

A satellite photograph of the Baltic Sea region, showing the coastline of Scandinavia and the northern European大陆. The sea is mostly dark blue, while land areas are green and brown. Some white clouds are visible over the landmasses.

# Challenges for the Baltic Sea region from the HELCOM perspective

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7th Study Conference on BALTEX

10-14 June 2013, Borgholm  
Island of Öland, Sweden



# Contents

- Baltic - a sea in urgent need of help
- Helsinki Commission in a nutshell
- Strategy to reach the Baltic Sea in good environmental status
- Climate change in HELCOM's work
- Road ahead



# Baltic - a sea like no other

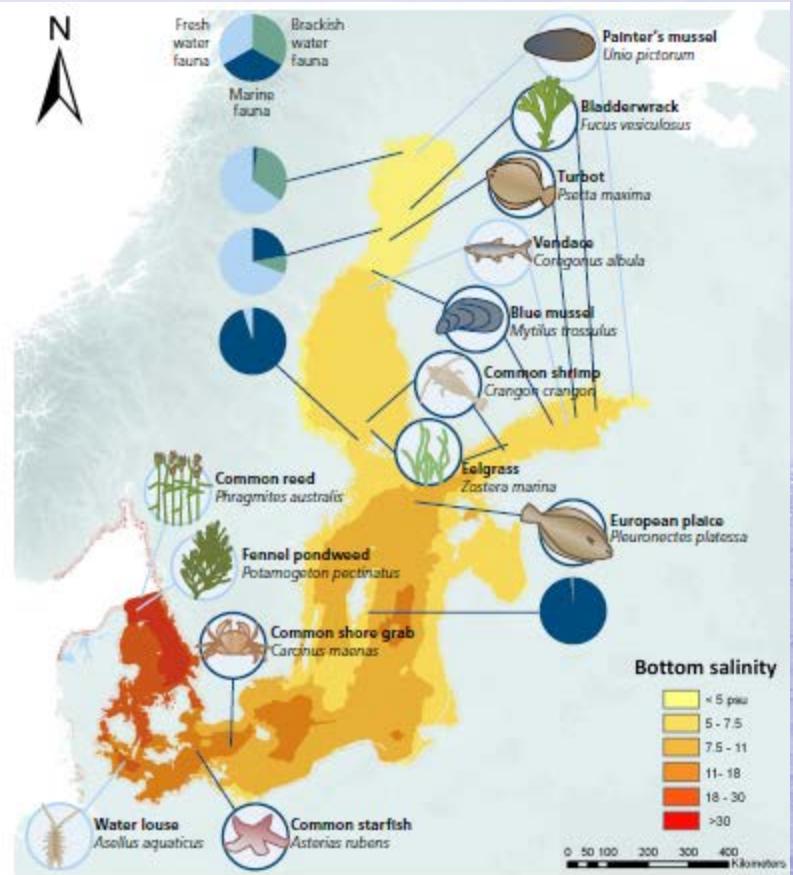


Marine Area: 415,000 km<sup>2</sup>

- 9 Coastal States

Catchment area: 1.72 million km<sup>2</sup>

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



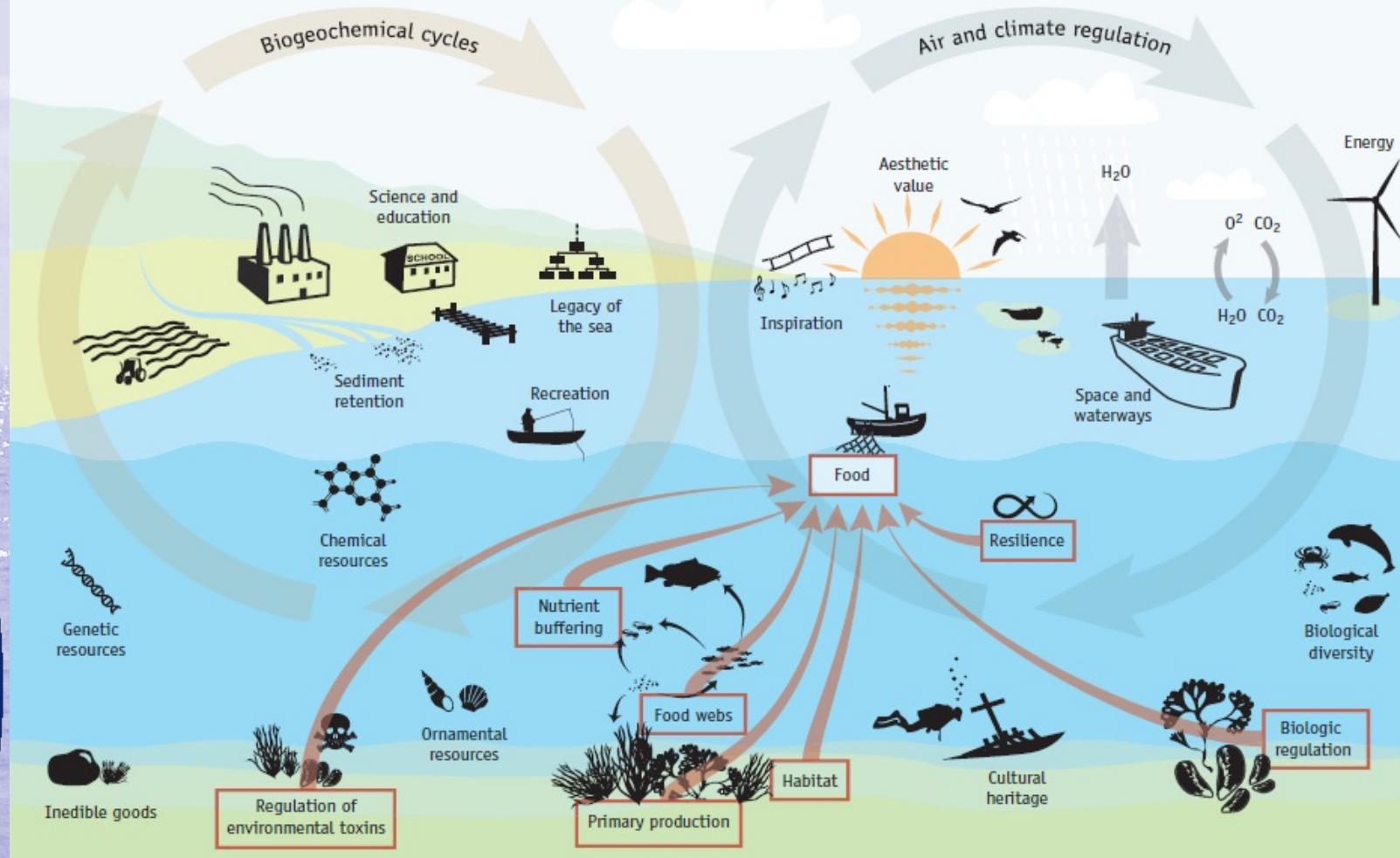
- Natural specifics:
  - low temperature
  - low water exchange rate
  - brackish water
  - sensitive to human pressures

# Is it the future we want for the Baltic?



# Do we know enough to save the Baltic?

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



Ecosystem services provided by the Baltic Sea, also illustrating (orange arrows) how one ecosystem service (food) is dependent on other ecosystem services. (by J. Lokrantz/Azote, BalticSTERN Final Report "The Baltic Sea - Our Common Treasure. Economics of Saving the Sea ", 2013)

# HELCOM

- intergovernmental organisation
- nine coastal countries and the EU
- protection the marine environment
  - pollution prevention,
  - nature conservation,
  - safety of navigation
- watershed approach
  - transboundary
- voluntary commitment and legal obligation

# Helsinki Commission



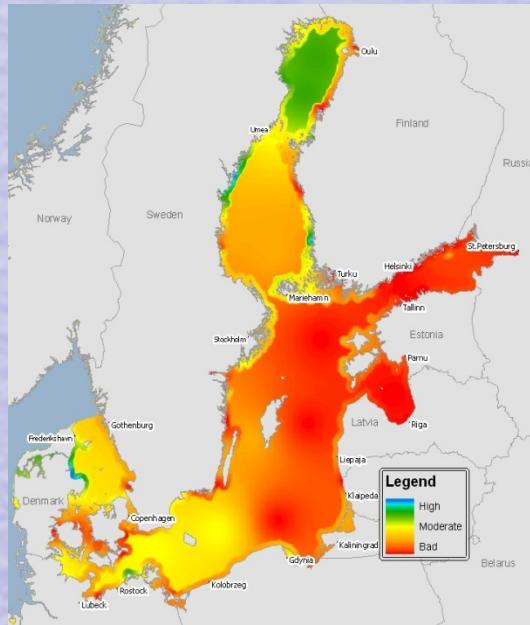
# Some achievements (since 80s)

- > 40% reduction of nutrient loads
- 50% reduction of discharges of 46 hazardous substances
- 109 of the Hot Spots recovered
  - 162 sites designated in 1992
- 159 Baltic Sea Protected areas (10.3% of the marine area)
  - 78 (3.9% area) - in 2003
- Populations of grey seal, white-tailed eagle have been recovered
- Less shipping accidents and illegal oil spills, better preparedness

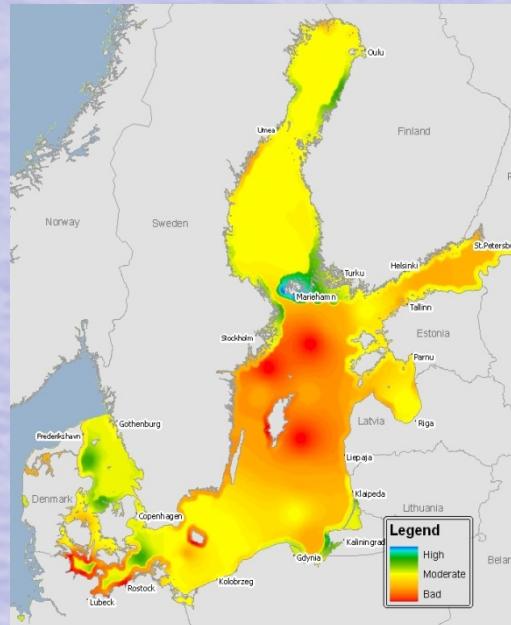


# HELCOM Initial Holistic Assessment of the Ecosystem Health of the Baltic Sea 2003-2007

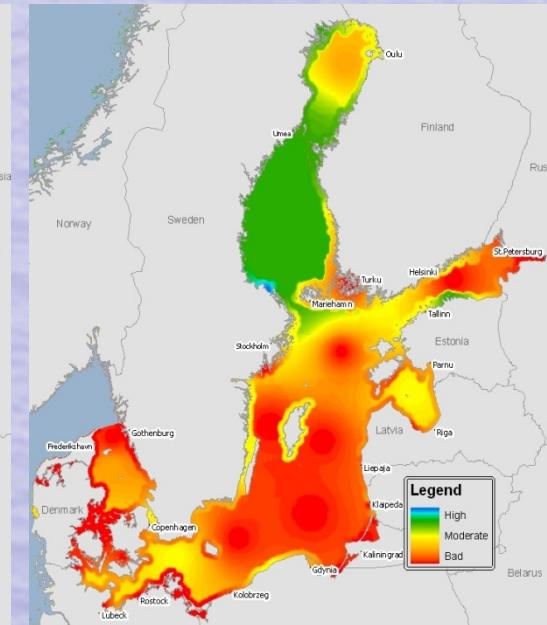
Eutrophication - HEAT



Hazardous substances - CHASE



Biodiversity - BEAT



- An overview of the ecosystem health of the Baltic Sea in 2003-2007, including status, pressures and economic analysis
- A baseline for assessing the effectiveness of the implementation of the measures of the HELCOM BSAP

# HELCOM Baltic Sea Action Plan

Nutrients on  
natural levels

Natural levels  
of oxygen and  
algal blooms

Viable  
populations  
of species

Natural marine  
and coastal  
landscapes

Natural  
distribution of  
fauna and flora

HELCOM Baltic Sea Action Plan

Thriving and  
balanced  
communities

## EUTROPHICATION

## BIODIVERSITY

## MARITIME TRAFFIC

No alien  
species

Minimum  
sewage and air  
pollution

No illegal or  
accidental  
discharges



Helsinki Commission  
Baltic Marine Environment Protection Commission

## HAZARDOUS SUBSTANCES

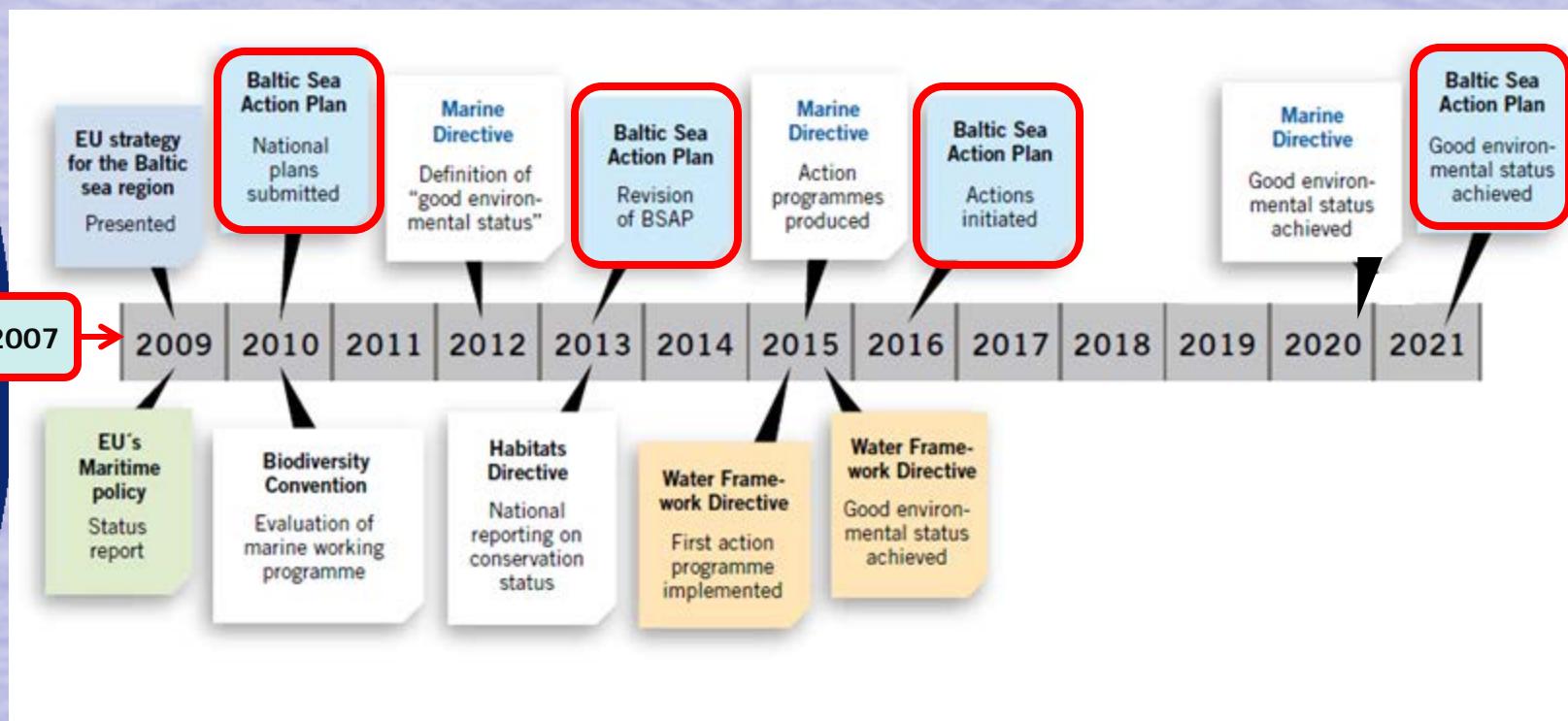
Hazardous  
substances on  
natural levels

Healthy  
wildlife

All fish  
healthy to eat

# Coherent implementation

- **2010 Moscow, Ministerial Meeting**  
National Implementation Programmes, overall progress
- **2011 High-level segment, HELCOM**  
Identifying good examples and less-progress areas
- **2013 Copenhagen, Ministerial Meeting**  
Efficiency of reaching the targets, additional needed actions



# Examples of implementation

## Nutrient Pollution

- Improvement of waste water treatment
- Ban of P-containing detergents
- Agri-environmental measures



## Hazardous substances

- Knowledge on occurrence and sources



## Biodiversity and Nature Conservation

- List of priority salmon and sea trout rivers
- Update of Red List of species and habitats



## Shipping and Response to Accidents

- Special Area for sewage under MARPOL
- Sub-regional risk assessment of accidents



## Cross-sectoral

- Indicators of Good Environmental Status
- Maritime Spatial Planning
- Dialogue within fisheries and agriculture



# Further major focus areas

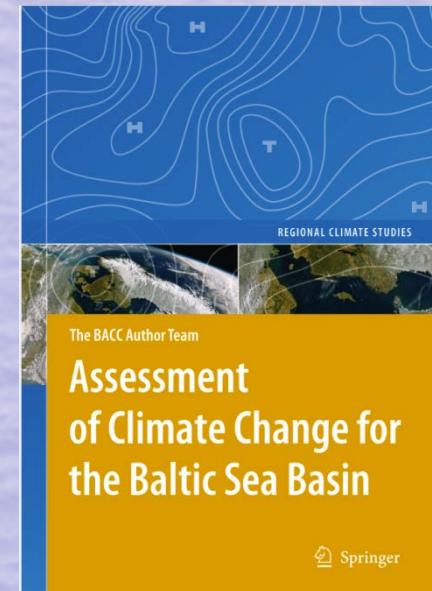
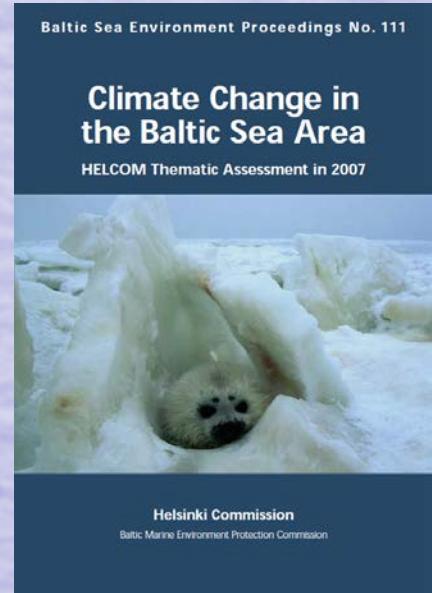
- ✓ Sewage from scattered settlements & houses
- ✓ Trapping and recycling nutrients from agriculture
- ✓ Addressing transboundary pollution
- ✓ Further monitoring of hazardous substances
- ✓ Habitat restoration and protection of migratory fishes
- ✓ Management plans for Marine Protected Areas
- ✓ Improvement of marine knowledge
- ✓ Accomplishment of earlier commitments



# Climate change and HELCOM: – policy response

- 2007 HELCOM Baltic Sea Action Plan:
  - “[We are...] fully aware that climate change will have a significant impact on the Baltic Sea ecosystem requiring even more stringent actions in the future” (HELCOM 2007, BSAP)
- 2010 HELCOM Moscow Ministerial Declaration:
  - [We agree...] on the need for supplementary actions and admit that climate change may have profound consequences both for the environmental status of the Baltic Sea as well as for the scope of the measures adopted by the Contracting Parties until now.

→ These supplementary or more stringent actions need to be specified in HELCOM's work



# HELCOM Workshop on Baltic Sea Region climate change and its implications

- Climate changes and transforms the Baltic Sea
  - Global change
  - Changes in the past in BSR
  - Future changes in BSR
  - Will the BSAP ensure GES in future climate?
  - Adaptation, planning and coastal challenges
- HELCOM's role
- Precautionary approach
- Current level of knowledge
- Proposals
  - Means to communicate to the HELCOM decision-makers
  - Thematic assessment of climate change 2013

Conclusions of the HELCOM  
Workshop on Baltic Sea region climate  
change and its implications



5-6 February 2013,  
Warnemunde, Germany

Helsinki Commission  
Baltic Marine Environment Protection Commission

# Proposals on BSR climate change and its implications

## State, impacts and measures

- Impacts to be included into load reduction targets setting
- Reduce human pressures to mitigate impacts on biodiversity
- Protected areas are essential to ensure a safe space for species
- Non-indigenous species may increase
- Balancing acts to decrease additional pressures, e.g. toxics
- Acidification requires attention
- Climate risks and vulnerability
- Multiple-stressor and holistic approach

## Knowledge

- Develop and maintain marine monitoring and data assimilation
- Further research needed
- Communicate uncertainties
- Improve communication, science and policy
- Review at regular intervals



Baltic Sea Environmental Proceedings No. xxx

Climate change in the Baltic Sea Area  
HELCOM thematic assessment in 2013

DRAFT



Helsinki Commission  
Baltic Marine Environment Protection Commission

- Overall implementation of the HELCOM BSAP
- Core indicator-based follow-up and assessment system
- Revision of Maximum Allowable Inputs and Country Allocated Reduction Targets
- Incorporation of cost-benefit analysis of the BSAP implementation and review

## Climate change implications to the Baltic marine ecosystem

- **enhanced cross-sectorial actions** to respond, prepare and better adapt to the current and future impacts
- advanced **modelling and assessment of the effects** in catchment areas in relation to e.g. agricultural practices
- stressing role of **biodiversity as optimal contributor** for storing and absorbing carbon
- **assessment of regional climate** change and its implications on the Baltic Sea ecosystem a **regular activity**



# Road ahead - priorities

- Climate change adaptations as regional priority
  - Follow-up in global context (UNFCCC)
  - 2013 Ministerial Conference
- Impacts adaptation
  - Do we need stricter measures to reach Good Environmental Status in climate change conditions?
- Continue cooperation between HELCOM and BALTEX
  - Include BALTEX climate change assessments into HELCOM six year assessment cycle



# HELCOM MINISTERIAL MEETING COPENHAGEN 3 OCTOBER 2013

Six years of the Baltic Sea Action Plan

- How is the Baltic Sea ecosystem doing?
- Are we on the right track to reach good environmental status?
- What do we need to do next for a healthy Sea?
- How to best join efforts and pool resources for the Baltic common vision?



**Thank you for your attention!**