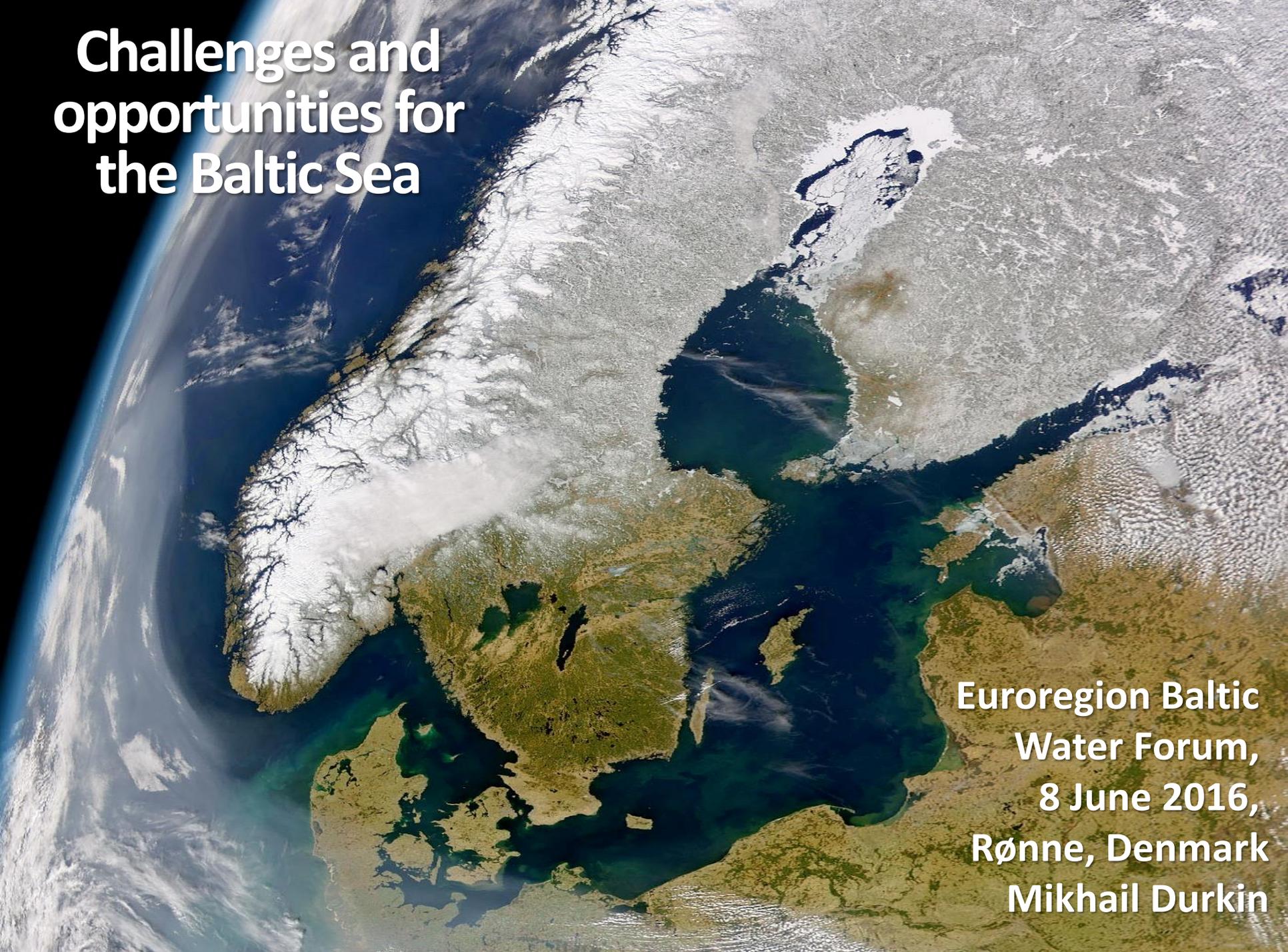


Challenges and opportunities for the Baltic Sea

A satellite image of the Baltic Sea region, showing the sea and surrounding landmasses. The sea is a deep blue-green color, and the land is a mix of green and brown. The image is taken from a high angle, showing the curvature of the Earth on the left side.

Euroregion Baltic
Water Forum,
8 June 2016,
Rønne, Denmark
Mikhail Durkin

Network of grass-root environmental NGOs

- **CCB:** was established in 1990
- **CCB:** a network of grass-root environmental NGOs
- **CCB:** cooperation of Environmental Citizens Organisations (ECO)
- **CCB:** 19 member organizations and through them – over 800 000 individual members
- **CCB:** works in the entire Baltic Sea catchment area, through organisations in Belarus, Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia, Sweden and Ukraine
- **CCB:** lobby at EU and HELCOM level, coordinated actions and field work, awareness raising and capacity building



co-funded by EU
LIFE Programme



Network covering the whole catchment

Russia

Friends of the Baltic,
St. Petersburg
Green World, St.
Petersburg

Finland

Finnish Association for
Nature Conservation
Finnish Society for
Nature and
Environment

Sweden

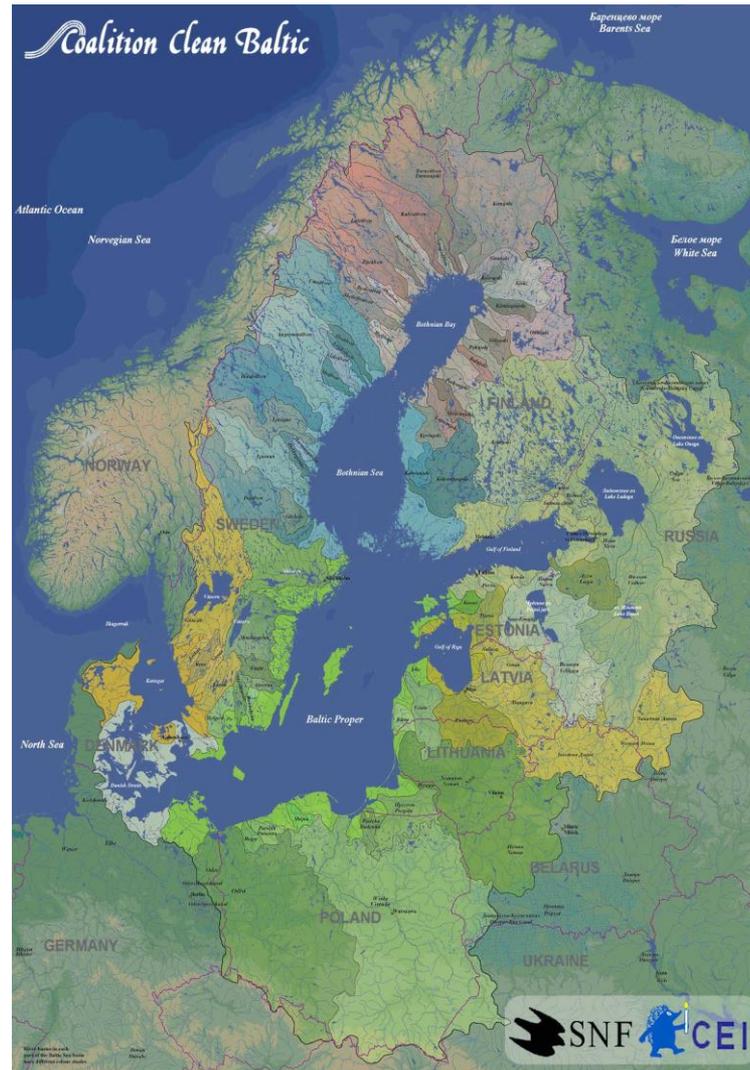
Swedish Society for
Nature Conservation
WWF-Sweden

Denmark

Danish Society for
Nature Conservation

Germany

Bund für Umwelt und
Naturschutz
Deutschland / Friends
of the Earth Germany



Estonia

Estonian Green Movement

Latvia

Environmental Protection
Club of Latvia, VAK
Latvian Green Movement

Lithuania

Lithuanian Fund for Nature
Lithuanian Green Movement

Poland

Green Federation, GAJA,
Szczecin
Polish Ecological Club, PKE

Belarus

Ecohome
IPO Ecoproject

Ukraine

The Western Centre of the
Ukrainian Branch
of the World Laboratory, Lviv,
Ukraine

co-funded by EU
LIFE Programme



Network working across sectors



**Water Protection in
Agriculture**



**River Basin and
Wastewater Management**



**Fisheries and
Aquaculture**



**Hazardous Substances
and Marine Litter**



**Biodiversity and Nature
Conservation**



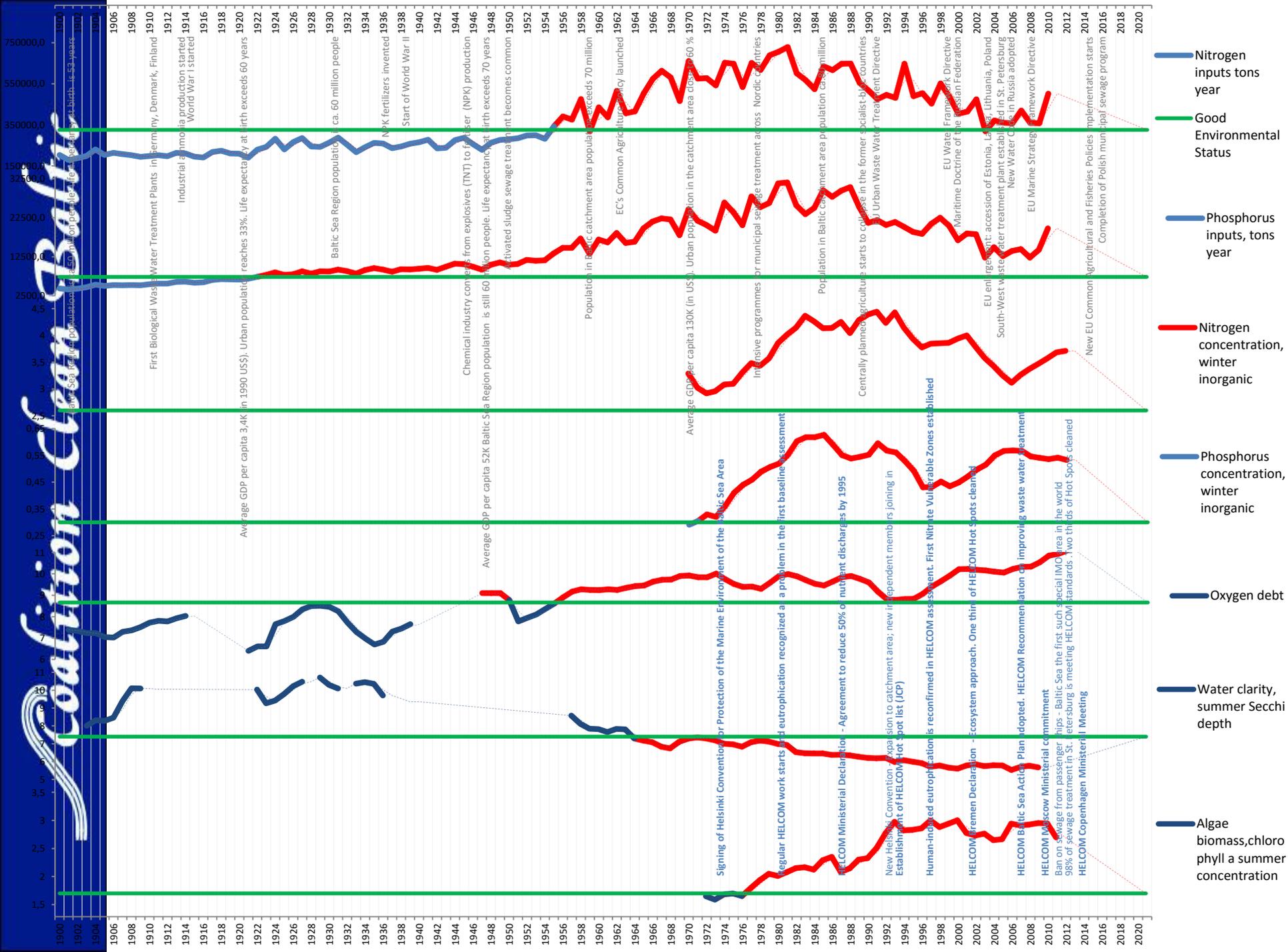
**Sustainable Development in
Coastal and Marine Areas**

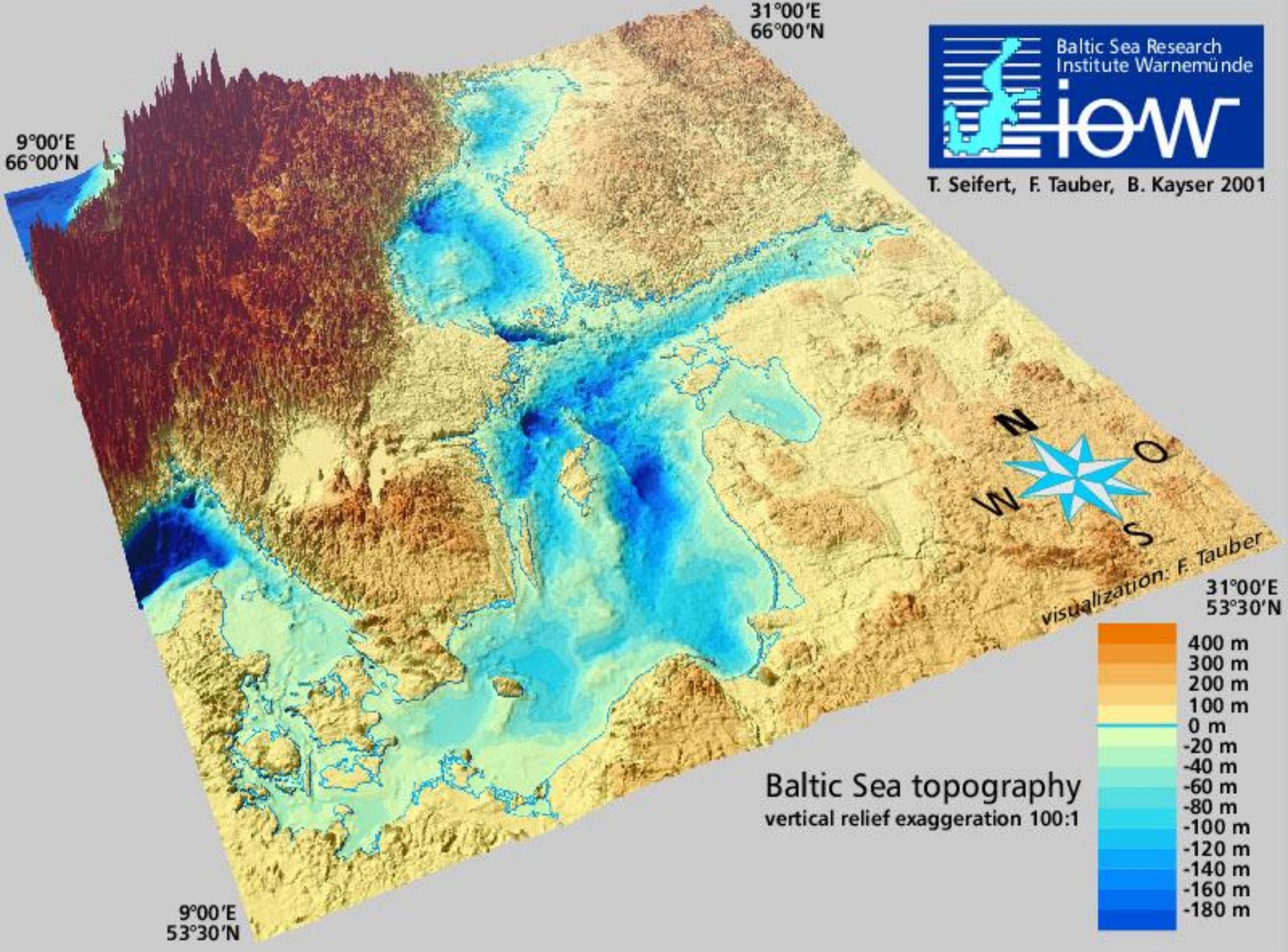


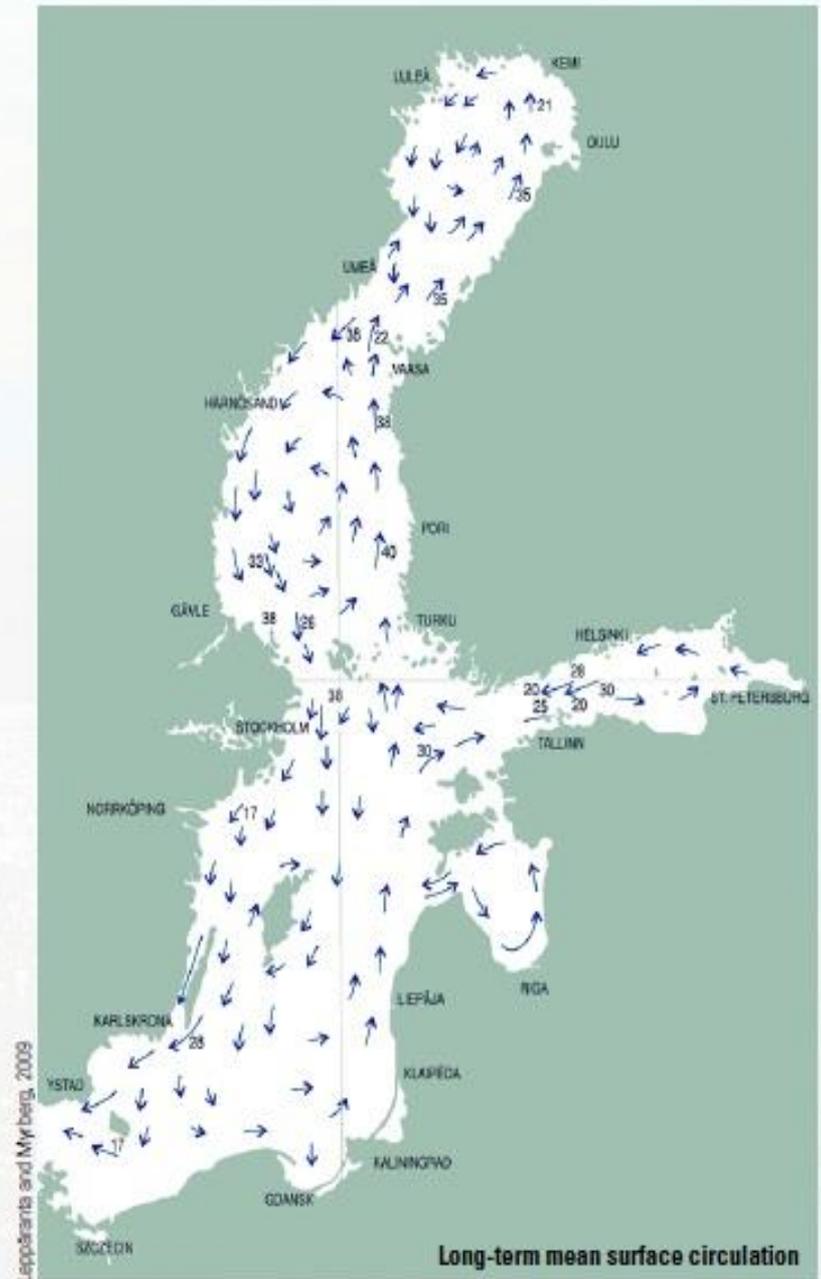
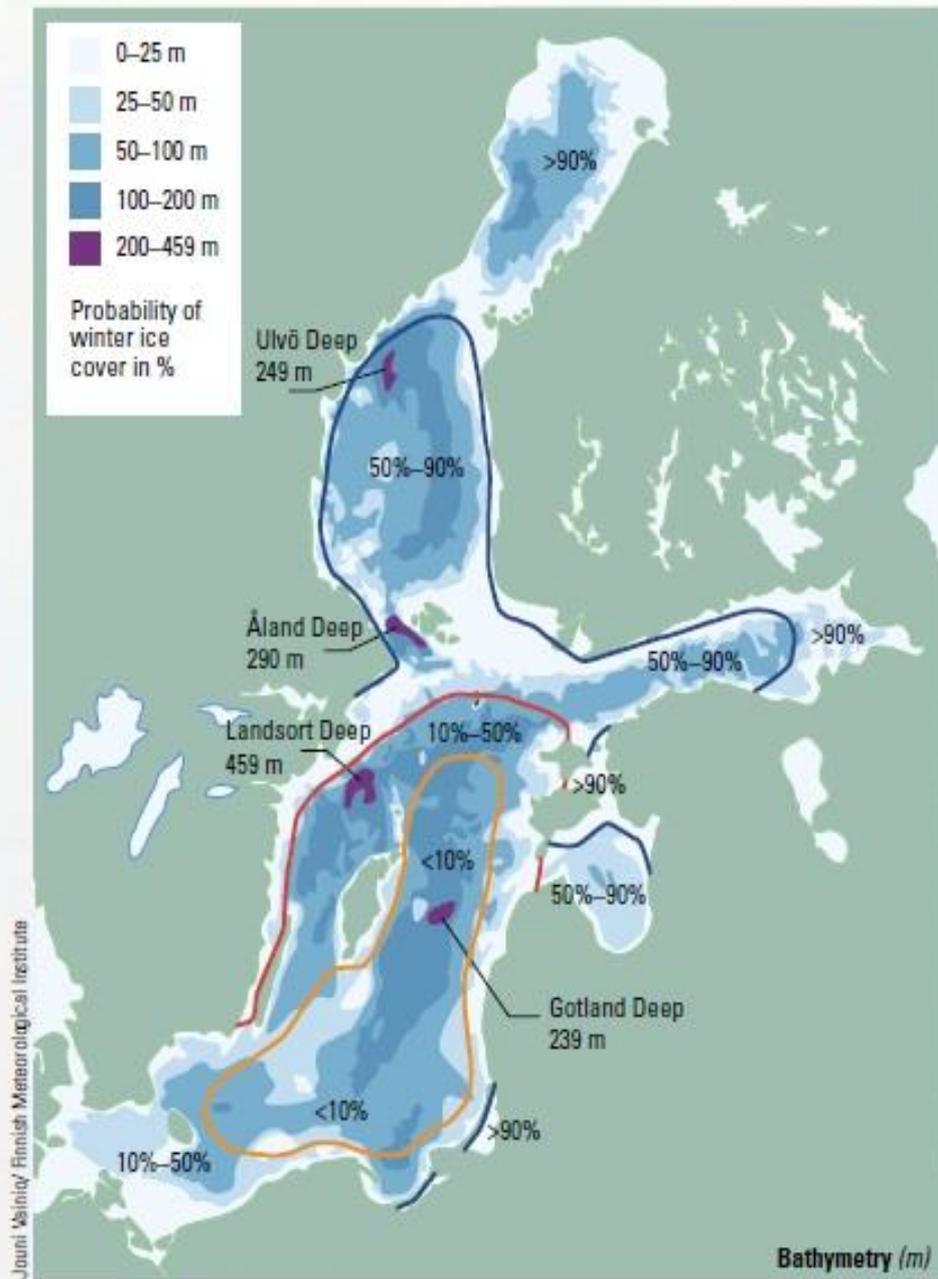
**Harmful Installations and
Maritime Transport**

co-funded by EU
LIFE Programme

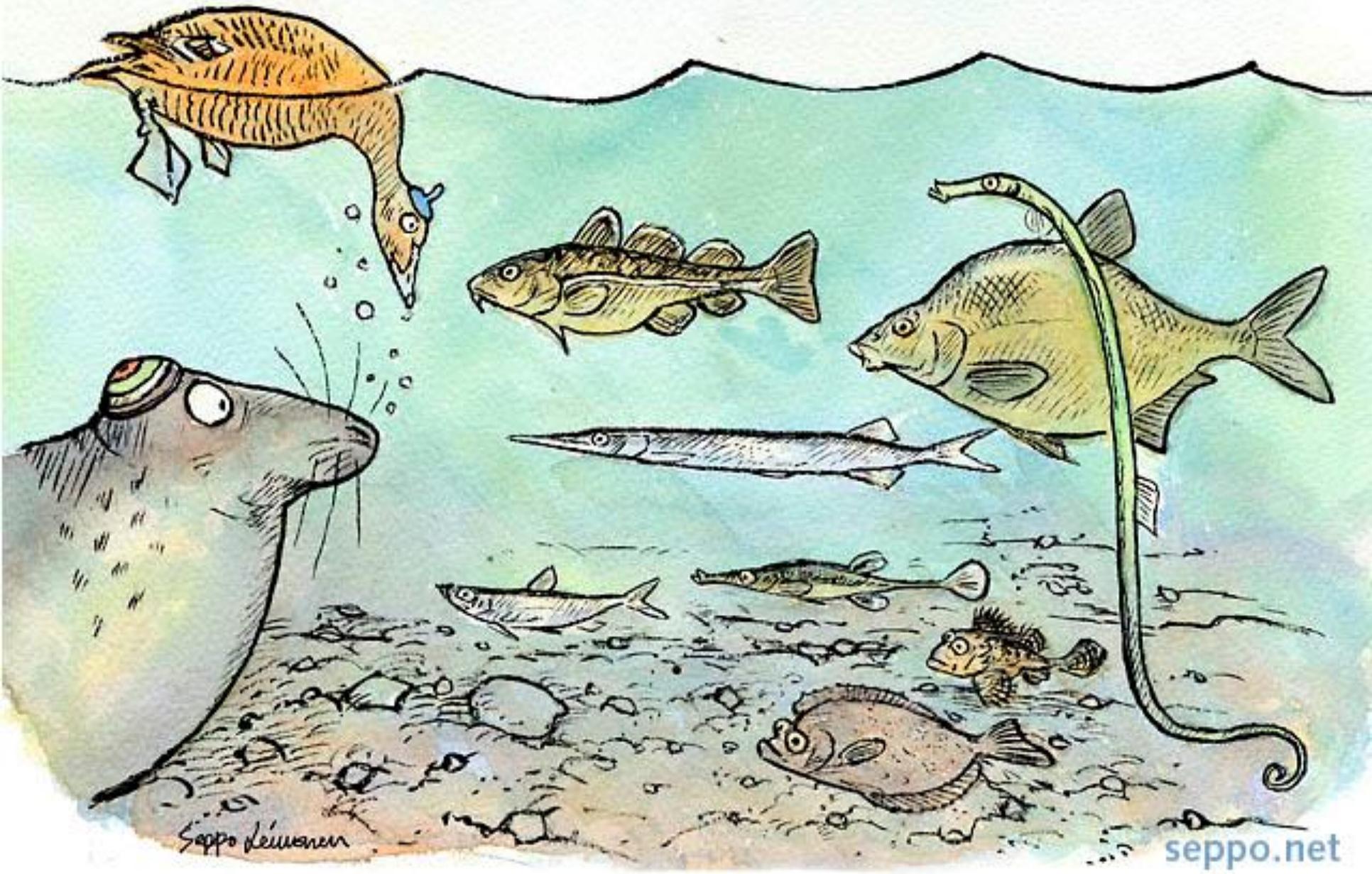








Typical Baltic Sea ecosystem







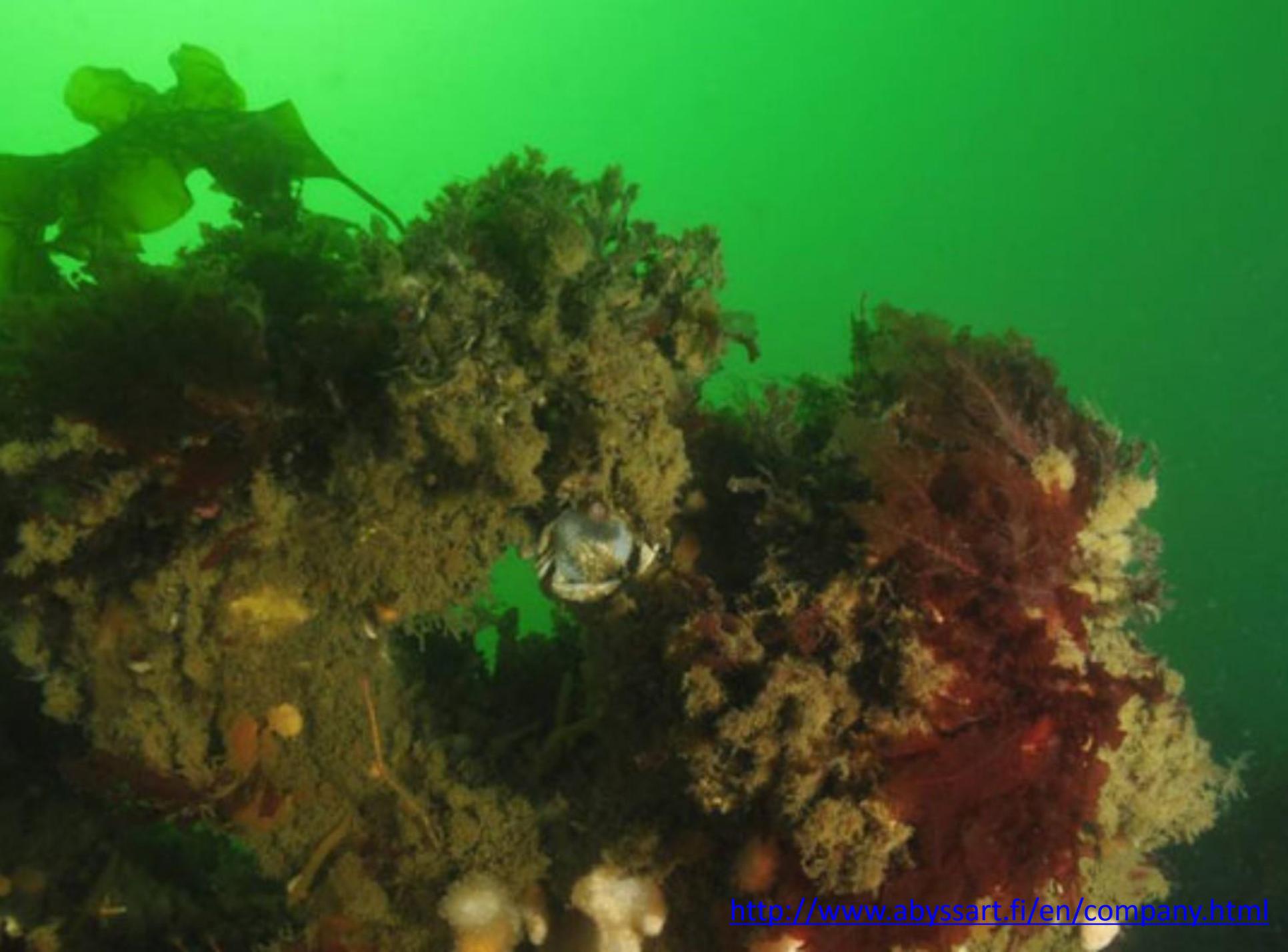


















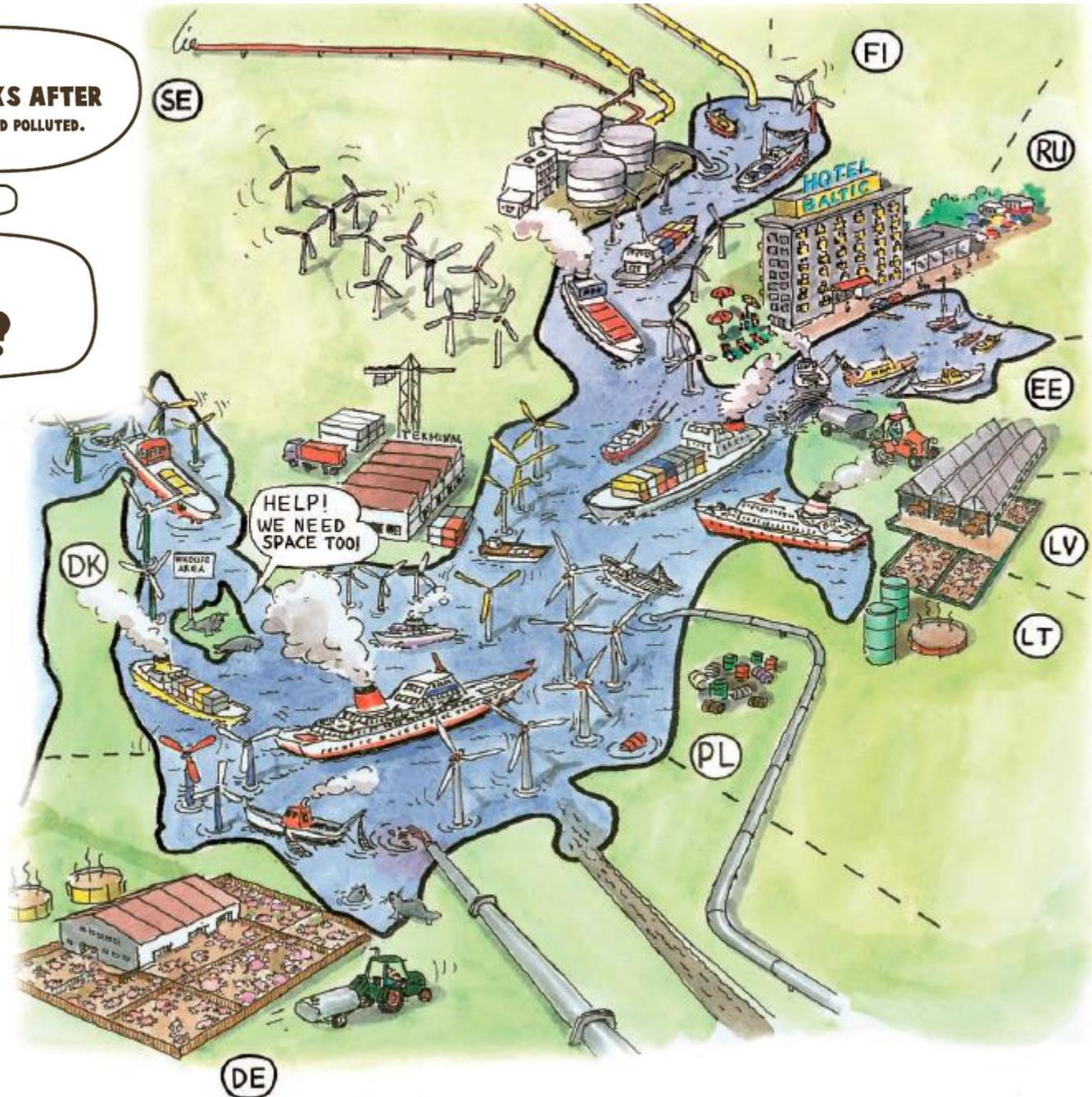




Coalition Clean Baltic

SOMETIMES IT SEEMS AS
IF NO ONE LOOKS AFTER
THE BALTIC SEA. IT IS OVERUSED AND POLLUTED.

WHO HAS RESPONSIBILITY
FOR MANAGING THESE COMPETING
USES AND PROTECTING ITS
NATURAL RESOURCES ?



**BECOME A
MARITIME SPATIALIST
WITHIN 10 MINUTES**

**MARITIME SPATIAL
PLANNING IN THE BALTIC SEA**

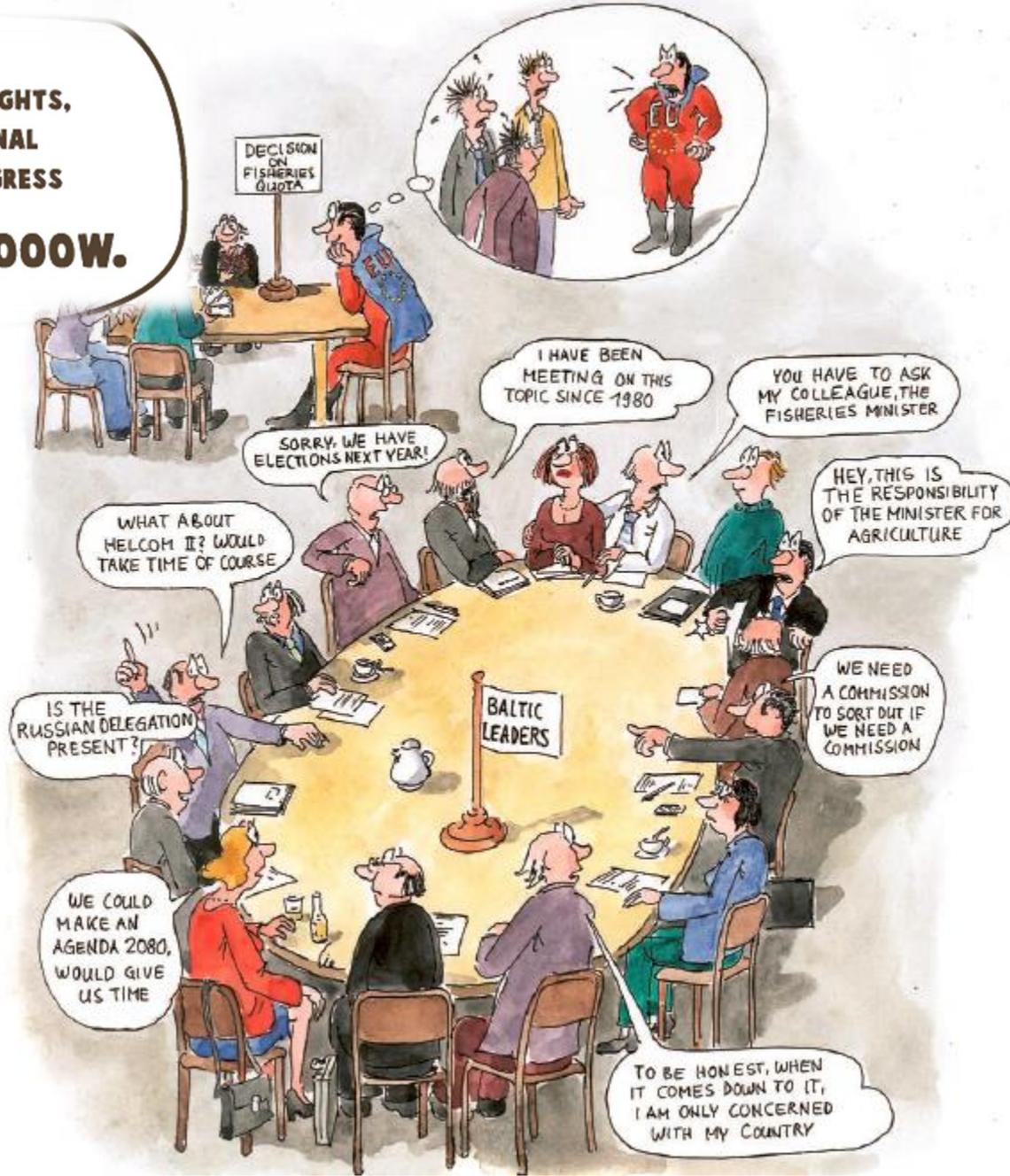
SOMETIMES IT ALSO SEEMS
AS IF EVERYONE GOVERNS THE BALTIC SEA.
IT IS A **LABYRINTH**
OF RULES,
RIGHTS AND RESPONSIBILITIES,
WITH TOO MANY PARTIES
CHASING SECTORAL
AND NATIONAL INTERESTS.



**BECOME A
MARITIME SPATIALIST
WITHIN 10 MINUTES**

**MARITIME SPATIAL
PLANNING IN THE BALTIC SEA**

A JUNGLE OF RIGHTS,
POWERS, RESPONSIBILITIES AND NATIONAL
INTERESTS MAKE PROGRESS
IN THE BALTIC SEA
REALLY **SLOOOOOOOOOOW.**



WWF for a living planet!

MARITIME SPATIAL PLANNING IN THE BALTIC SEA

BECOME A MARITIME SPATIALIST WITHIN 10 MINUTES

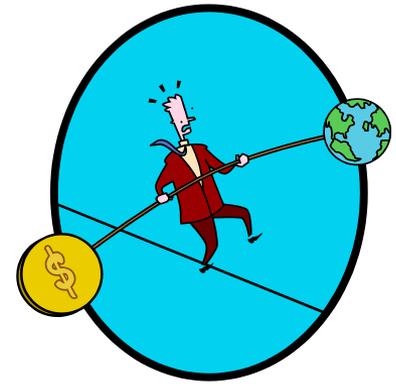
What is good ecosystem health of the Baltic Sea?

- **The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.**

(UN Convention on Biodiversity)

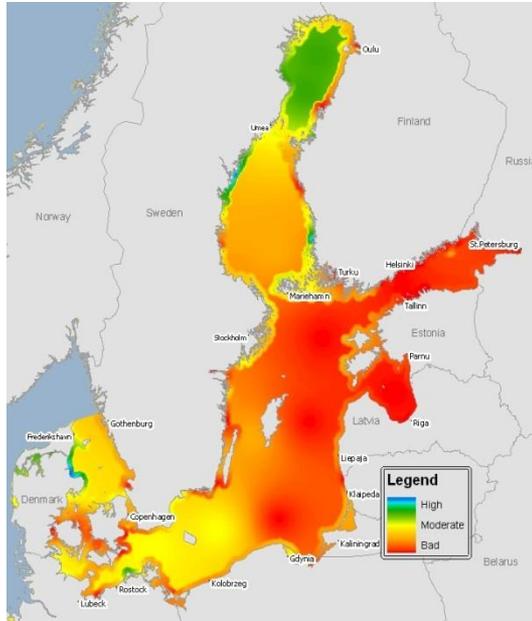
- **A marine environment, with diverse biological components functioning in balance, resulting in a good environmental/ecological status and supporting a wide range of sustainable human economic and social activities**

(HELCOM Baltic Sea Action Plan)

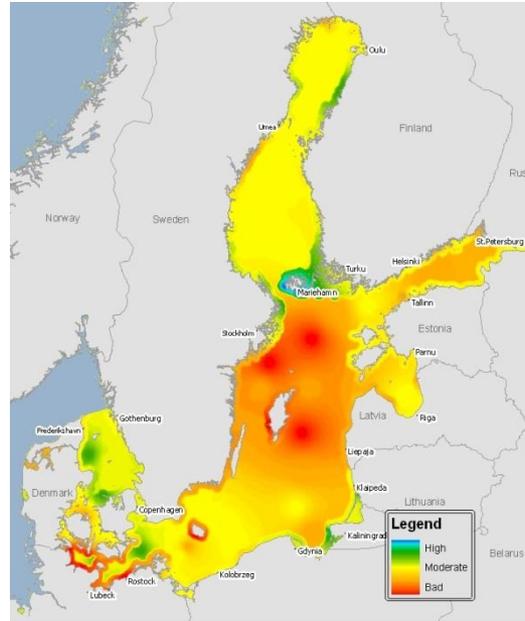


Are we on the right track?

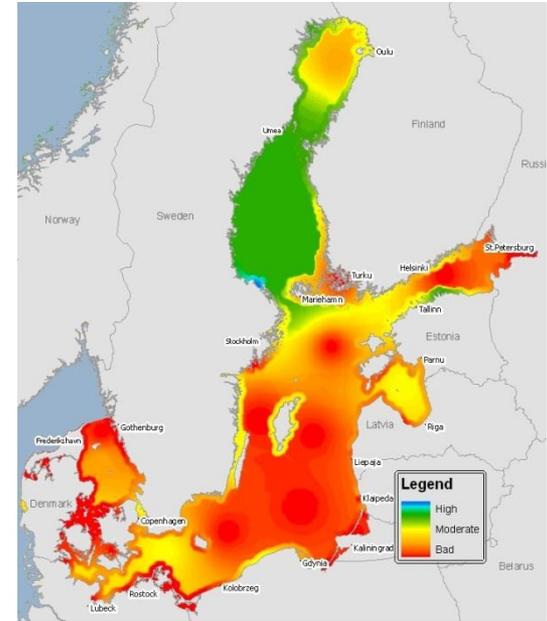
Eutrophication



Hazardous substances



Biodiversity



- **> 40%** reduction in loads of nitrogen and phosphorus
- **50%** reduction in discharges of 46 hazardous substances
- **117** of the designated 162 major pollution Hot Spots have been recovered (2016)
- Since 2003 number of MPAs has increased from 78 to **159** and cover **10.3%** of marine area
- **Populations** of grey seal, white-tailed eagle have been **recovered**, as well as wild salmon populations restored, etc.
- Improved safety of navigation and accident response capacity – **less accidents** with spills, **less illegal oil spills**, better preparedness

4%

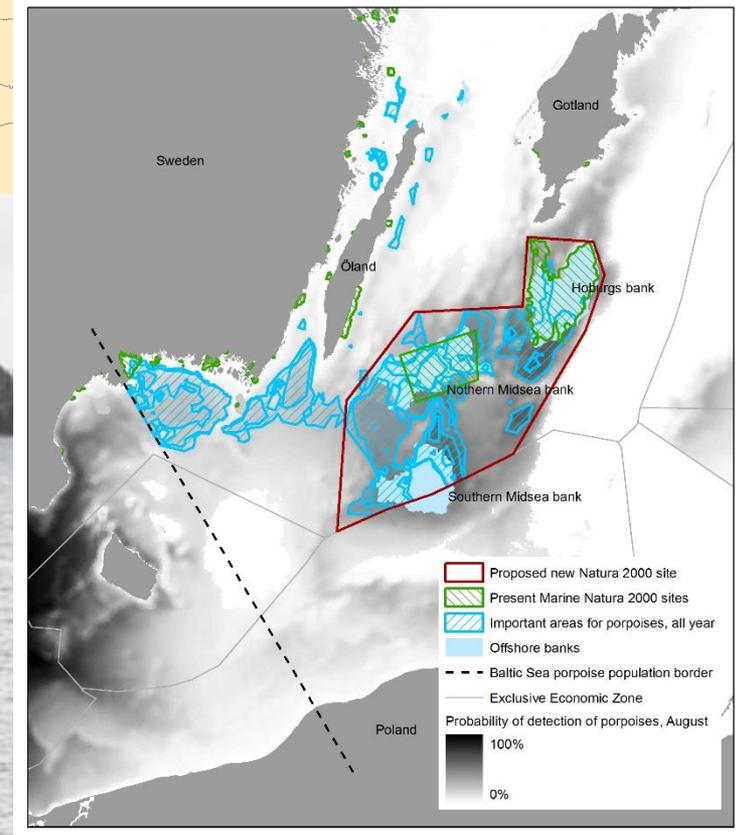
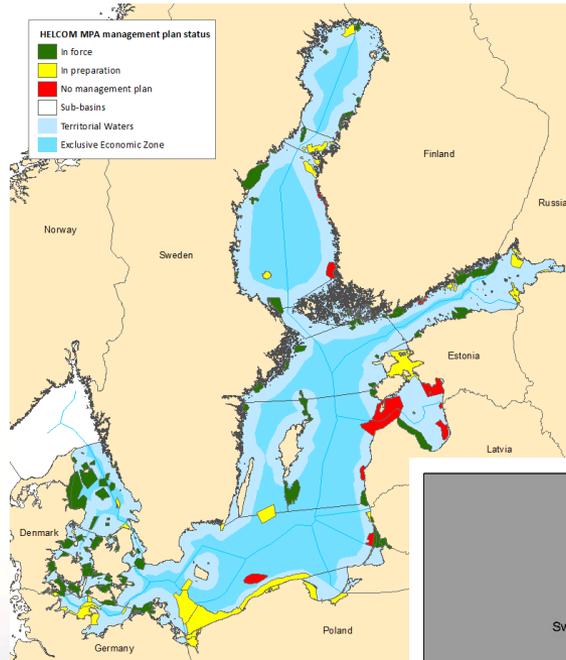
Species and

27%

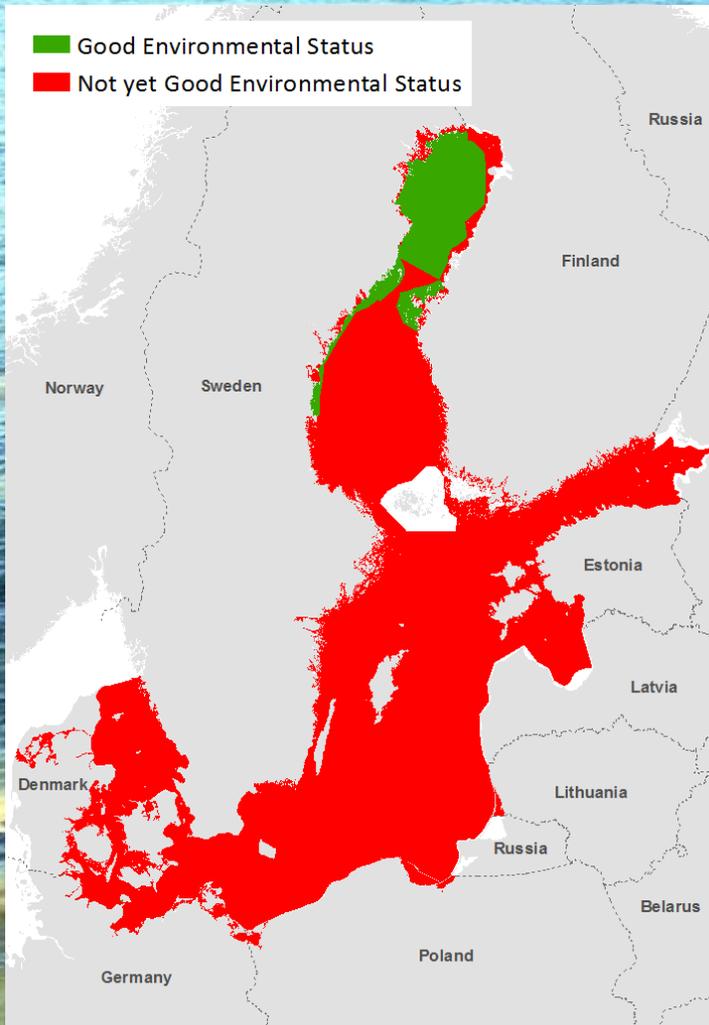
habitats
are under threat of
extinction



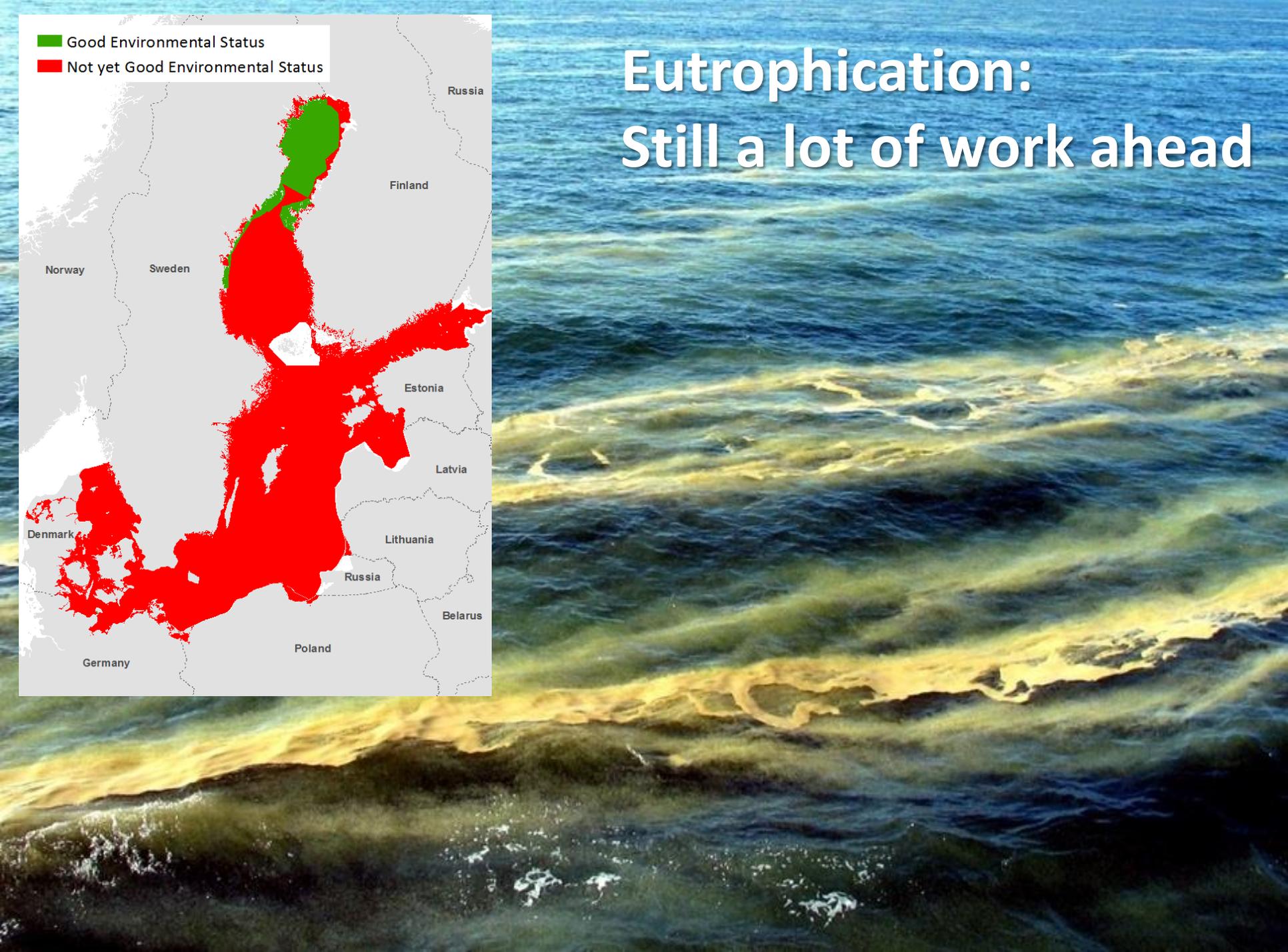
12%
of the sea area
is covered by
Marine Protected
Areas

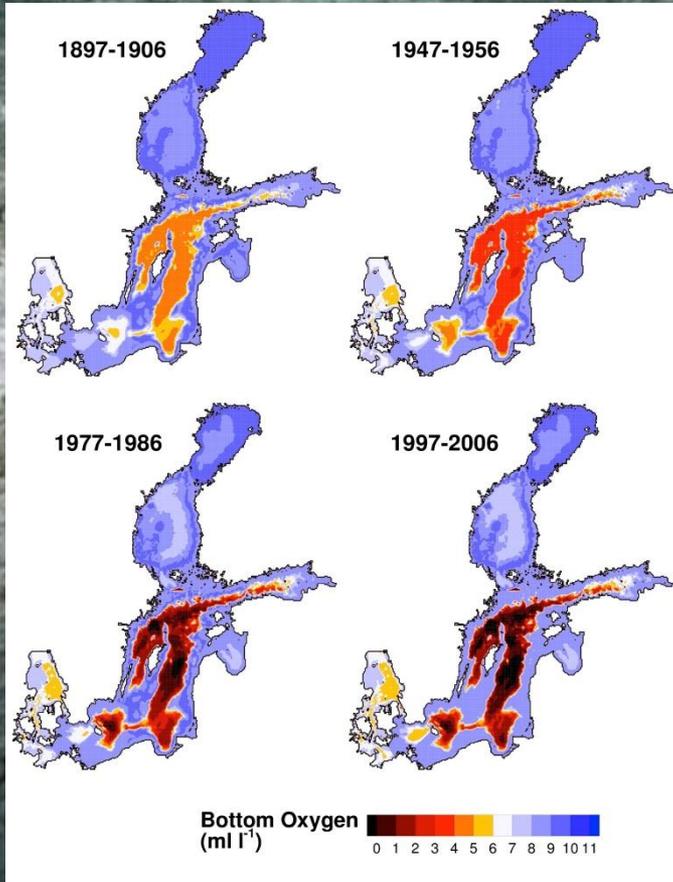
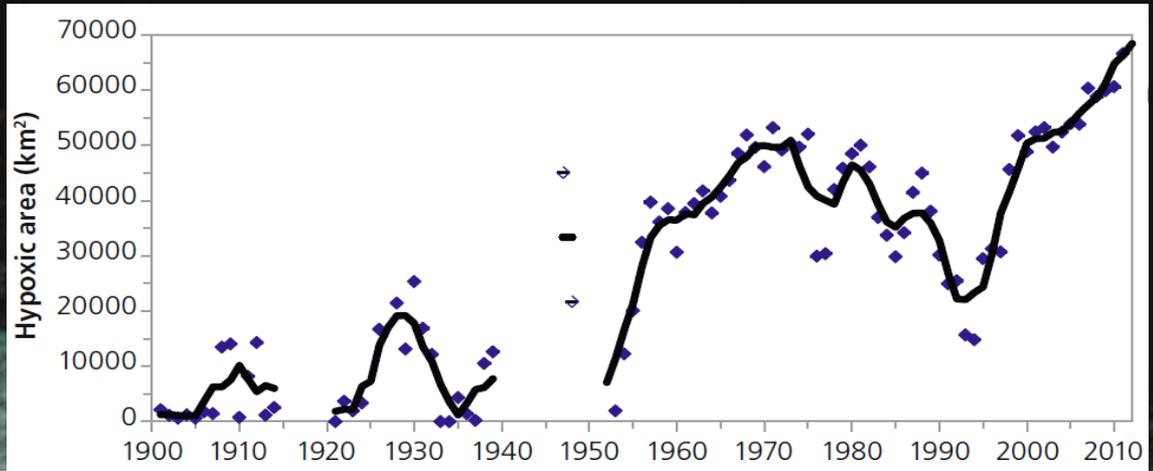


Good Environmental Status
Not yet Good Environmental Status

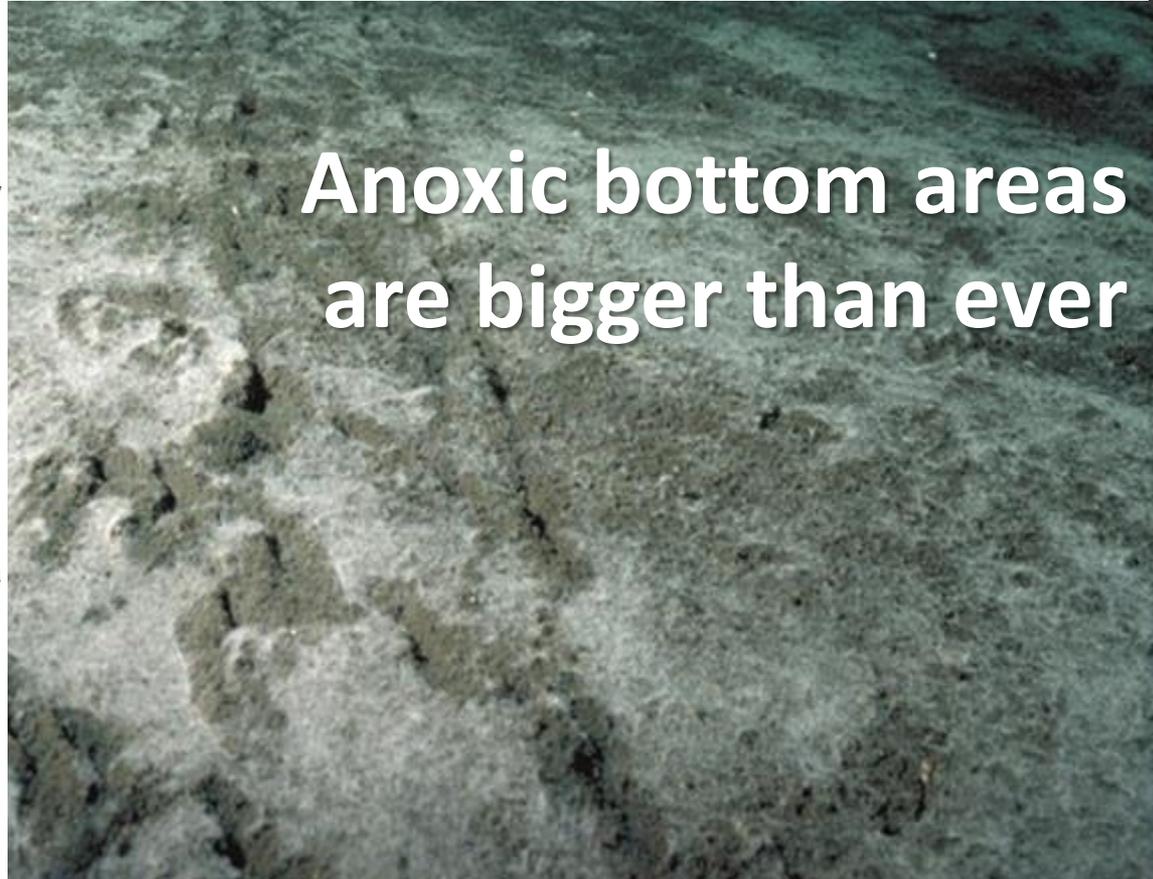


Eutrophication: Still a lot of work ahead





Anoxic bottom areas
are bigger than ever



 Good Environmental Status

 Not yet Good Environmental Status

Country Allocated Reductions Targets, 2013 (t/yr from 1997-2003 loads)

UNECE N 18720
Shipping N 6930

P 530
N 9240 

P 330 + 26
N 2430 + 600 

P 3790
N 10380 

P 320
N 1800 

P 220
N 1670 

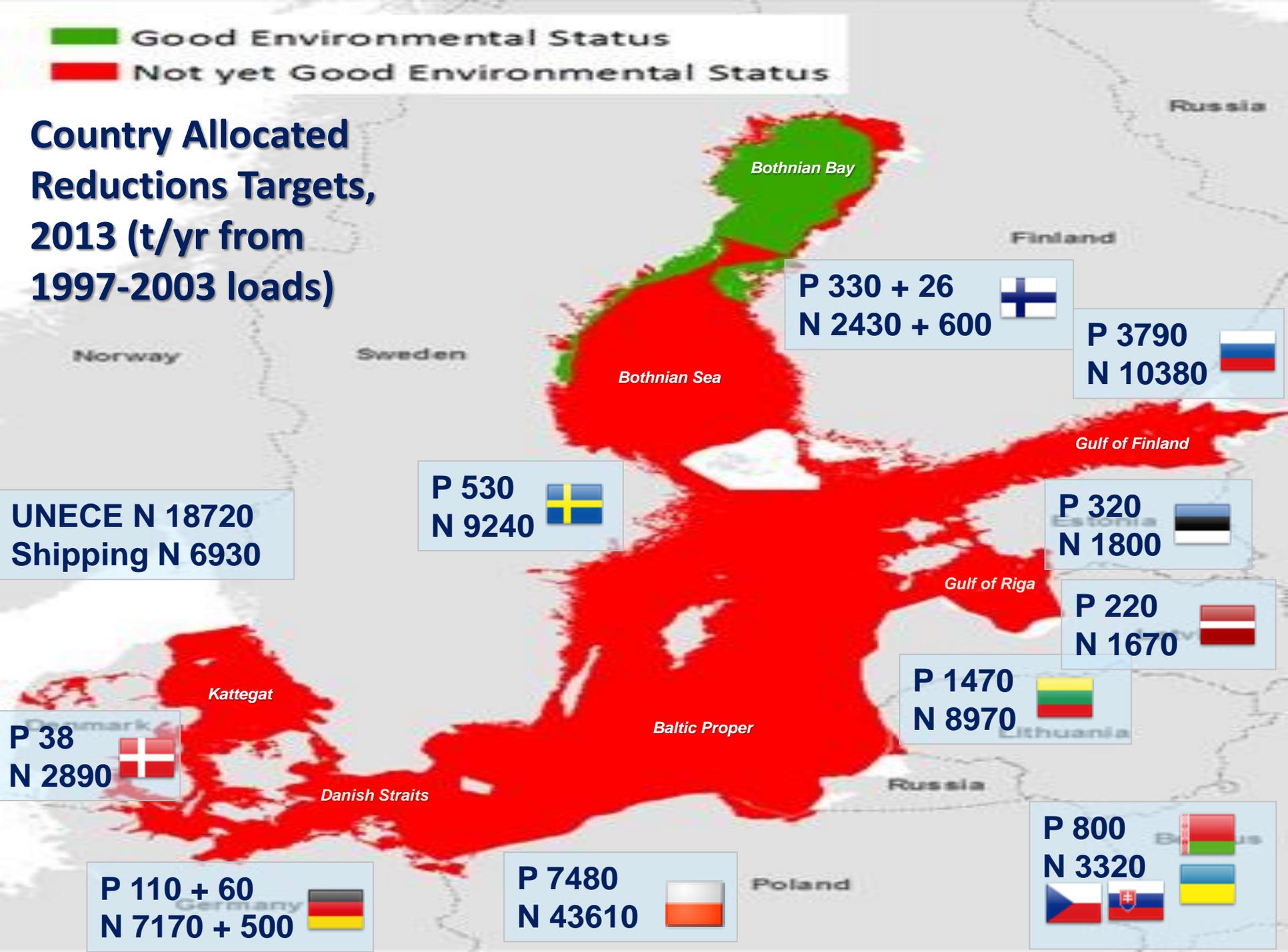
P 1470
N 8970 

P 38
N 2890 

P 110 + 60
N 7170 + 500 

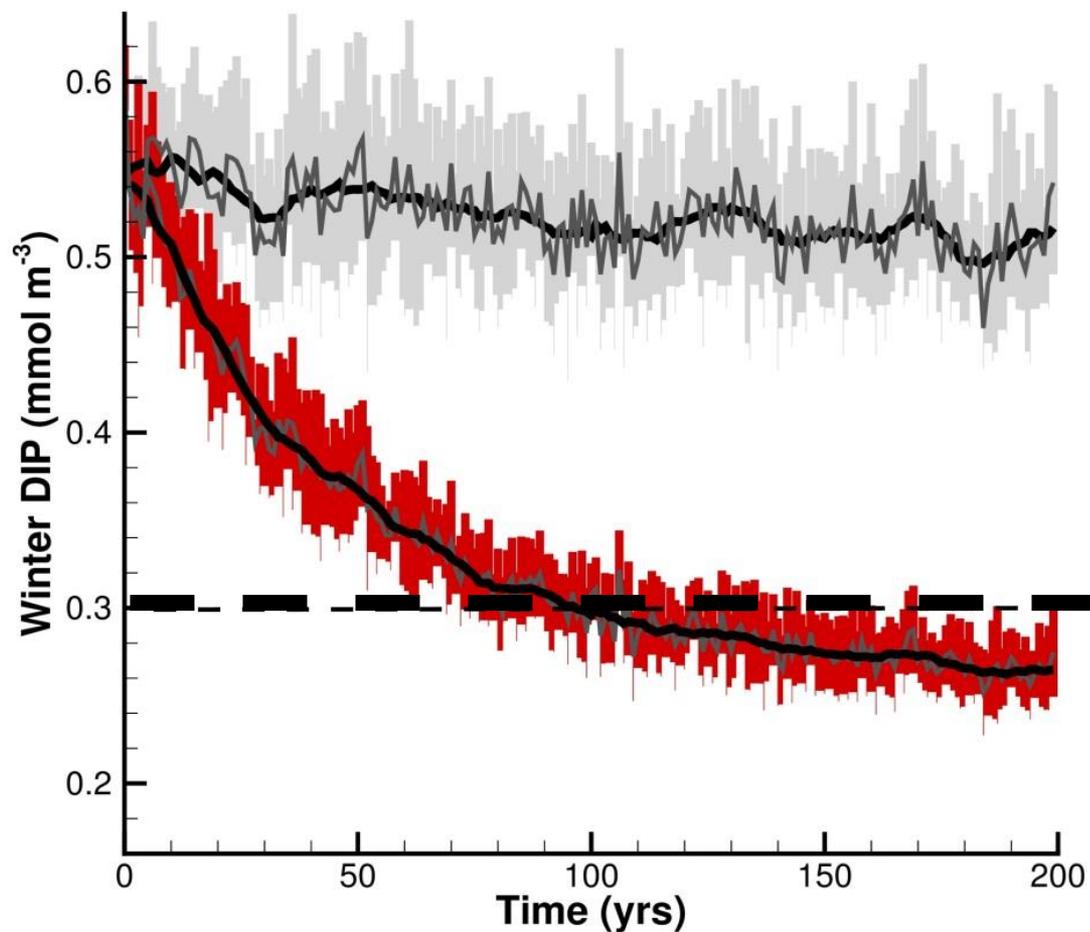
P 7480
N 43610 

P 800
N 3320 



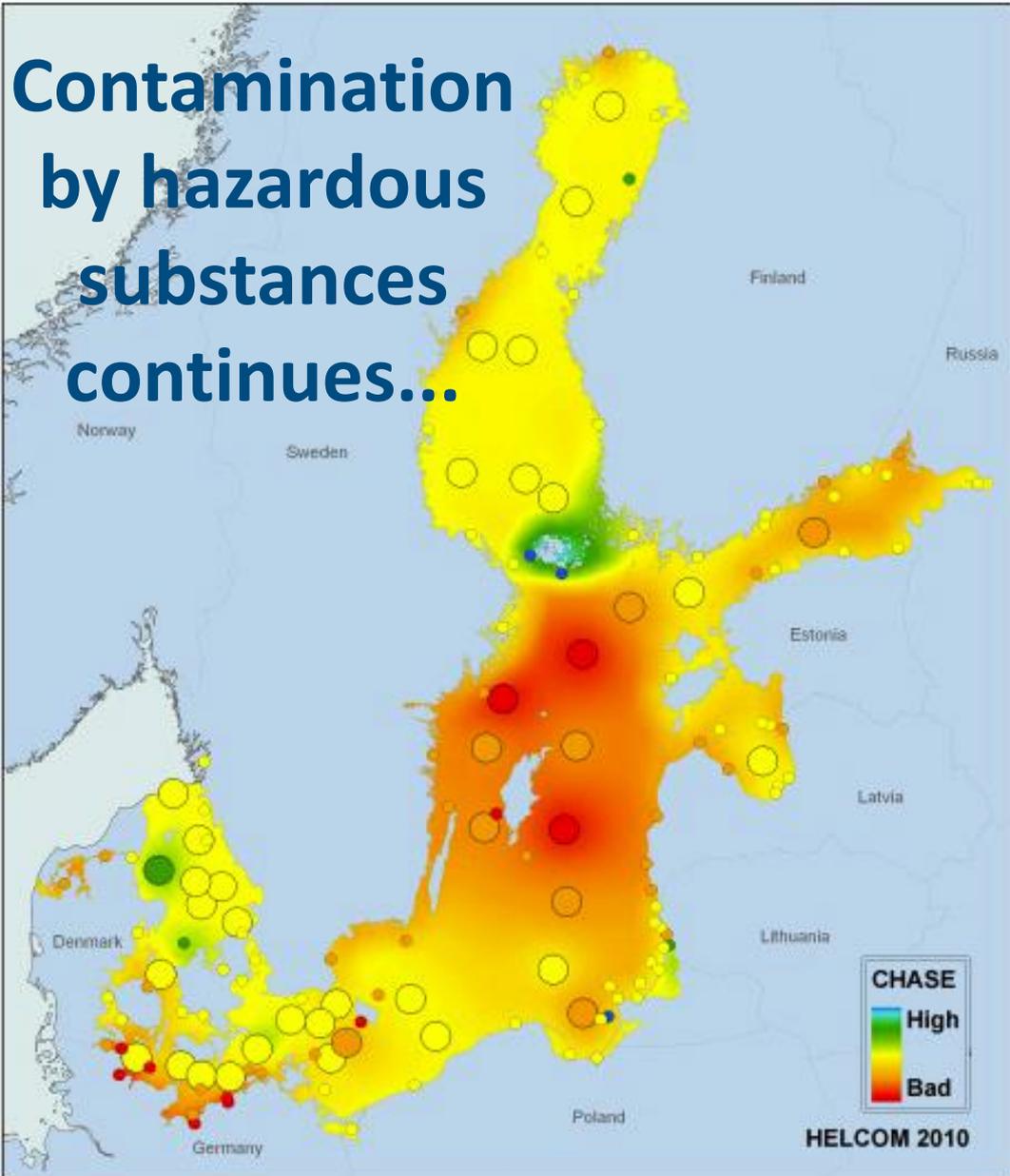
When will the Baltic Sea be healthy?

Long time before targets are reached (up to 100 years)
Significant improvement within decades, perhaps even shorter

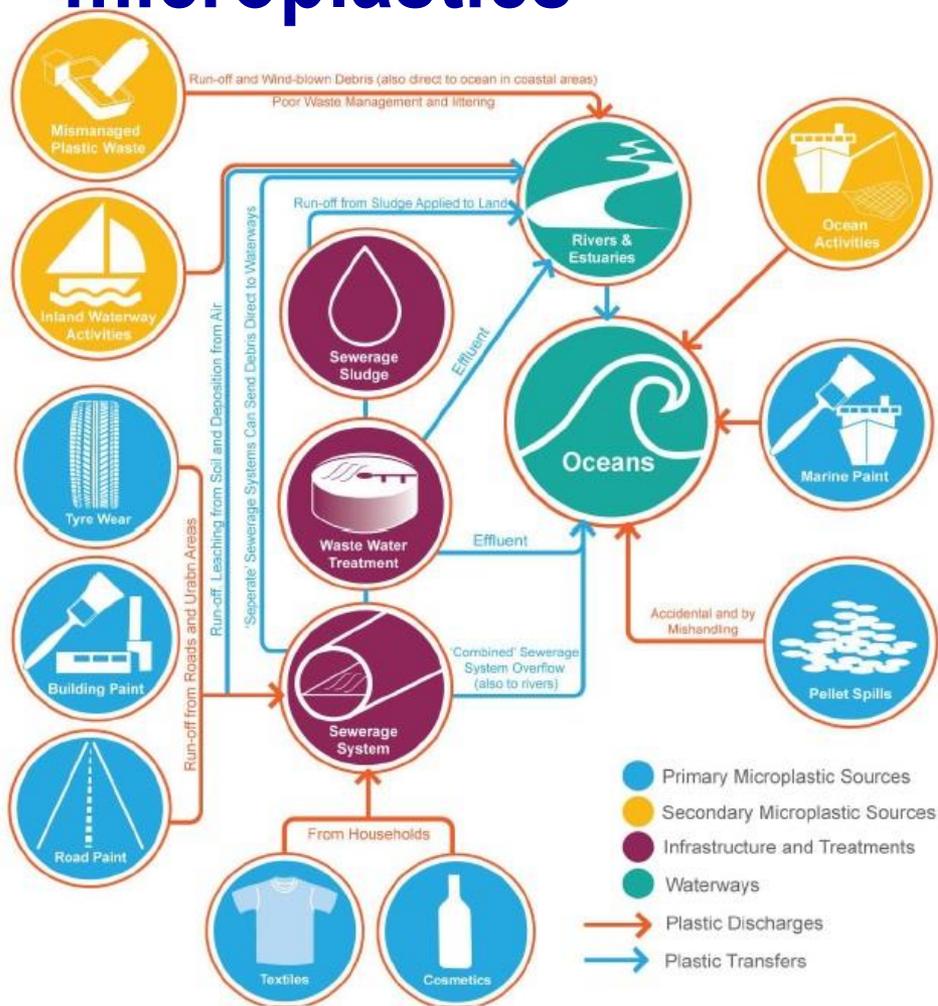


There will be a quick initial response but it will take time to reach targets

Contamination by hazardous substances continues...



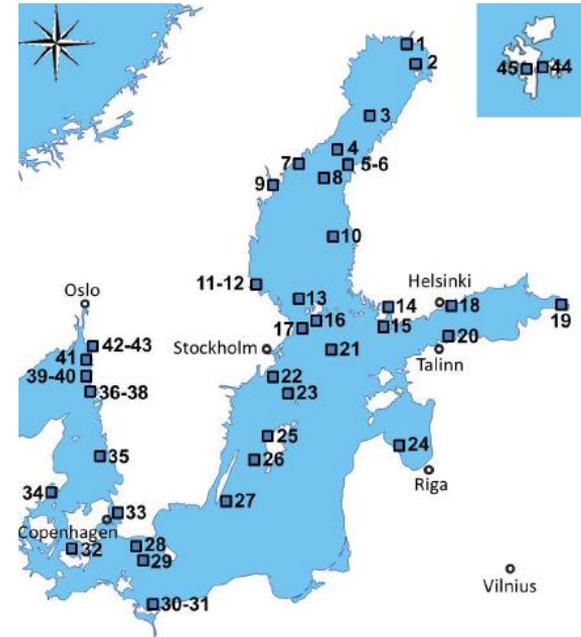
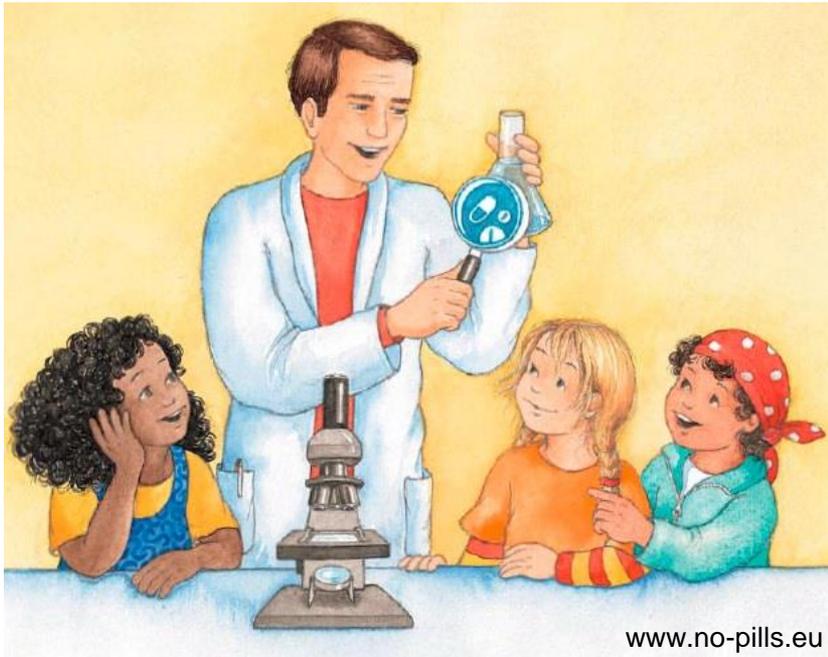
Emerging threat: marine litter & microplastics



co-funded by EU LIFE Programme

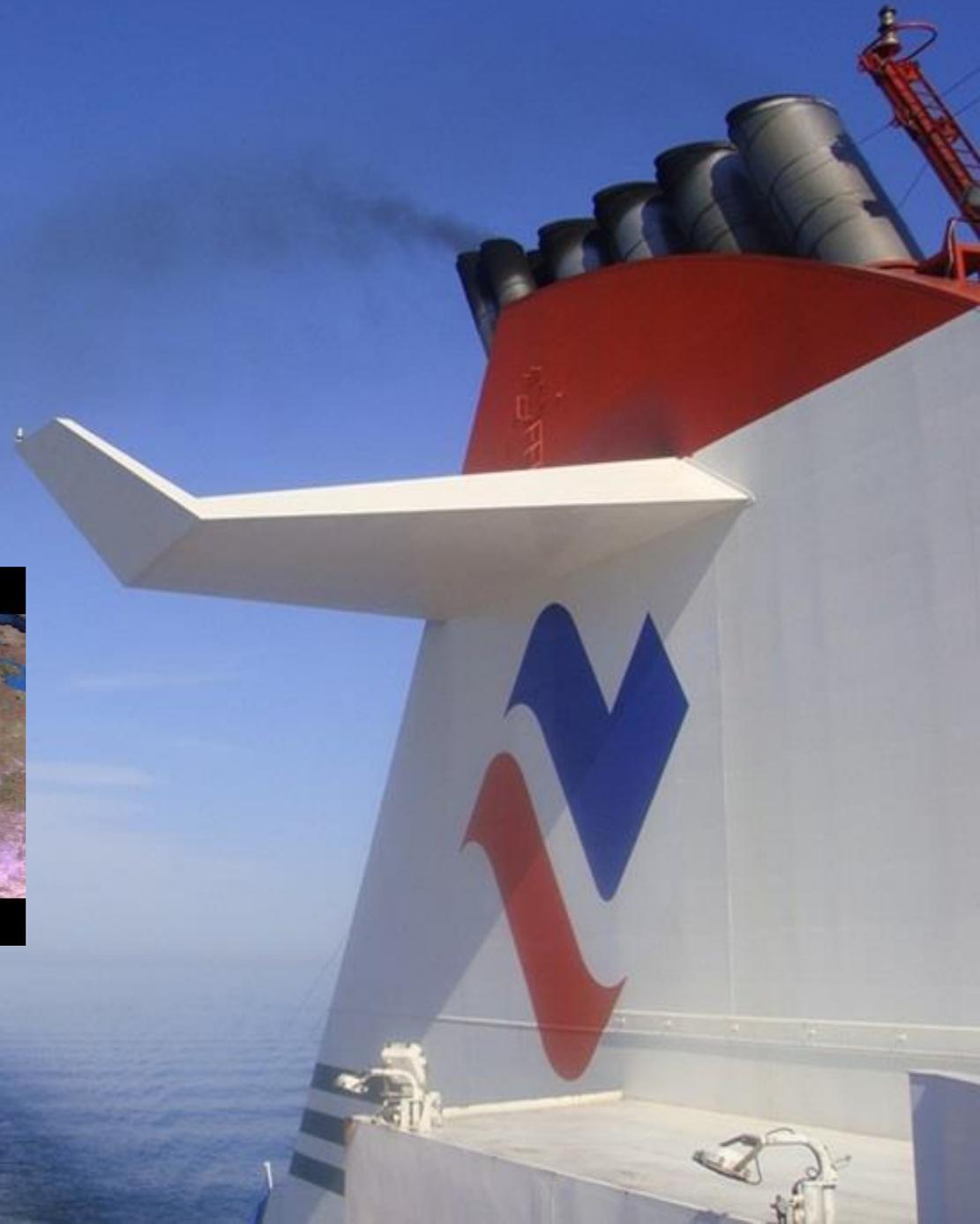
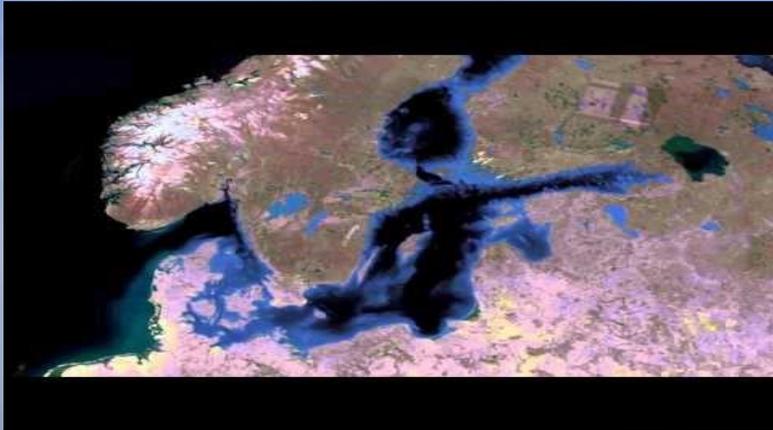


Emerging threat: Pharmaceuticals in the BSR



- ca. **2200 tAPI /yr** enter annually through WWTPs
- **main loads:** cardiovascular, central nervous system and anti-inflammatories and analgesics (**diclofenac, ibuprofen and paracetamol** most frequent)
- **main source - excretion** by human and animals and incorrect disposal
- **vast observations** (45000 source/path and 4600 sea/coastal samples)
- data from 7 out of 9 coastal states
- traced **effects in biota** (mostly in blue mussels)
- **developed take-back** but unknown **efficiency?**

Cleaner
and safer
shipping



Emissions:

- SO_x
- NO_x
- O_3
- PAH
- Particles

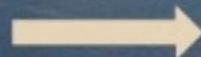
Greenhouse gases:

- Mainly CO_2

Ozone-depleting substances:

- Halon
- CFCs
- VOC

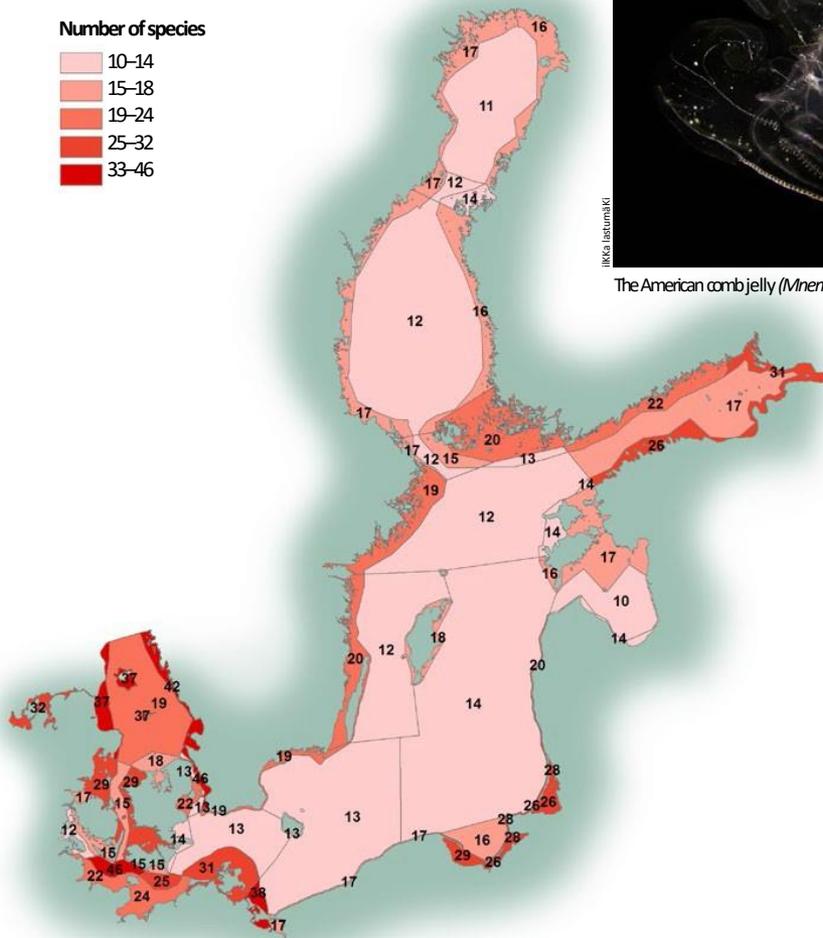
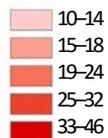
- Ballast water
- Hull fouling
- Accidental or illegal spills
- Sewage discharges
- Bilge water



- Oil, chemicals, anti-fouling paints and other hazardous substances
- Alien species
- Nutrients

Alien species in the Baltic Sea

Number of species



Source: HELCOM 2012

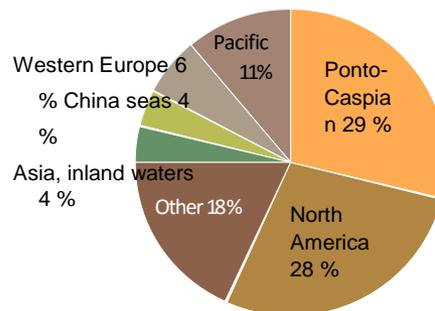


The American comb jelly (*Mnemiopsis leidyi*)

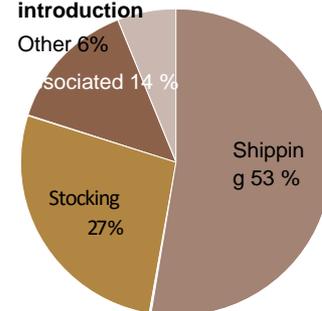


Chinesemitten crab (*Eriocheir sinensis*)

Origin of species

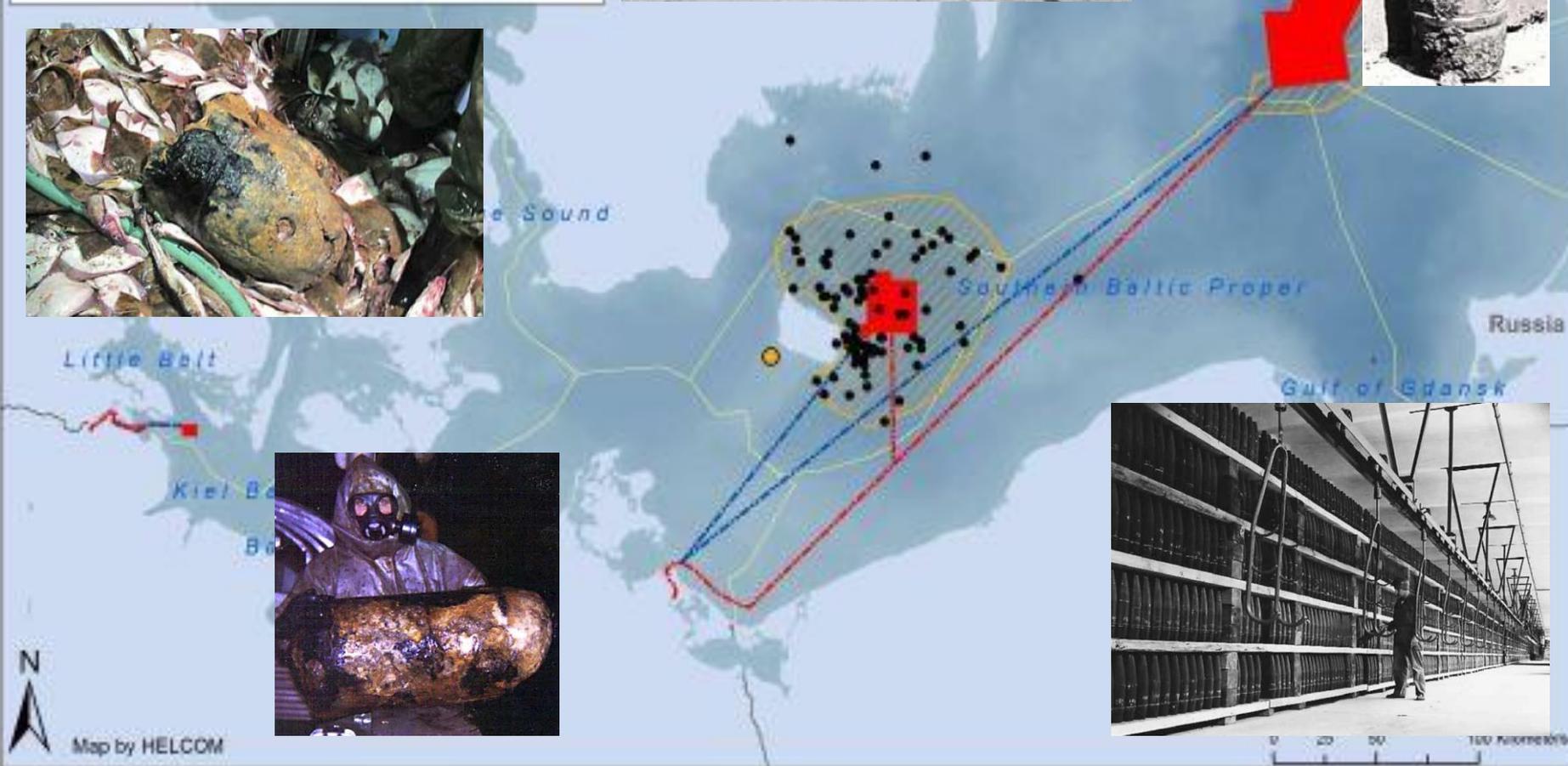


Method of introduction

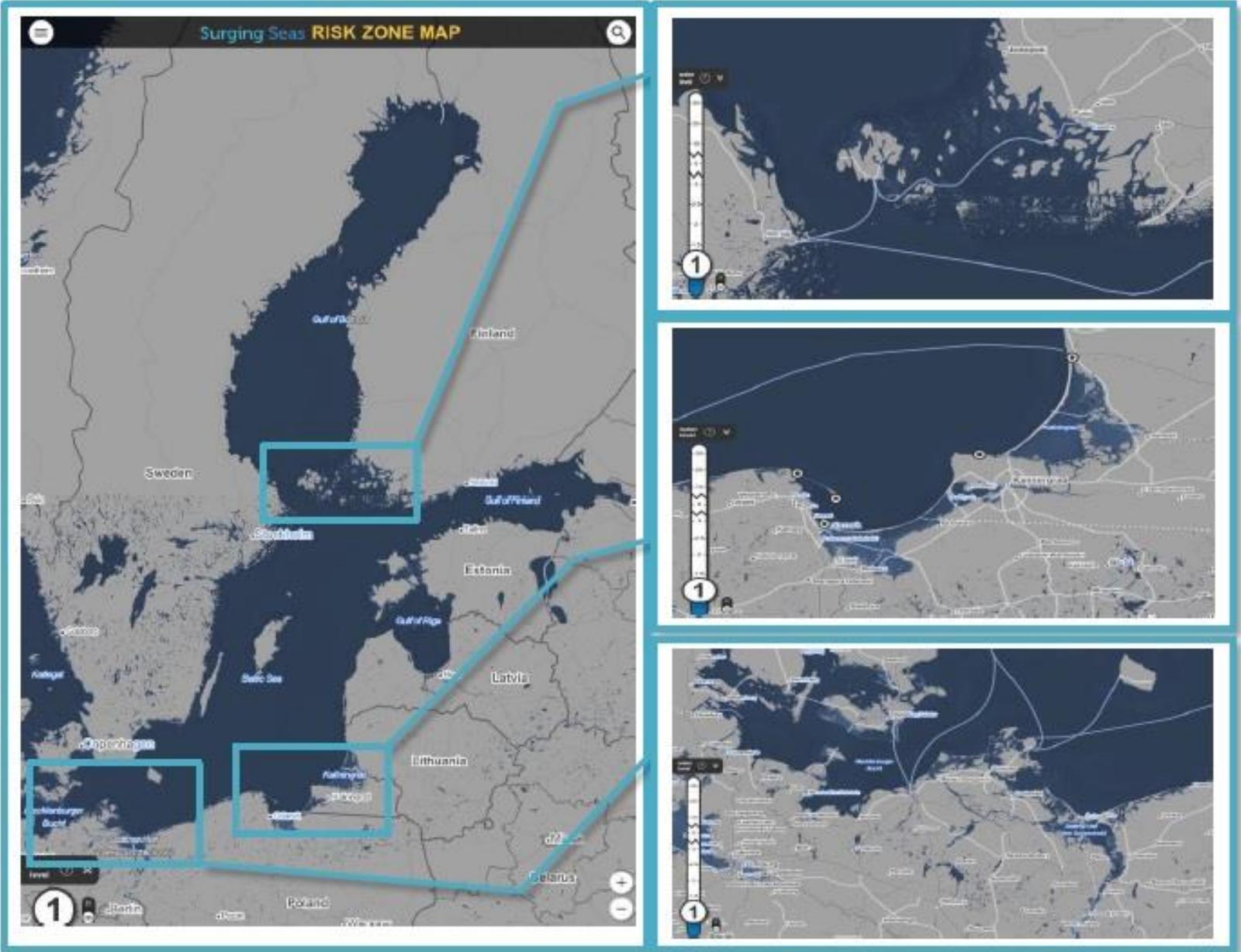


Source: Zaiko et. al. 2011

- Reported encounters with chemical munitions 1994-2012
- Emergency relocation areas
- Designated transport route
- Suspected alternative transport route
- Designated dumping area
- ▨ Suspected dumpsite
- ▨ Suspected en-route dumping areas
- ▨ Areas of discovery of chemical warfare materials
- Exclusive economic zone

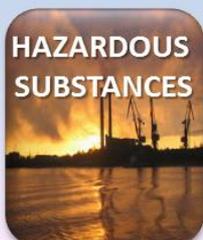
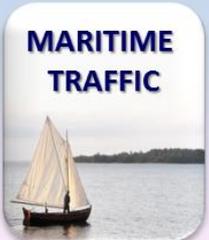
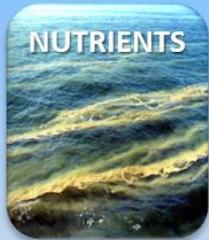


Climate change implications



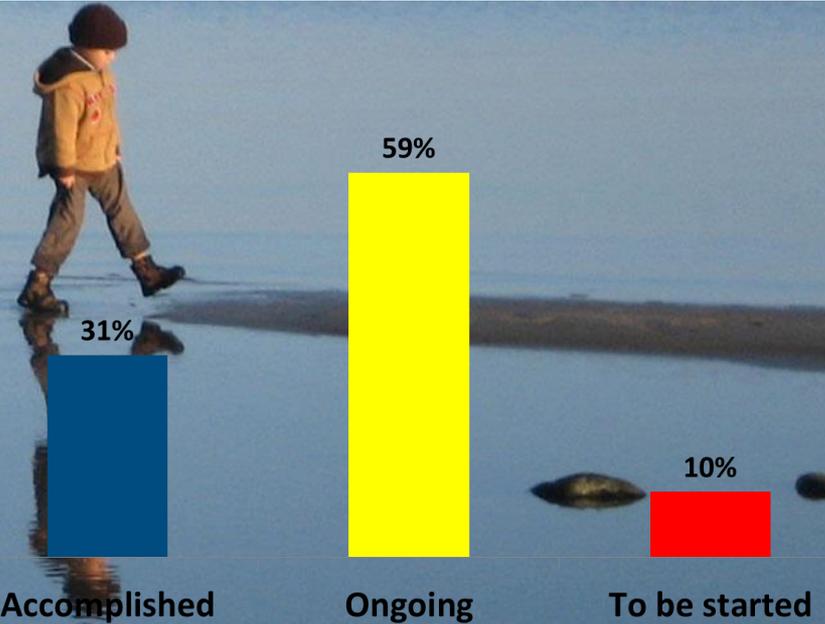
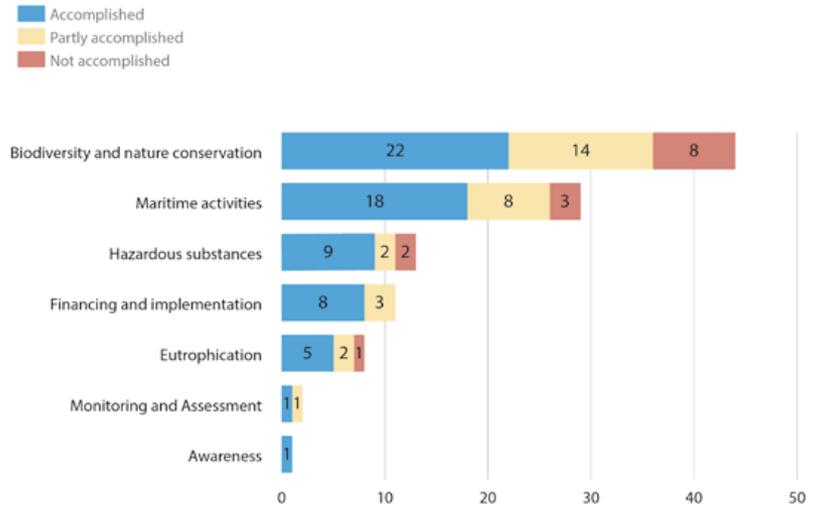
Baltic Sea Action Plan: Where are we?

VISION OF
A healthy Baltic Sea
with biological components
sustaining human activities



How many accomplished per segment

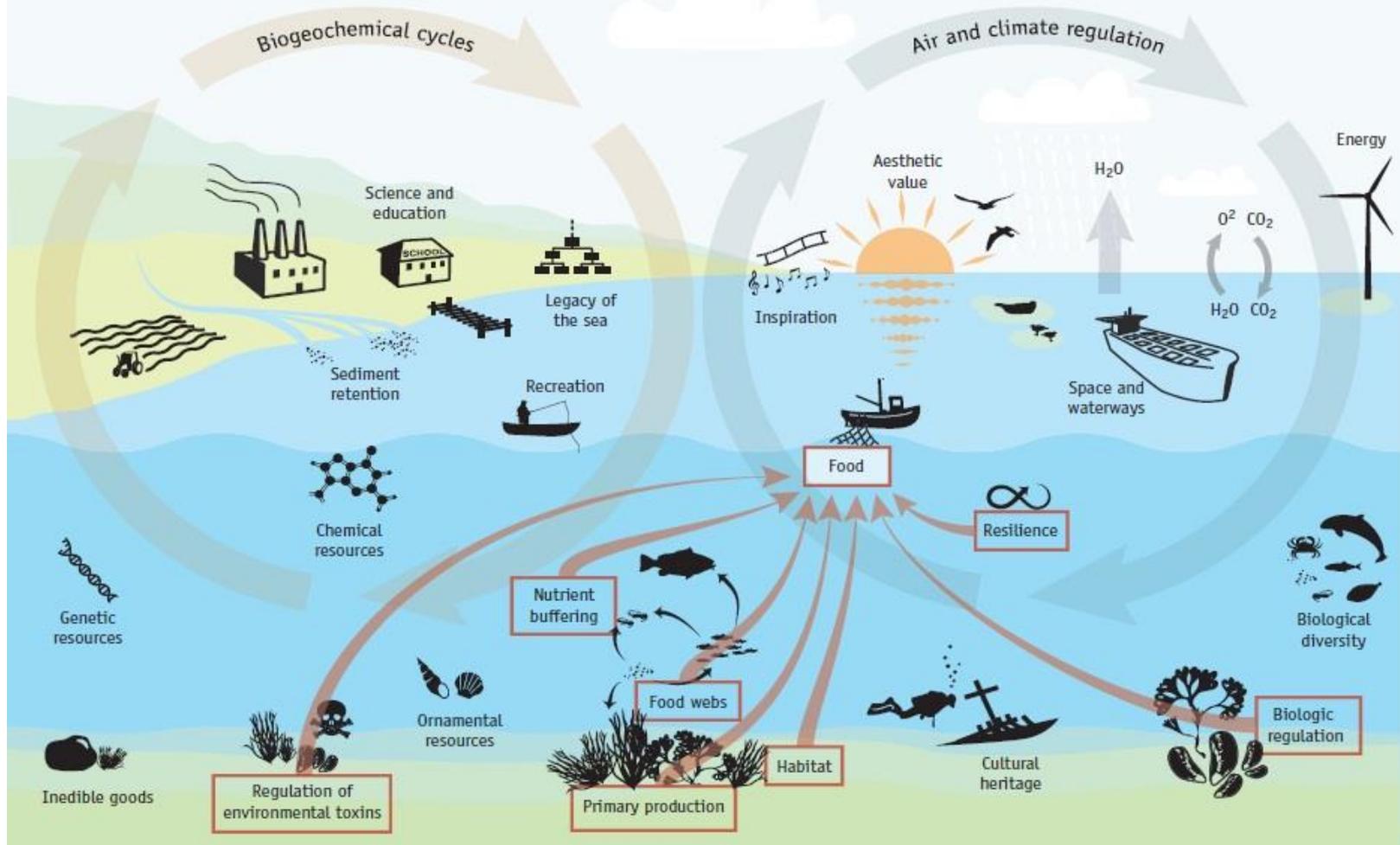
Number of joint actions accomplished by segment. May 2016



HELCOM

Is it feasible to save the Baltic Sea?

Benefits 3,8(5,0) B €/year – Costs 2,8 B €/year = Surplus 1(2,2) B €/year



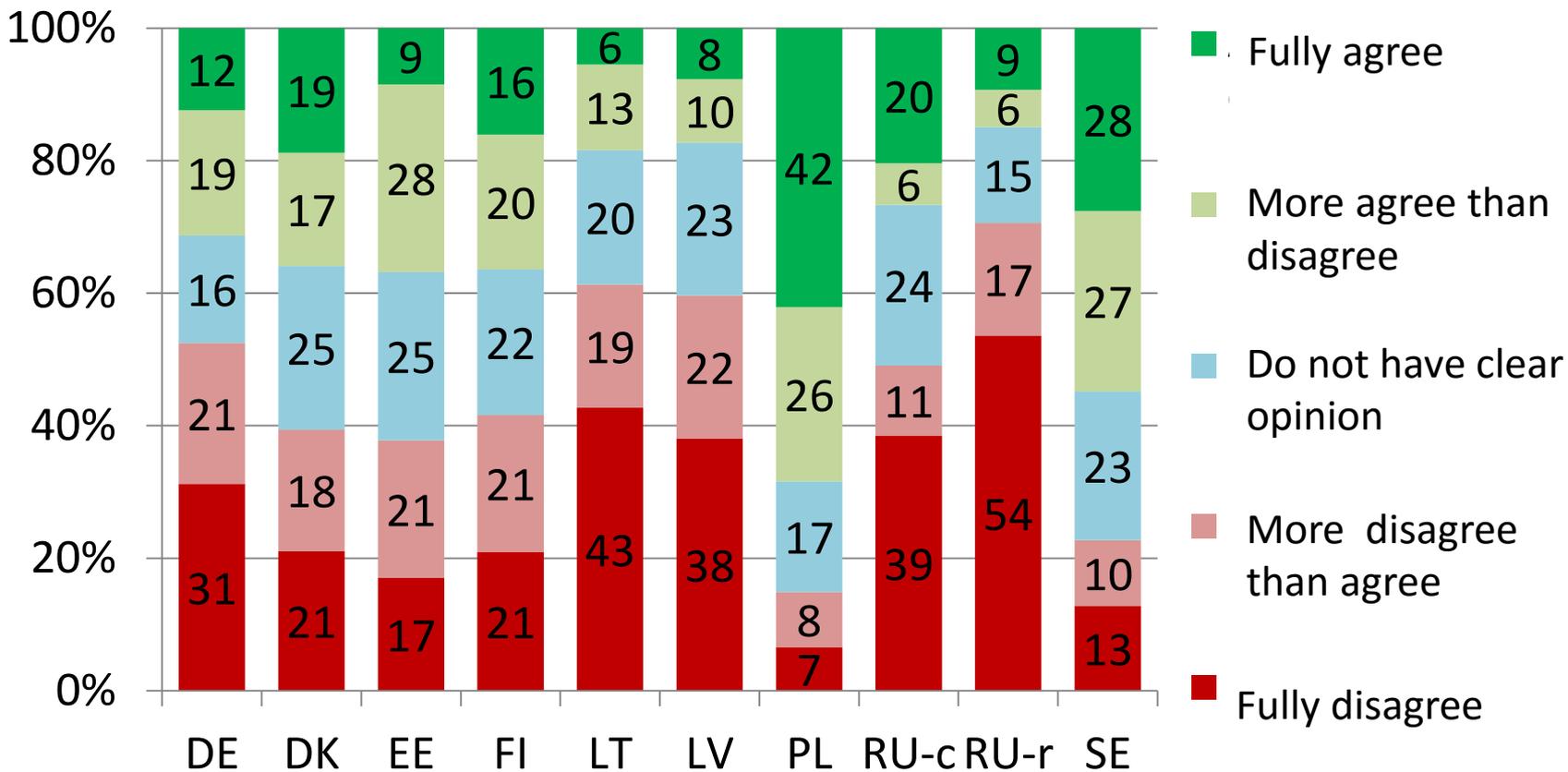
BalticSTERN Final Report "The Baltic Sea - Our Common Treasure. Economics of Saving the Sea ", 2013)

Challenges and opportunities

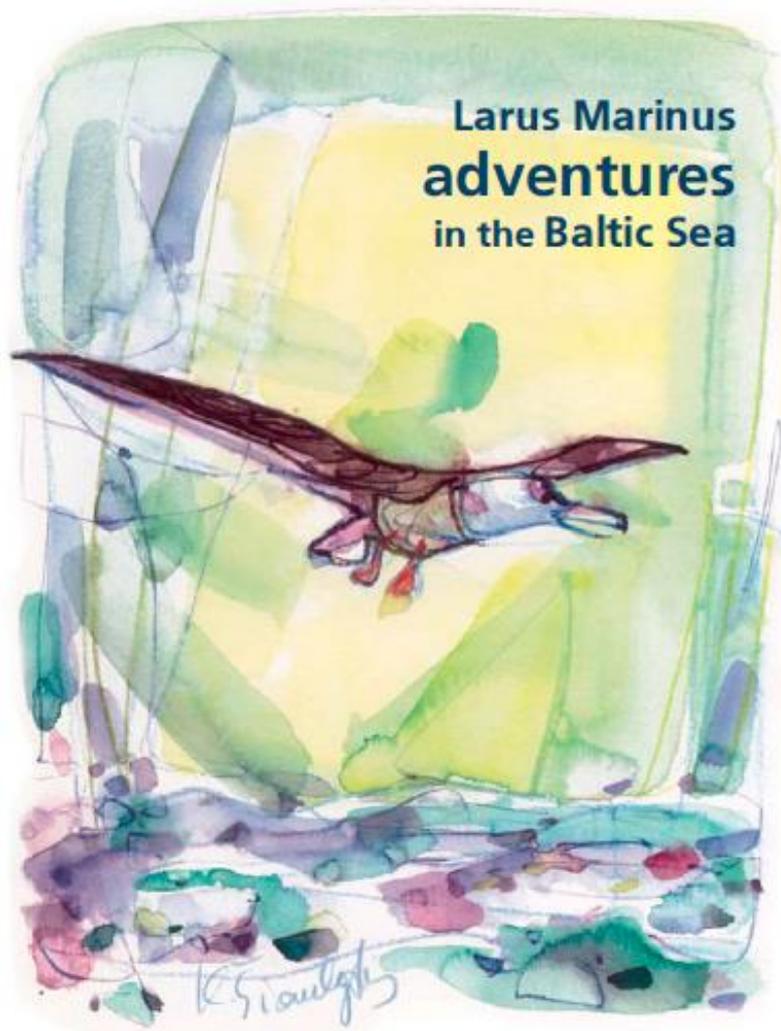
- **Eutrophication**
 - Wise use of nutrients, nutrient recycling, removal fisheries
 - Re-think waste water treatment → water & energy nexus
 - Nutrient neutrality, offsetting
- **Hazardous substances**
 - Consumer behaviour: take back systems for pharmaceuticals, phasing out microplastic products
 - Technology & innovations – WWTP & stormwater
- **Biodiversity**
 - Smart cooperation with fishermen
 - MPAs management: benefits outweigh
 - Ecosystem-based Maritime Spatial Planning
- **Maritime transport and ports**
 - Sewage collection, LNG as fuel, ballast water management,
 - Beneficial use of dredged material
 - Ports development in urban planning

Vox populi:

“I can personally contribute to improvement of environment situation of the Baltic Sea”



Thank you for your attention!



Östra Ågatan 53, SE-753
22 Uppsala, Sweden

+46 73-977 07 93;

mikhail.durkin@ccb.se

www.ccb.se



co-funded by EU
LIFE Programme

