Aquaculture in the context of protecting Baltic marine environment

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EU Workshop on Good Practice Exchange

12-13 June 2014

Copenhagen, Denmark

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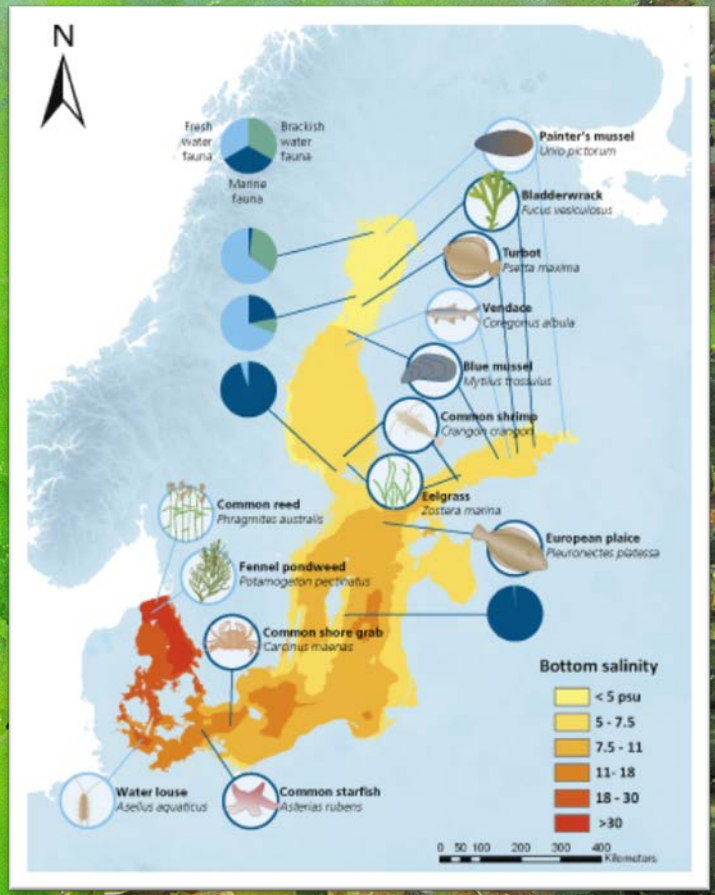
Baltic - a sea like no other



Marine Area: 415,000 km²

- 9 Coastal States

Catchment area: 1.72 million km²

- 4 x size of the sea area
- 14 countries, 85 million people

Natural specifics:

- low temperature
- low water exchange rate
- brackish water
- shallow and young
- sensitive to human pressures

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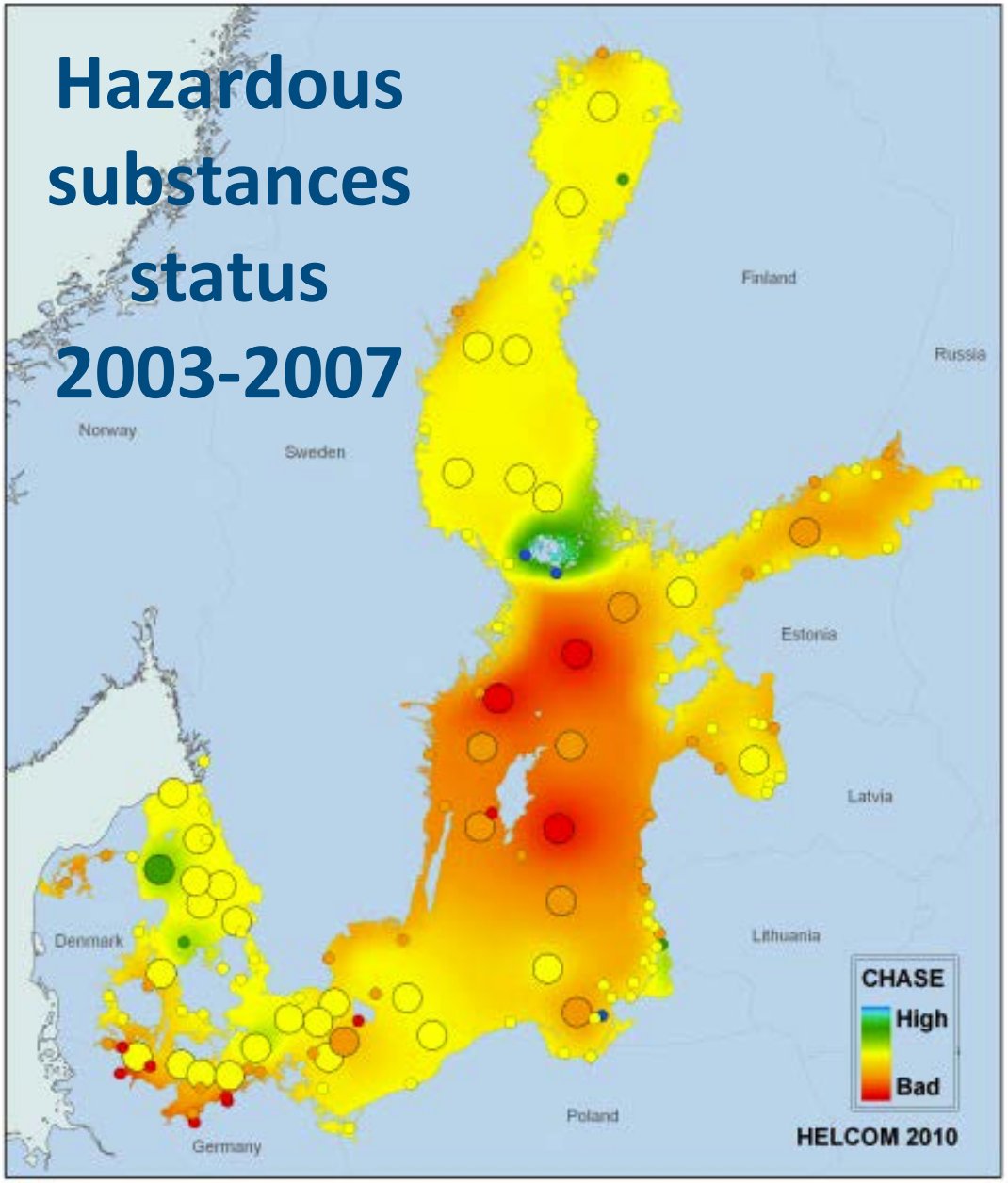
Hazardous substances status 2003-2007

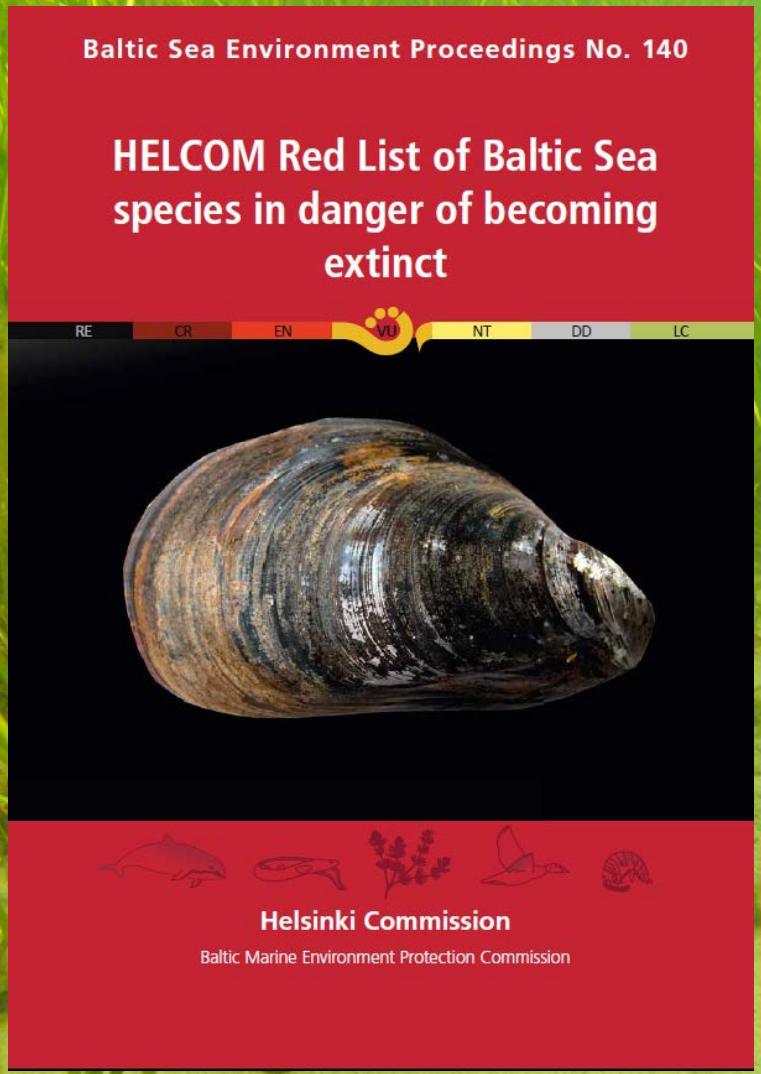


4%

of species and

27%

of biotopes are in danger of extinction



Is there an impact of alien species?

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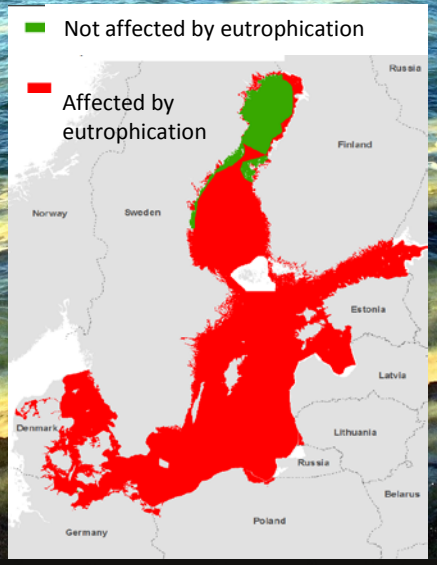
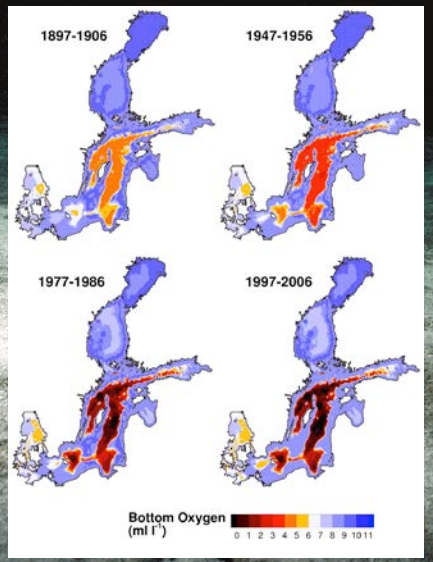
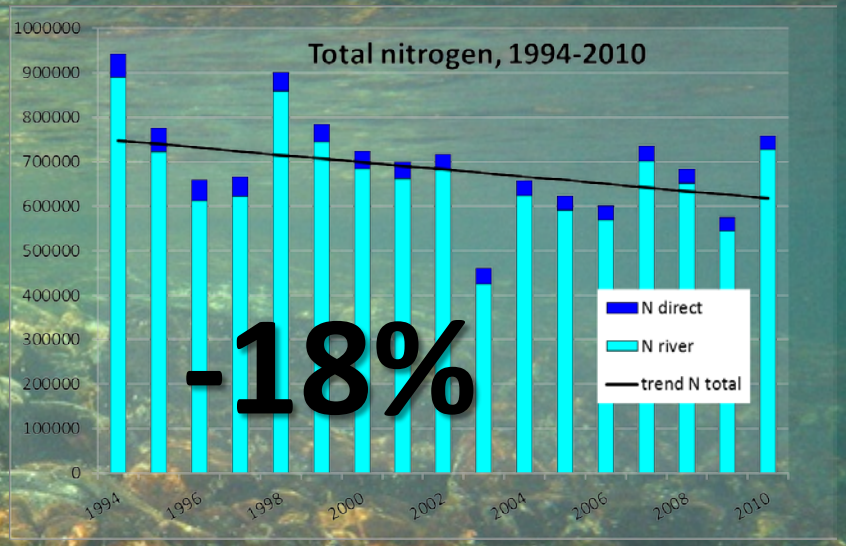
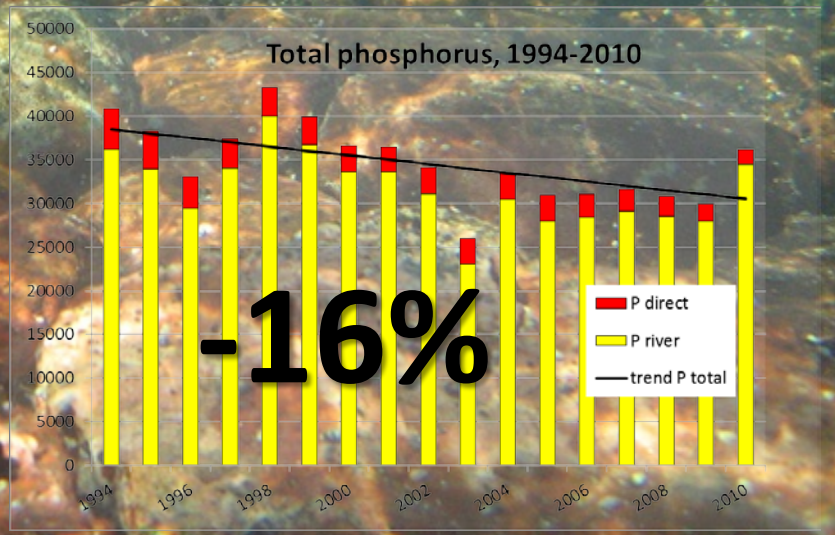
Above and beneath the Baltic waves: still a lot to do!









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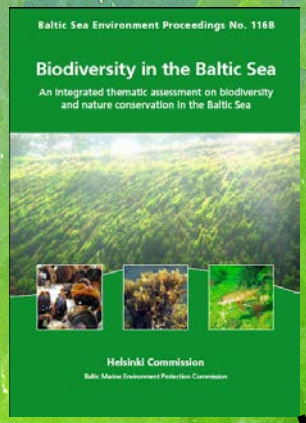
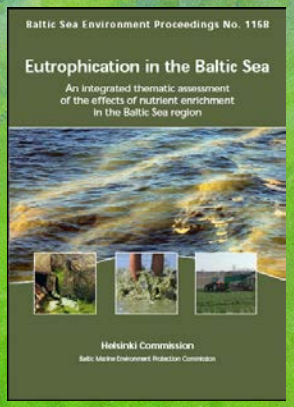
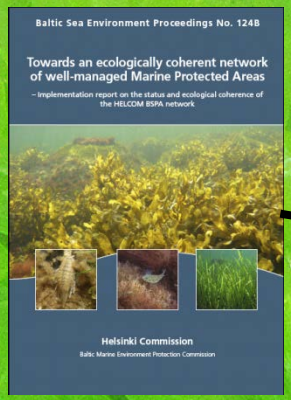
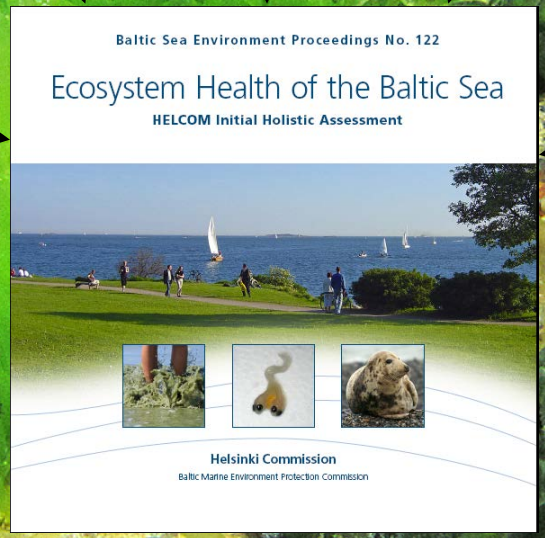
HOLAS

- **Based on data from HELCOM's coordinated monitoring programmes**
- **Use of indicator-based assessment tools**









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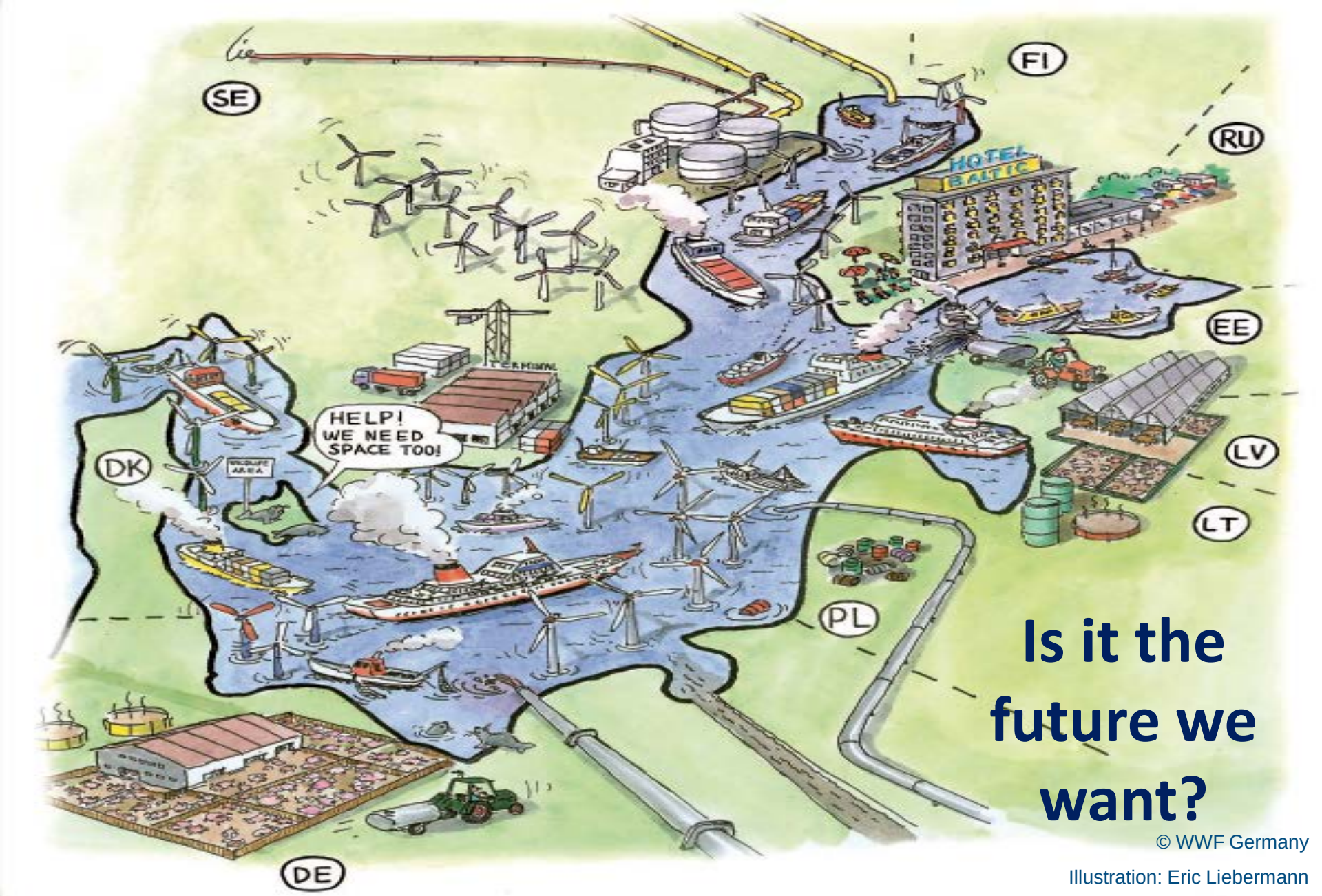
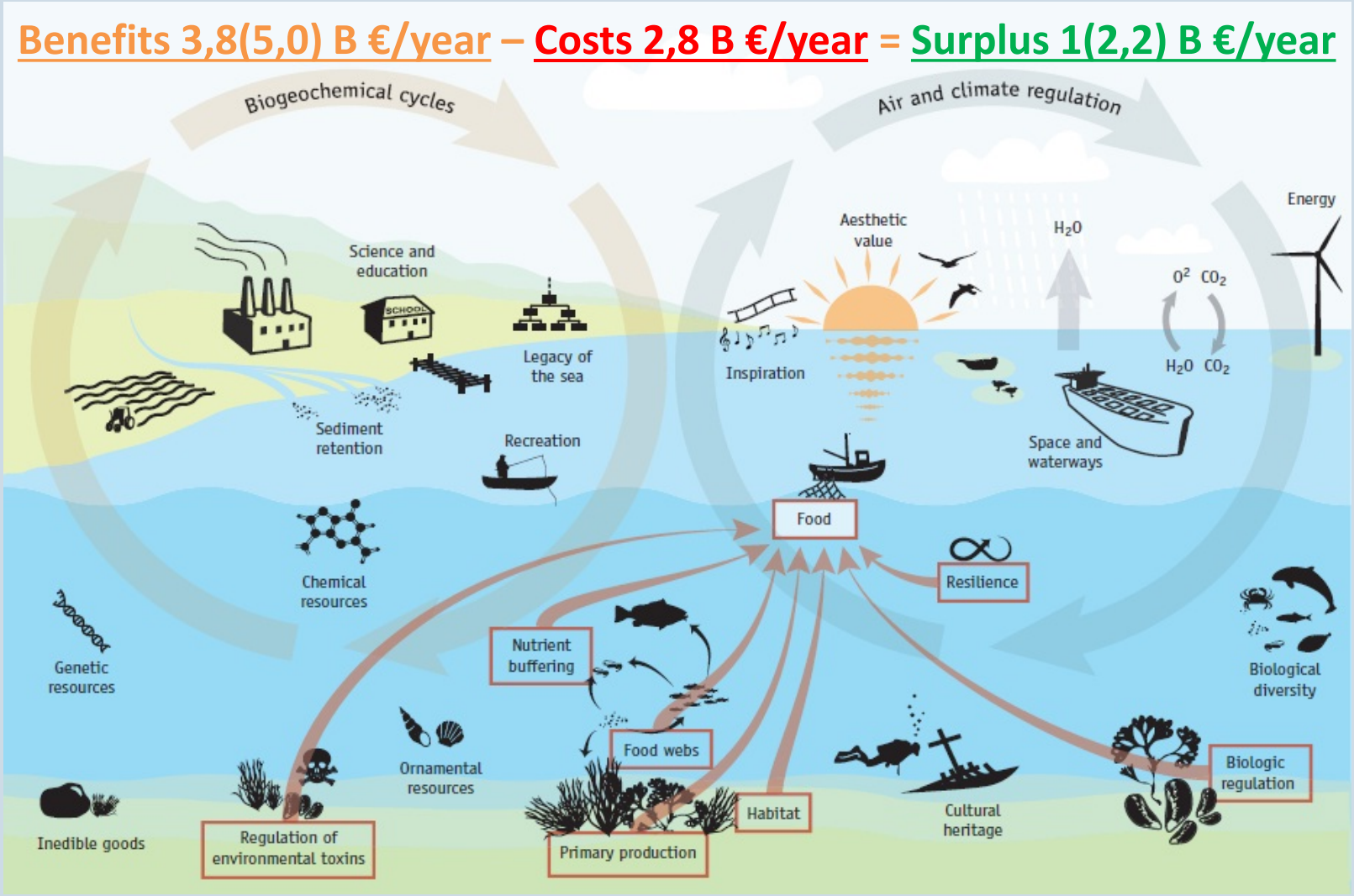


Illustration: Eric Liebermann

Socio-economic considerations: looking for cases

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

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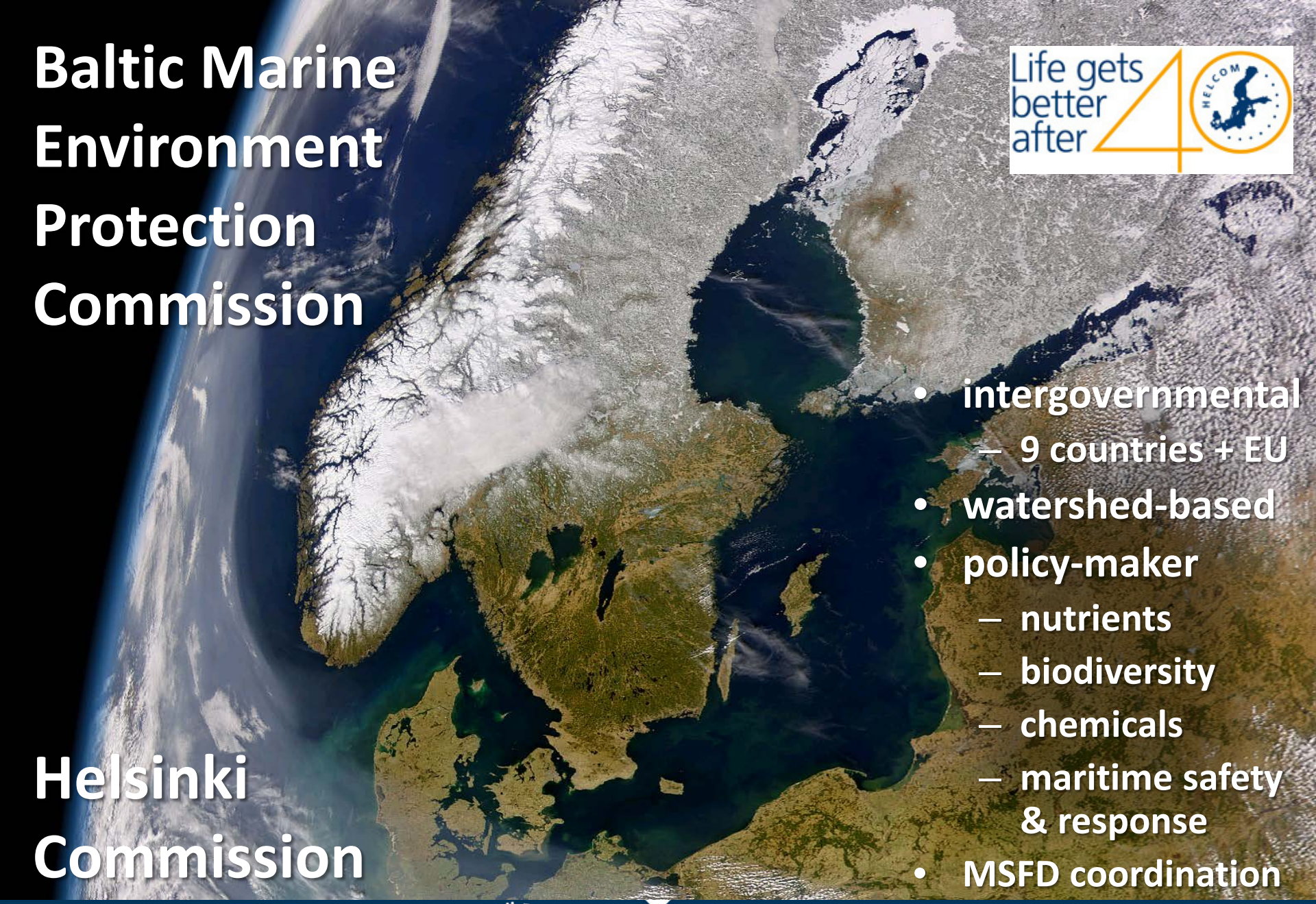
Baltic Marine Environment Protection Commission

Helsinki Commission



Life gets better after 40

- intergovernmental
  - 9 countries + EU
- watershed-based
- policy-maker
  - nutrients
  - biodiversity
  - chemicals
  - maritime safety & response
- MSFD coordination

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Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1992 (Helsinki Convention)

The 1992 Helsinki Convention entered into force on 17 January 2000

Annex III. Prevention of pollution from land sources

- Regulation 2(7) Pollution from fish-farming shall be prevented and eliminated by promoting and implementing Best Environmental Practices and Best Available Technique.

HELCOM Recommendations

- 25/4 **Measures aimed at the reduction of discharges from fresh water and marine fish farming (2004) –** *under revision*
  - 20/1 Measures aimed at the reduction of discharges from fresh water fish farming (1999)
  - 18/3 Measures aimed at the reduction of discharges from marine fish farming (1997)
  - 15/3 Measures aimed at the reduction of discharges from marine fish farming (1994)

Diverse challenges in a diverse environment

Sea cultures
VS
Land-based ones

Fish farming
VS
Other cultures

Different markets with different tastes, different space and resources

HELCOM Baltic Sea Action Plan process → 2021

BSAP, Krakow (2007)

→ need to address aquaculture as potential sources causing eutrophication

BSAP review, Copenhagen (2013)

→ importance of sustainable aquaculture,

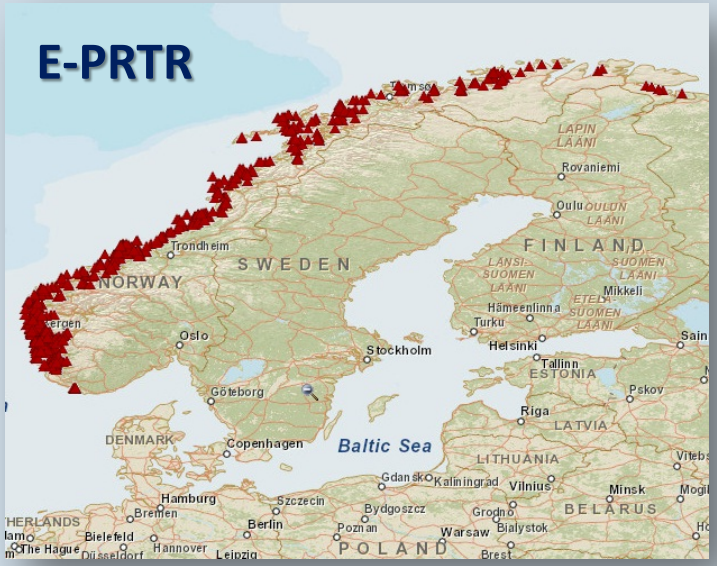
→ **new Recommendation aiming at limiting potential environmental impacts (by 2014)**

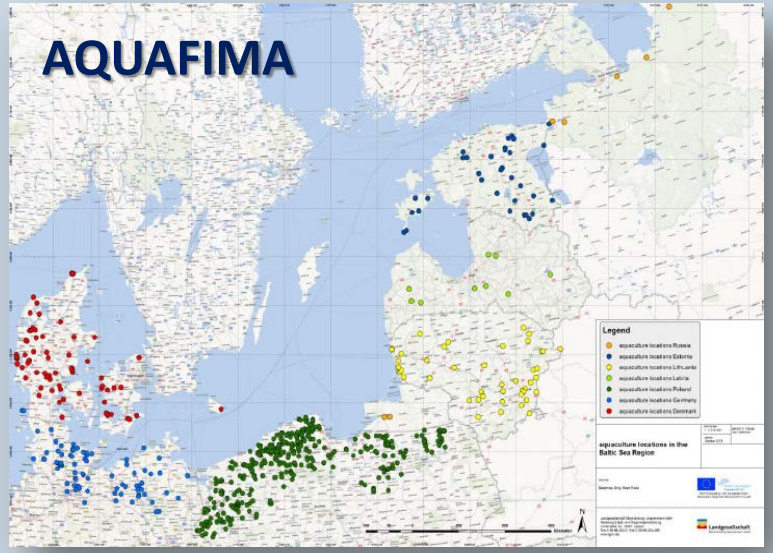
- introduction of non-indigenous species,
- ecological and genetic impacts from unintended releases of farmed species,
- nutrient pollution,
- introduction of antibiotics and other pharmaceuticals

2013 HELCOM commitments – into practice

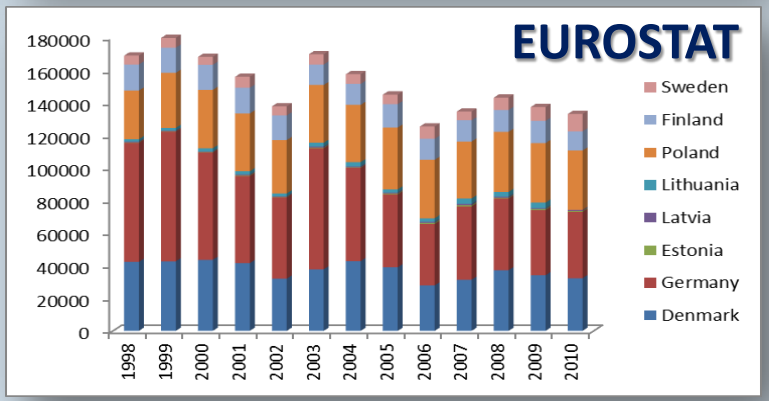
- **BSR to become a model for sustainable growth** linked to **an ecosystem-based approach**
- **Sustainable use of marine goods and services for** achievement or maintaining **good environmental status**
- Input to **holistic assessment's socio-economic analysis** through **gathering expertise on** economic and social analysis of the **use of Baltic Sea and cost of degradation** of environment
- **Promote green investments and practices in cleaner technologies** in all sectors to implement the BSAP, strengthen economy and improve environmental quality

Aquaculture in the BSR: do we know enough?





- *Why it is going down?*
- *What is BAT/BEP for aquaculture?*
- *How to make it sustainable?*



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Is aquaculture sustainable *by default*?

… as it responds to

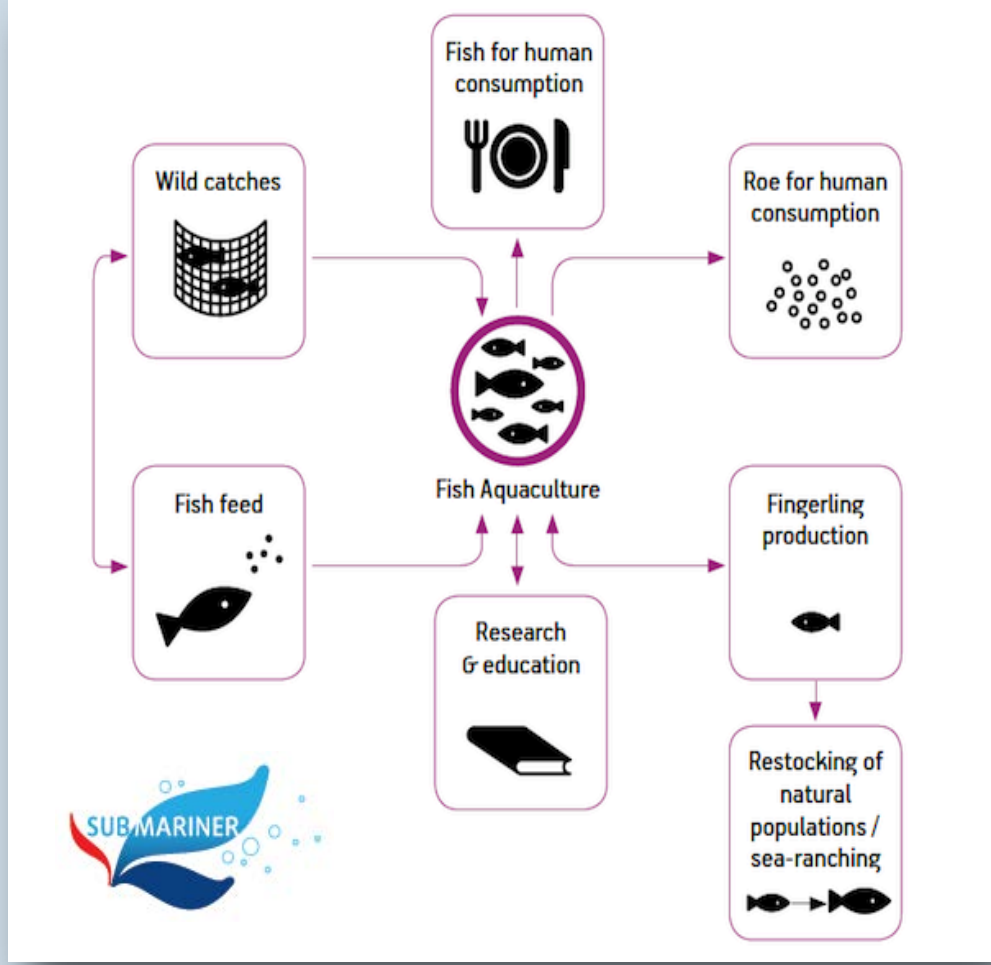
1. **declining output from wild fisheries**
   - resource depletion
   - habitats degradation
2. **expanding global seafood demand**
   - efficient, sustainable and safe/secure protein source
   - demand for sustainable products
3. **providing economic opportunities**
   - scale and innovations
   - local is the “new organic”

ICES Annual Science Conference 2013: The Challenge of Sustainable Aquaculture Production

BUT is it also **environmentally-acceptable**?

Sustainable aquaculture: -Ins vs. -Outs

INPUTS



OUTPUTS

LOSSES ?

Setting a high sustainability standard

Countries are trying to reach HELCOM regionally agreed national nutrient targets for site–specific sources, both at land and sea

Introducing new sources of nutrients load can be done providing adequate compensation

Within the MSFD process they may become legally binding for states, as they have been already agreed upon at the regional level

Sustainable aquaculture (SA): prospects

INPUTS

➔ Legal frames & BAT/BEP guidance

- CFP Basic regulation (Part VII)
- Strategic EU Guidelines for SA
- Guidance for aquaculture and Natura2000
- Nordic BAT, FAO

➔ Ecosystem approach

- ecosystem functions and services
- human wellbeing and equity, stakeholders
- knowledge and uncertainties

➔ Innovative, greener tech

- Integrated MultiTrophic, closed circuits
- smart nutrient and chemical management
- genetic security; safe introductions
- maritime, coastal and land spatial planning
- R&D, scientific support

OUTPUTS

LOSSES

Summing up potentials for cooperation

➔ **Development of BAT / BEP**

- Expert knowledge for drafting HELCOM Recommendation on sustainable aquaculture (nutrients, chemicals, bio-safety)

➔ **Ecosystem approach implementation**

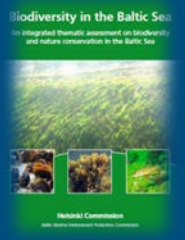
- interactions of aquaculture and N2K, application of MSP,
- relevant inputs to programmes of measures under MSFD

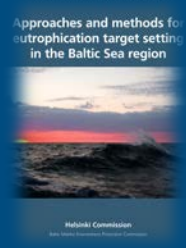
➔ **Socio-economic considerations**

- Looking for cases to explore valuation of ecosystem services in relation to aqua-/mariculture

➔ **Continued exchange of experience and knowledge**

- participation in relevant HELCOM and ICES work
- opportunities for promotion of project outcomes
- potential policy advise in relation to CFP





Thank you for your attention and looking forward for cooperation!

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