deteriorating littering trend. “Other”, plastic and fisheries related litter on the seafloor increased significantly in the period from 2015 to 2021.

Underwater noise
below threshold for marine mammals but exceeded threshold for masking for 9 out of 17 assessment units for fish, although not for fish behavioural disturbance.

Non-indigenous species
Good status for non-indigenous species was not achieved.

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HOLAS 3

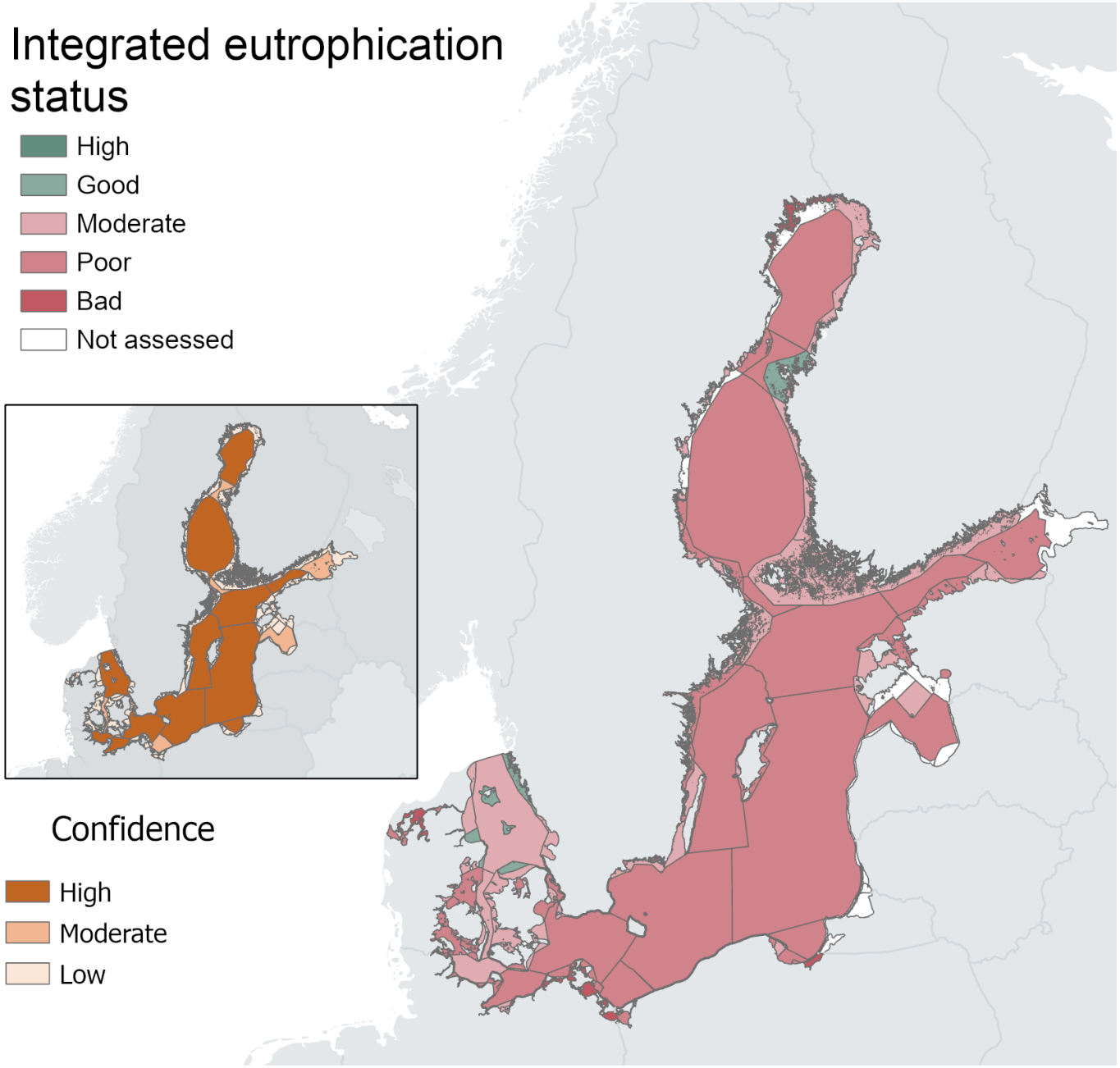
Status of pressure-based core indicators by sub-basin (hazardous substances, NIS, beach litter, noise)

* Pre-core indicator agreed to be tested in this assessment

** Pre-core indicator agreed to be tested in this assessment, masking of fish communication

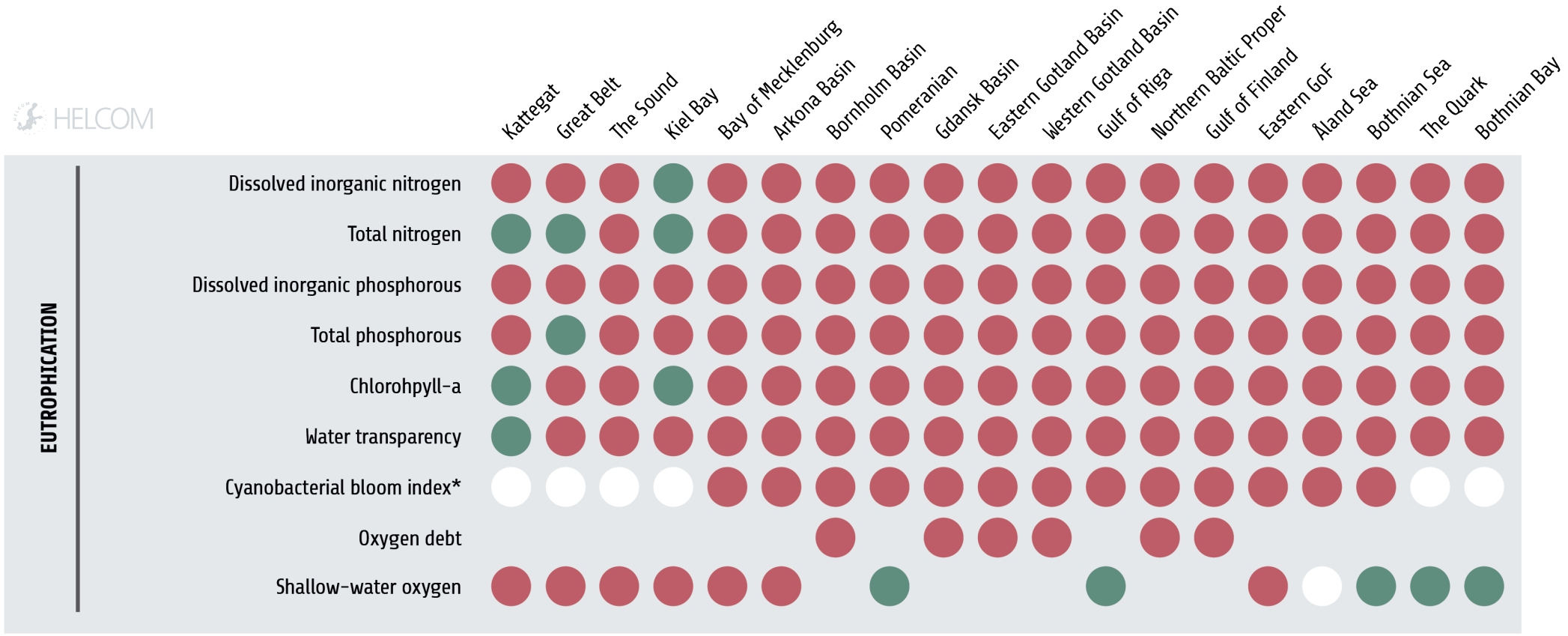
*** Pre-core indicator agreed to be tested in this assessment, fish behavioural disturbance

Eutrophication– Key takeaways



Eutrophication

Status of pressure-based core indicators by sub-basin (eutrophication)



* Pre-core indicator agreed to be tested in this assessment

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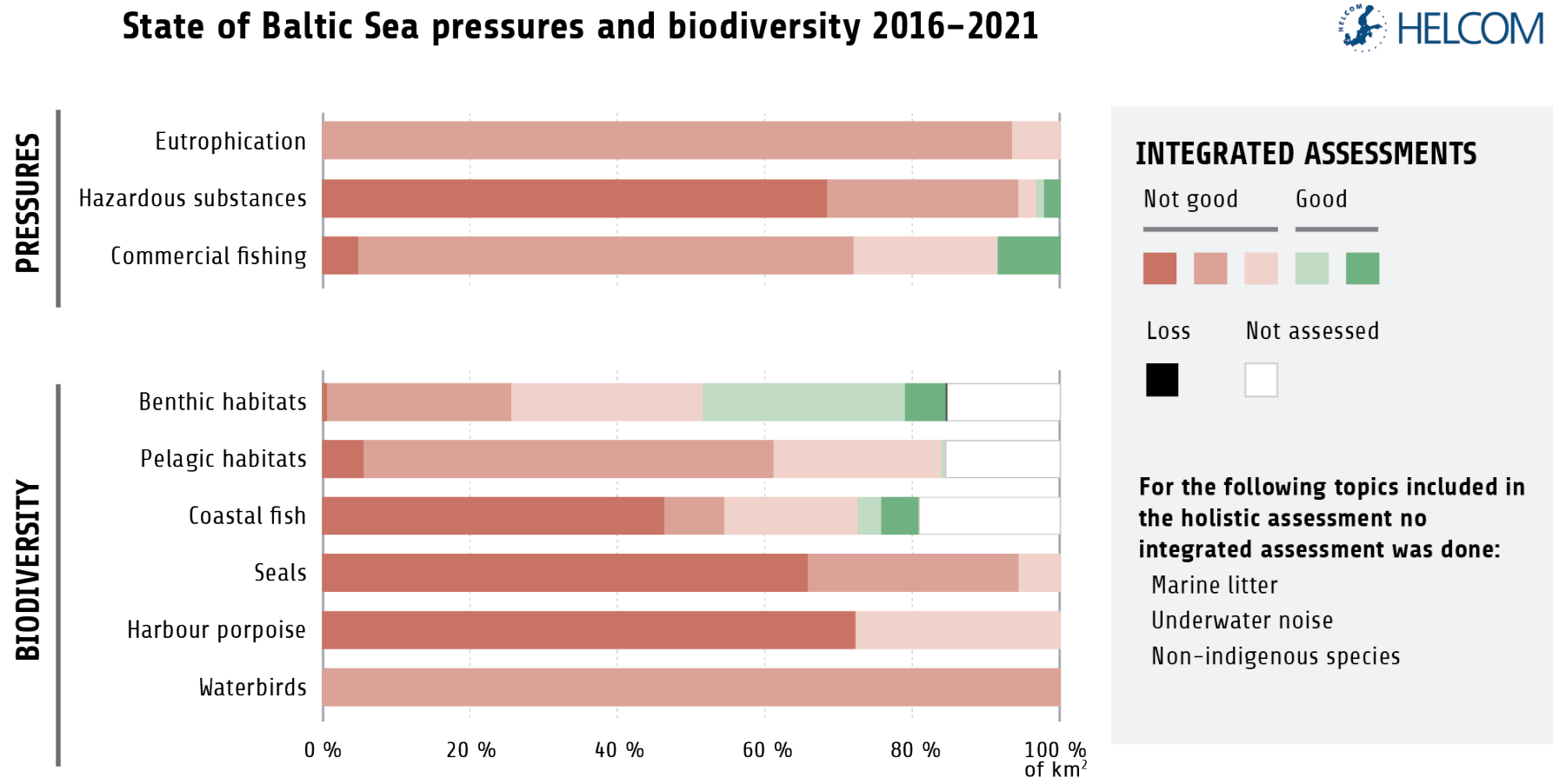
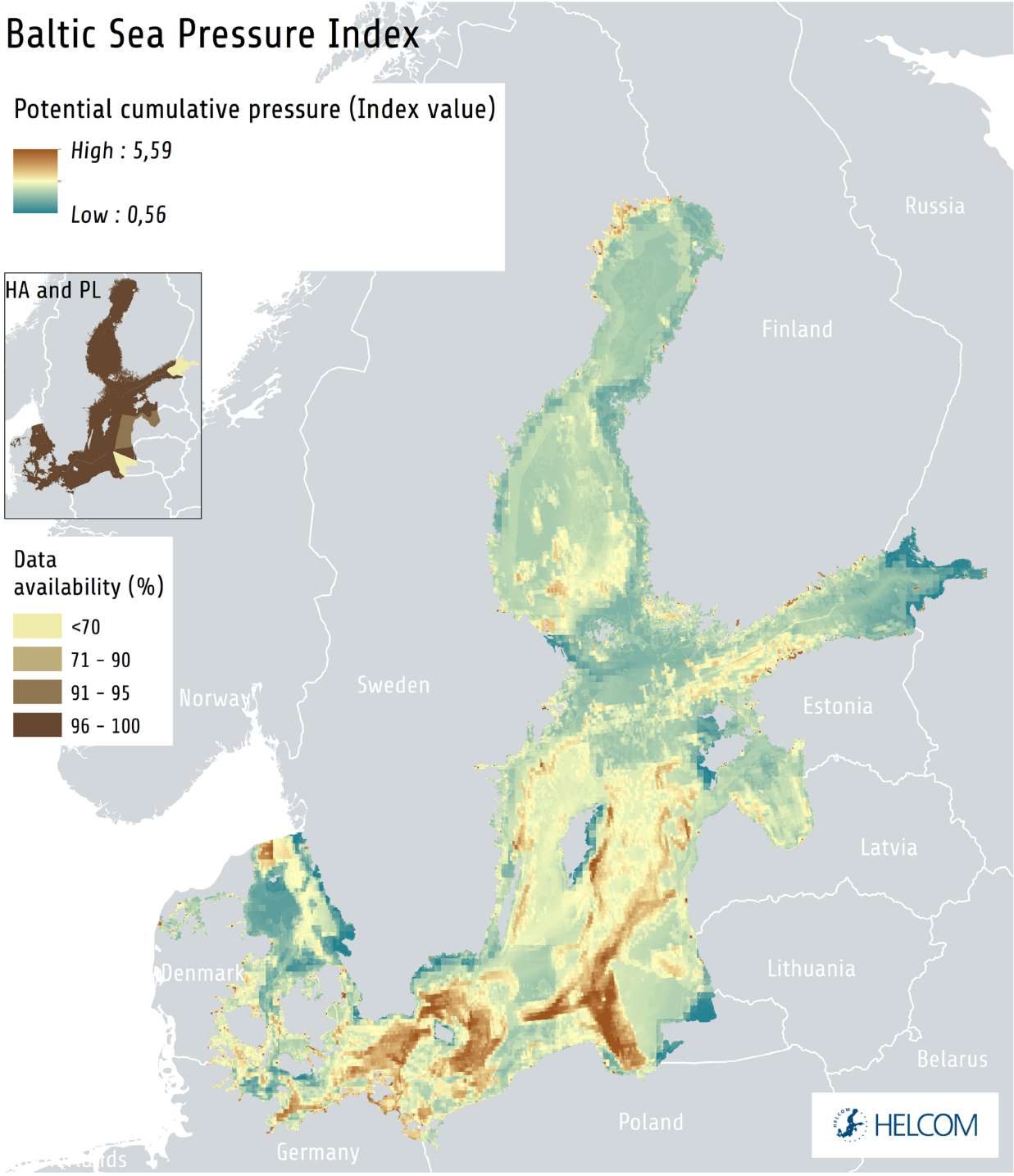
HOLAS 3

In summary: the state of the Baltic Sea ecosystem has not improved



Spatial Distribution of Pressure and Impact Assessment (SPIA)



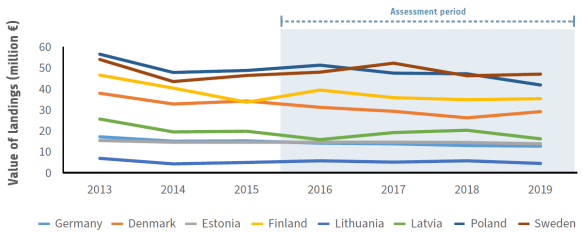
Spatial pressures and impacts

HOLAS 3

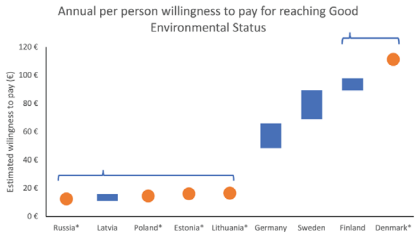
Economic and social analyses

Economic and social analyses

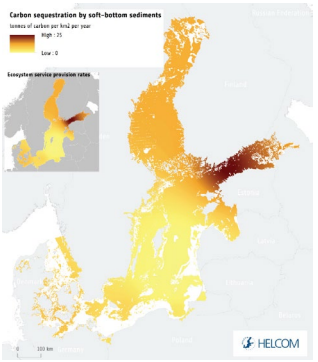
Economic and social analysis of the use of marine waters



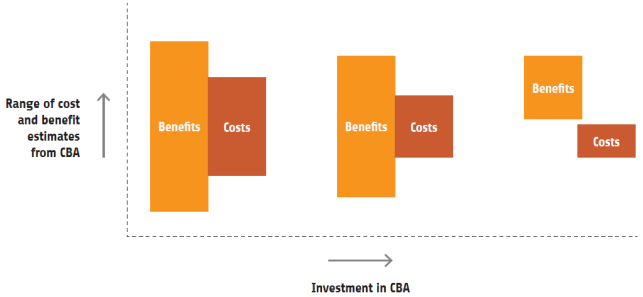
Cost of degradation analysis



Assessment of ecosystem services



Cost-benefit analysis



Driver indicator assessments

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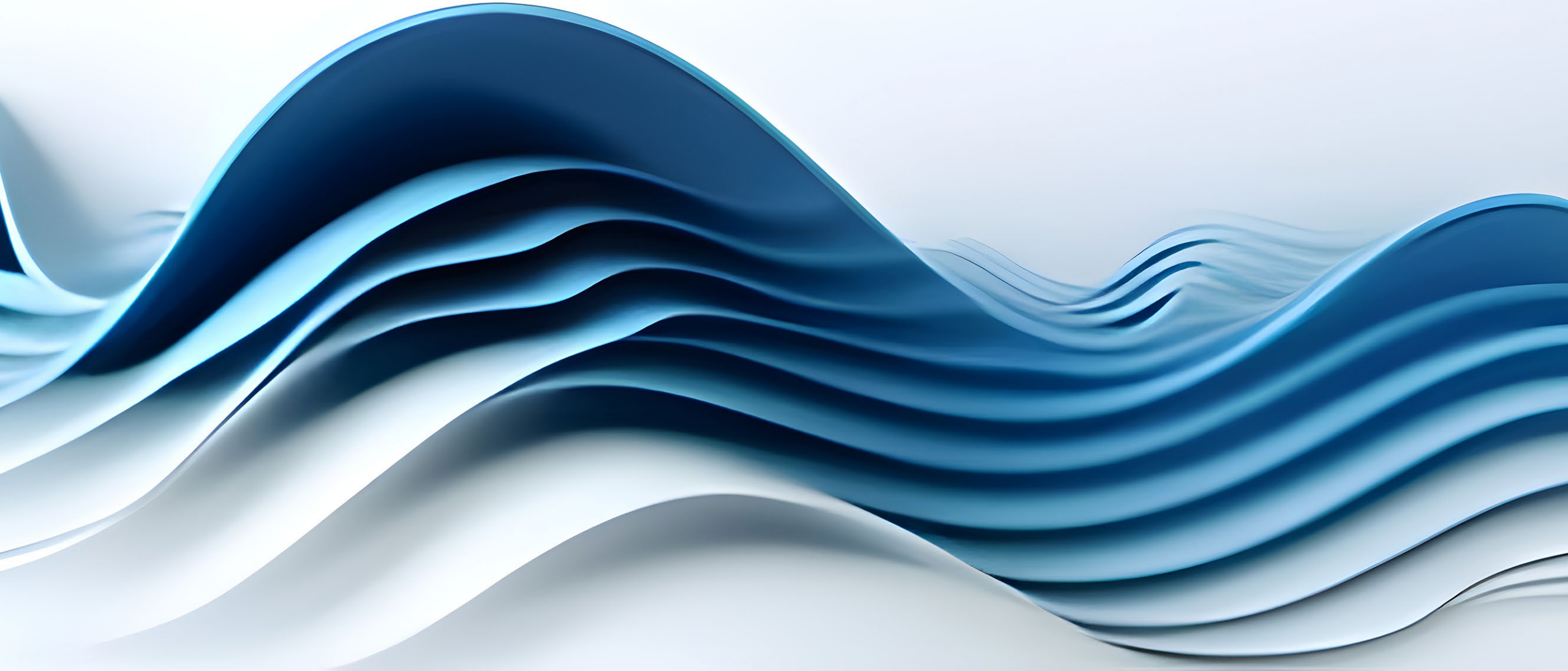
HOLAS 3

Next steps



Key takeaways from HOLAS 3

The Baltic Sea is under increasing impacts from **climate change** and **biodiversity degradation** catalysed by eutrophication, pollution, land use and resource extraction.

Little to no improvement of the Baltic Sea environment occurred during the assessment period.

Measures to reduce pressures on the Baltic Sea **are working**, when they are implemented, and the agreements in the updated Baltic Sea Action Plan remain highly relevant.

The effects of **climate change** are expected to increase in the future, increasing the need for measures to enhance ecosystem resilience and mitigate their negative impacts.

Transformative changes are needed in all socioeconomic sectors interacting with or affecting the Baltic Sea environment. **Actions are needed** both to stop current negative trends and to protect and restore ecosystems.

Ecosystem knowledge and **policies** for the Baltic Sea environment have developed substantially within the past six years.

Implementing the updated **BSAP**, facilitating ecosystem-based management and minimizing impacts from climate change are **focal areas for HELCOM** in the coming years.

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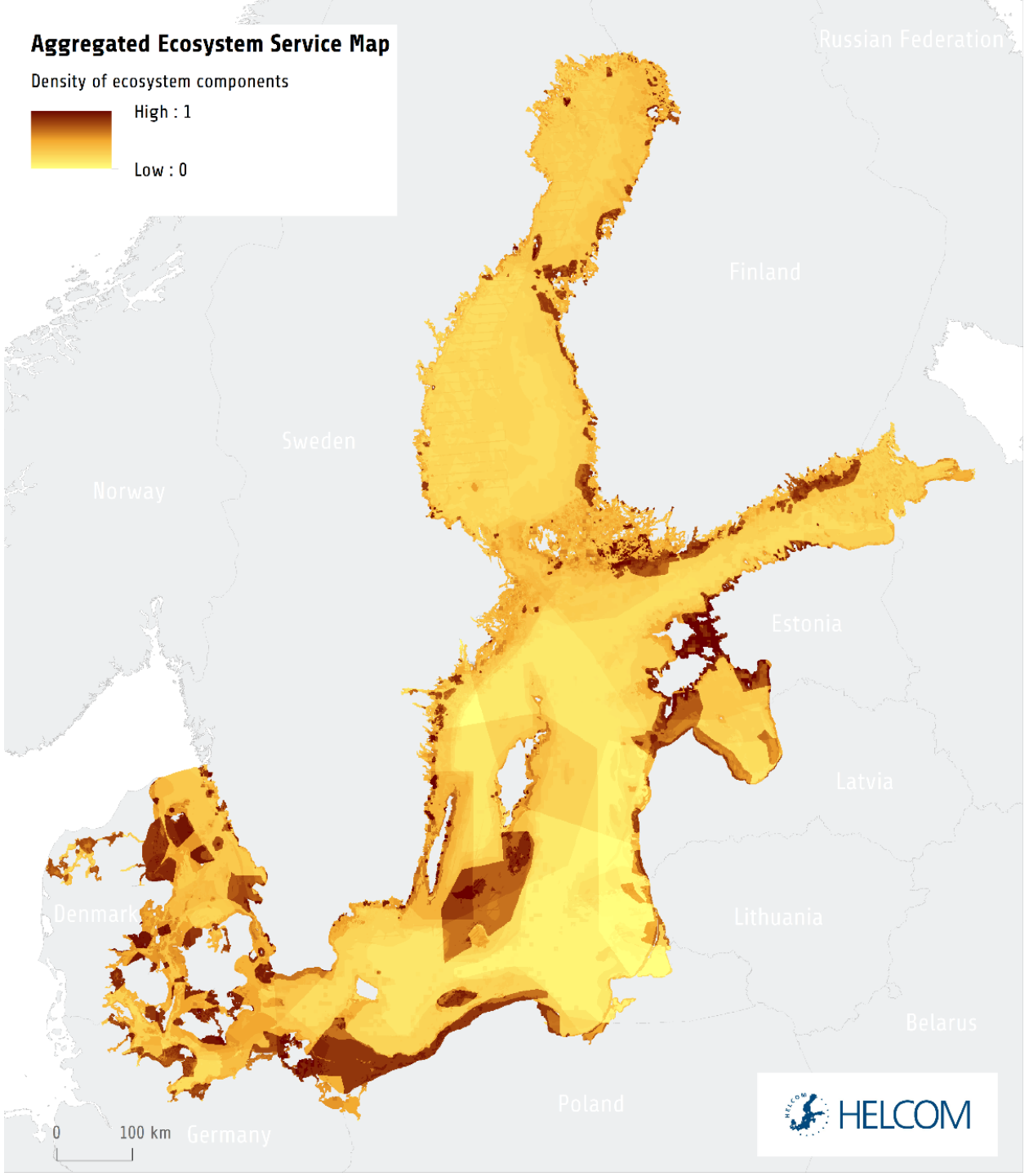
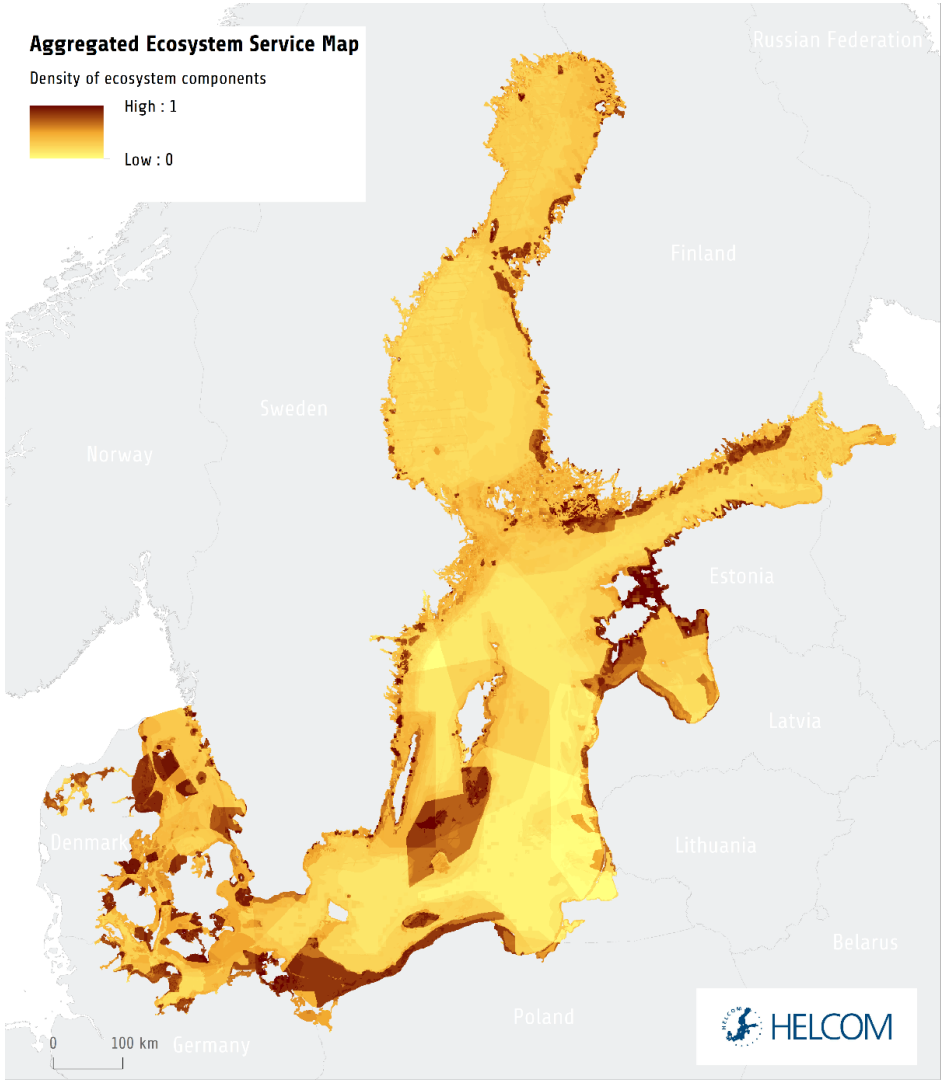
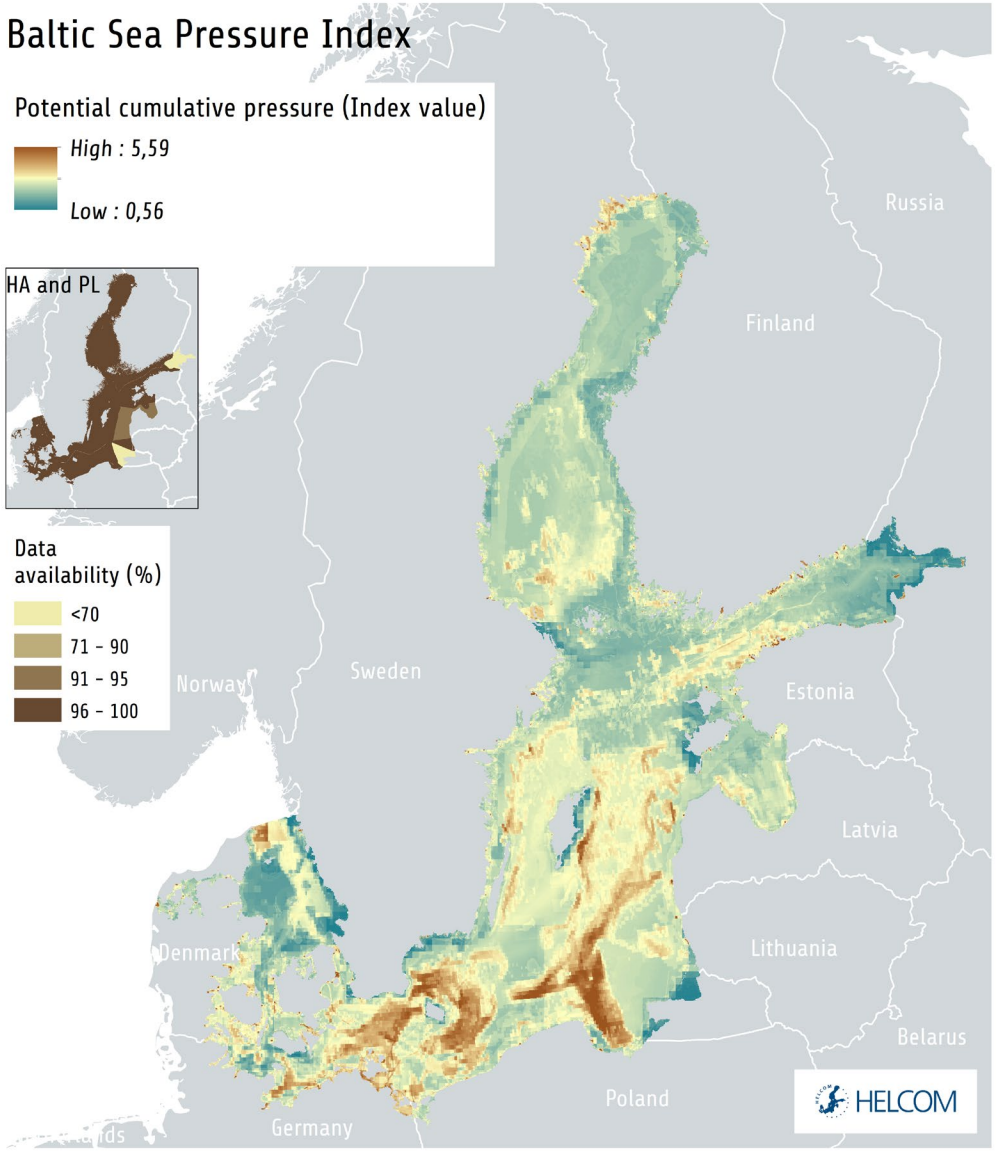
HOLAS 3

High cost of inaction



High cost of inaction





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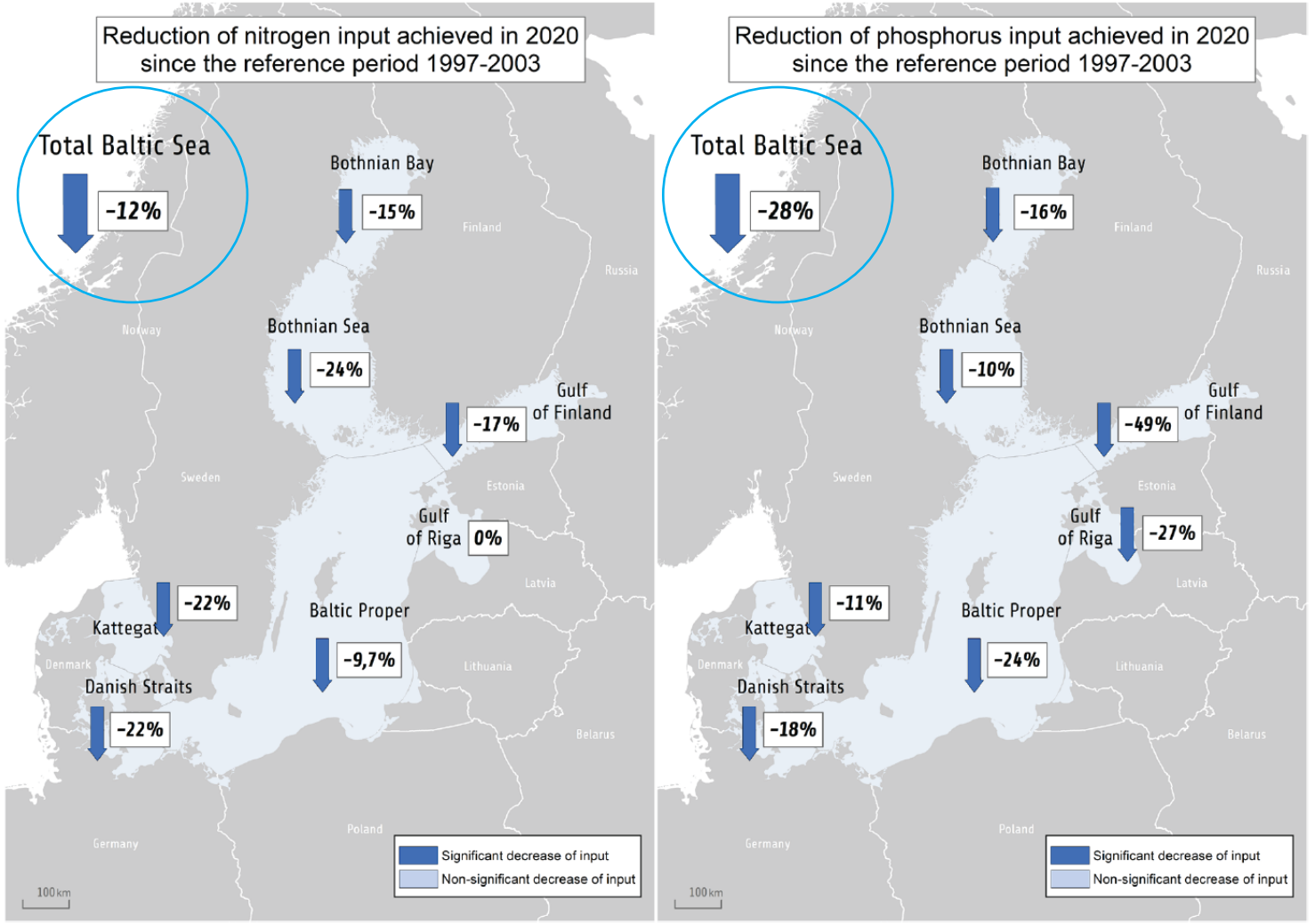
HOLAS 3

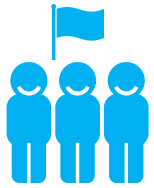
High cost of inaction

e.g. **9 billion euro/year** lost solely for recreation

Regional measures are working



Now that we know, where do we go?



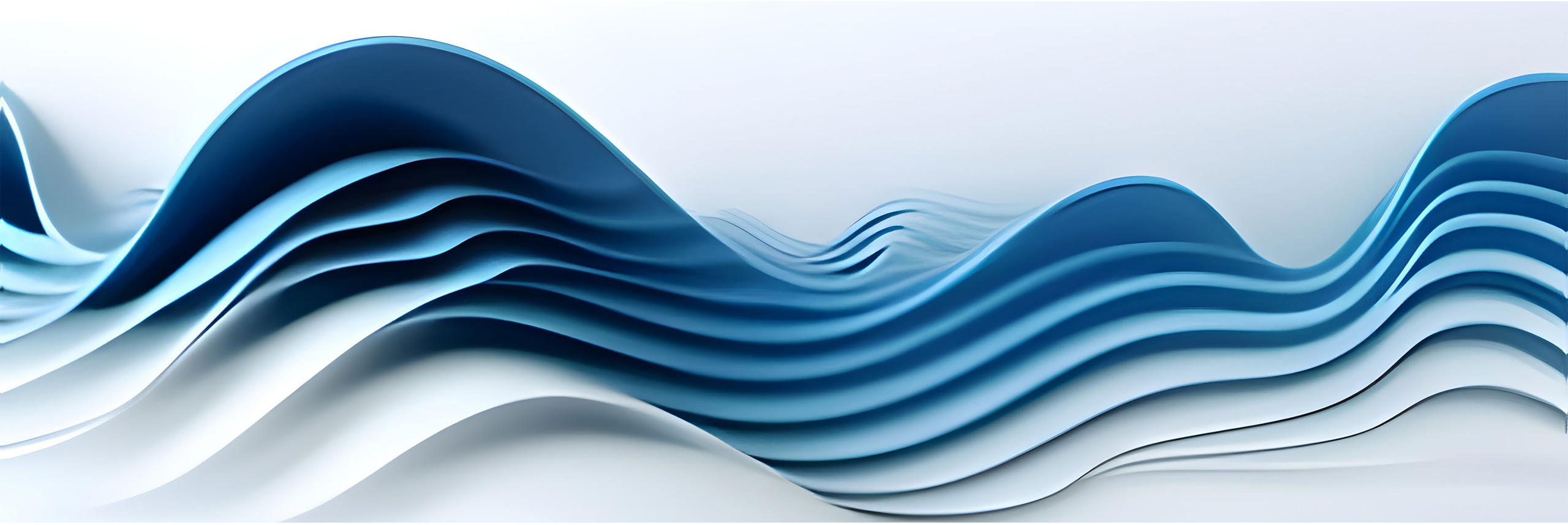
National work in HELCOM countries is at the core of implementing the Baltic Sea Action Plan and improving the health of the Baltic Sea.

The third HELCOM holistic assessment highlights the importance of measures to strengthen Baltic Sea biodiversity.

Achieving a healthy Baltic Sea ecosystem requires measures both to limit the extent and intensity of current human-induced pressures and to protect and restore species and habitats.

An urgent need is to equip our shared Baltic Sea ecosystem with the capacity to withstand the future effects of climate change.

A central task for HELCOM is to incorporate current knowledge developments in an ecosystem-based management framework that promotes the sustainability of the Baltic Sea region through cooperation at national, regional, and global levels.



Thank you!

https://stateofthebalticsea.helcom.fi