

The problem of eutrophication and perspectives on compliance in the Baltic Sea area

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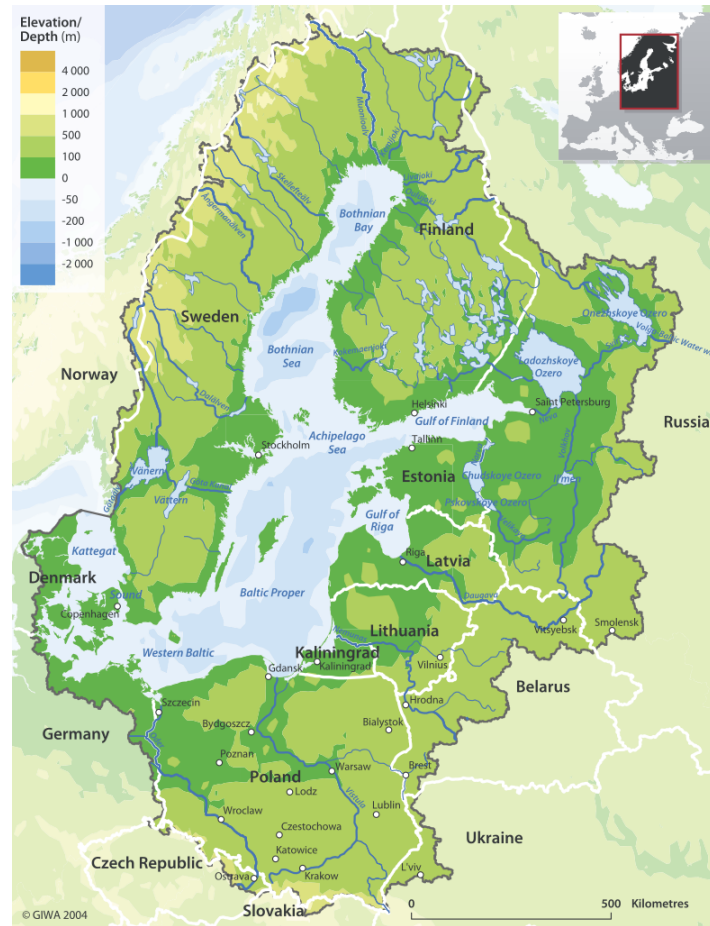
The Baltic Sea drainage area

Coastal states:

Denmark, Estonia, Finland,
Germany, Latvia, Lithuania,
Poland, Russia and Sweden

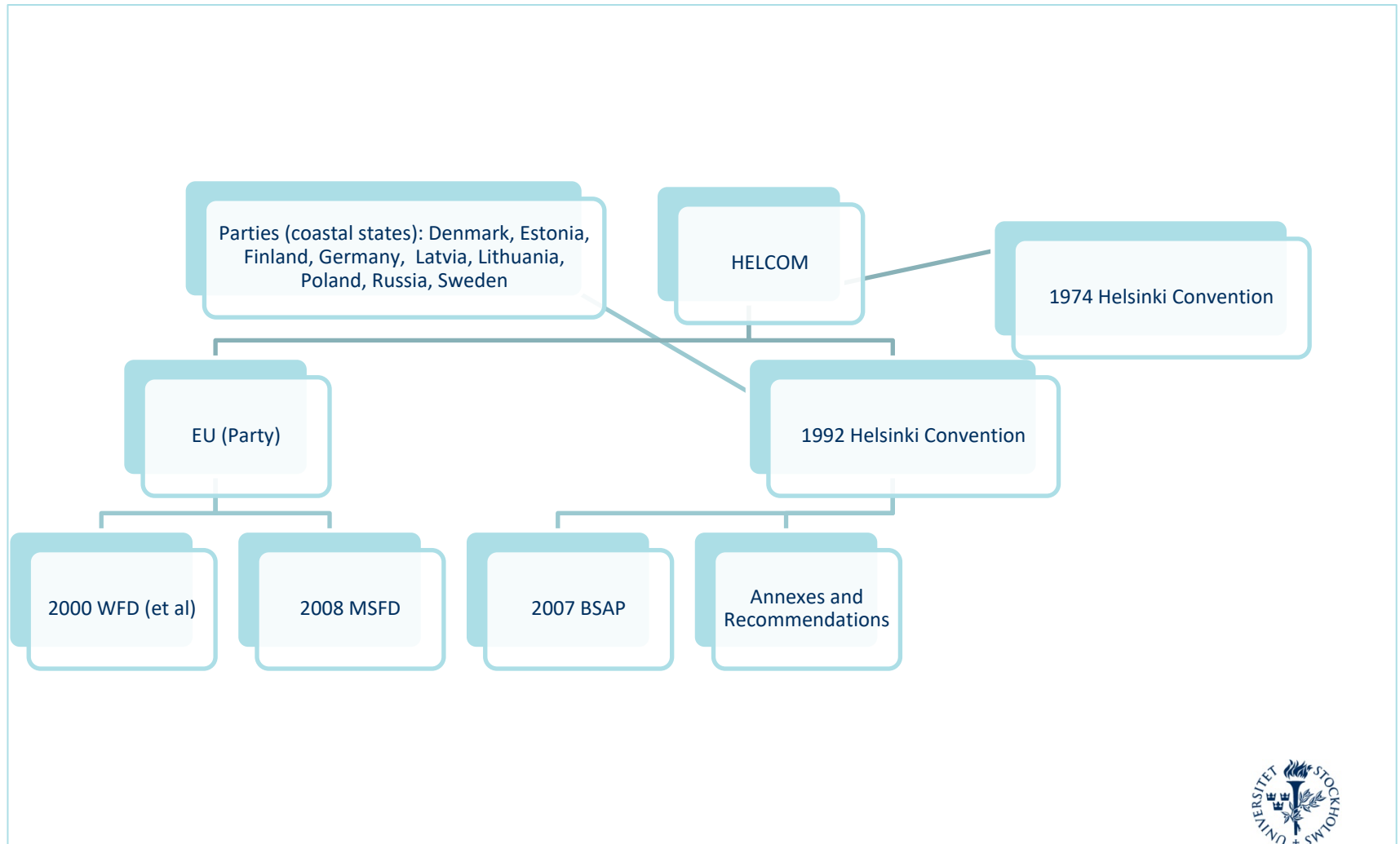
Non-coastal states:

Belarus, Czech Republic,
Norway and Ukraine



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Baltic Sea regulatory framework



The Helsinki Convention

Article 3(1): “The Contracting Parties shall individually or jointly **take all appropriate legislative, administrative or other relevant measures to prevent and eliminate pollution** in order to promote the ecological restoration of the Baltic Sea Area and the preservation of its ecological balance.”

The Helsinki Convention

Article 3(3): “In order to prevent and eliminate pollution of the Baltic Sea Area the Contracting Parties shall promote the use of Best Environmental Practice and Best Available Technology. **If the reduction of inputs, resulting from the use of Best Environmental Practice and Best Available Technology, as described in Annex II, does not lead to environmentally acceptable results, additional measures shall be applied.**”

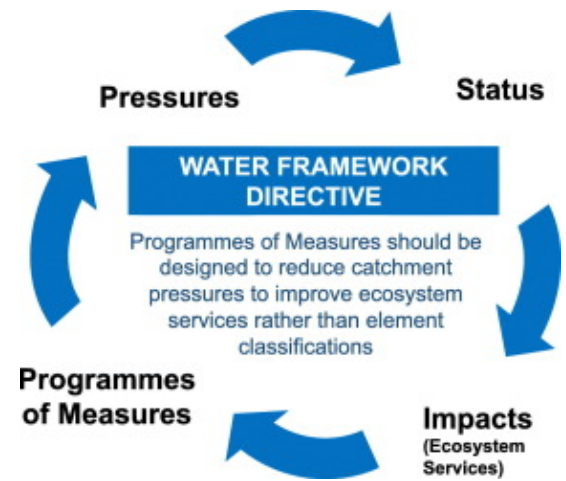
- *The importance of Annexes and Recommendations!*
- *BSAP!*
- *What is compliance?*

Reporting requirements and Enforcement

- HELCOM - Self-reporting
 - The Contracting Parties shall report to HELCOM on e.g. measures taken and the effectiveness of measures taken
- HELCOM lacks competence to act on non-compliance
- EU enforcement through EU Commission and EU Court

2000 EU Water Framework Directive

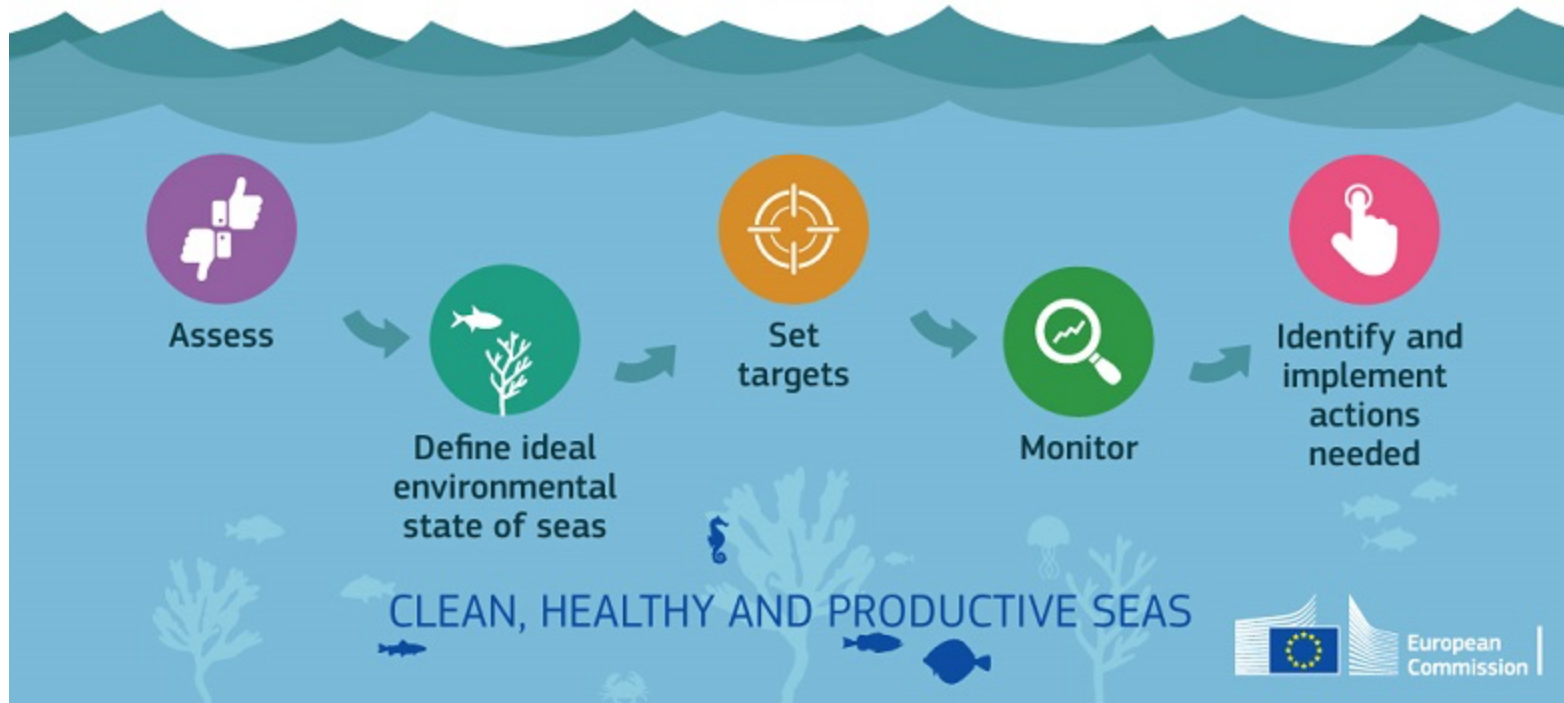
- Aims at “**good ecological (or chemical) water status**” for all inland water in 2015
- Applicable on “**inland water**”
- **River basin approach: River basin plans/Programmes of measures**
- Incorporates a number of underlying Directives; *Industrial Emissions Directive, **the Nitrates Directive**, the Waste Water Directive and others.*
 - Poor compliance by EU states with the Nitrates directive!



2008 EU Marine Strategy Framework Directive

- Applicable to the **marine waters**, beyond the base line – according to jurisdiction by UNCLOS
- Connected to and implemented with the Water Framework Directive
- **Ecosystem approach with adaptive review**
- **“Good Environmental Status”** in EU marine waters **by 2020**
 - Goal achievement: *“...considerable efforts have been made by Member States, not all pressures are covered properly by the measures....”*
- **The coordination is to be based on existing structures of regional agreements (= BSAP)**
- Developed by, and includes, stakeholder participation

How EU Member States develop marine strategies



2007 Baltic Sea Action Plan

- Generally articulating the provisions already in place under the Convention (defining vague requirements)
- **Ecosystem approach:** Goal is 'good ecological status' **by 2021**
 - Definition for Eutrophication is "Baltic Sea unaffected by eutrophication"
- The Eutrophication Segment entails an important addition:
 - **Targets for 'Maximum Allowed Nutrient Input'** (non-binding)
- Based on **National Implementation Programmes**
- **Additional recommendations**
- Regional reflection of the EU Marine Strategy Framework Directive
- Uncertain legal status - but authoritative and (potentially) effective because **adaptive control linked to MSFD and the EU**

Maximum allowable nutrient input

Sub-region	Maximum allowable nutrient input (tonnes)		Inputs in 1997-2003 (normalised by hydrological factors)		Needed reductions	
	Phosphorus	Nitrogen	Phosphorus	Nitrogen	Phosphorus	Nitrogen
Bothnian Bay	2,580	51,440	2,580	51,440	0	0
Bothnian Sea	2,460	56,790	2,460	56,790	0	0
Gulf of Finland	4,860	106,680	6,860	112,680	2,000	6,000
Baltic Proper	6,750	233,250	19,250	327,260	12,500	94,000
Gulf of Riga	1,430	78,400	2,180	78,400	750	0
Danish straits	1,410	30,890	1,410	45,890	0	15,000
Kattegat	1,570	44,260	1,570	64,260	0	20,000
Total	21,060	601,720	36,310	736,720	15,250	135,000

Country-wise nutrient reduction targets

WE AGREE on the following country-wise provisional nutrient reduction requirements: *

	Phosphorus (tonnes)	Nitrogen (tonnes)
Denmark	16	17,210
Estonia	220	900
Finland	150	1,200
Germany	240	5,620
Latvia	300	2,560
Lithuania	880	11,750
Poland	8,760	62,400
Russia	2,500	6,970
Sweden	290	20,780
Transboundary Common pool	1,660	3,780

Evaluation of BSAP measures 2018

Table 2.1.2. Accomplishment of joint eutrophication actions related to measures and management coordination. Blue=accomplished, Orange=partly accomplished (activity ongoing), Grey=future target year.

Agriculture

- Joint input on EU CAP Health Check (2008-2009)
- Establish a HELCOM Agricultural/Environmental Forum
- Review and update part II of Annex III of the Helsinki Convention
- Aim for elimination of remaining Hot Spots under the HELCOM JCP* (Target year: 2018)

Aquaculture

- New HELCOM Recommendation on sustainable aquaculture

Atmospheric input

- Update information on the atmospheric nitrogen deposition into review of the HELCOM BSAP MAI/CART scheme
- Develop principles for fair burden sharing of the country-wise reduction needs for atmospheric nitrogen deposition inputs for inclusion in MAI/CART
- Joint input to strengthen the emission targets for nitrogen under the EU NEC Directive and the Gothenburg protocol under CLRTAP

Clean shipping

- Joint proposal by the Baltic Sea countries to the IMO applying for a NOx Emission Control Area (NECA) status for the Baltic Sea
- Create a joint "Green Technology and Alternative Fuels Platform for Shipping"
- Joint submission to IMO in order to amend Annex IV to MARPOL 73/78 with requirements on nutrient discharges in sewage
- HELCOM countries to report to IMO, that adequate [port reception] facilities are available for the regulation** to enter into force by 1 January 2016 for new ships
- Update the "HELCOM Clean Seas Guide"
- HELCOM Interim Guidance on technical and operational aspects of delivery of sewage by passenger ships to port reception facilities

* 16 hot spots related to release of nutrients, both from agriculture and industry, remain to be fully mitigated.

** Baltic Sea as special area for sewage

Table 2.1.3 Accomplishment of national actions to mitigate eutrophication related to measures and management coordination. Blue=accomplished by all countries, Orange=partly accomplished, Red=not accomplished. Grey=future target year. 'Status' indicates the number of countries that have implemented the action.

HELCOM MAI/CART scheme	Status
■ National programmes to achieve nutrient reductions	*
■ Achieving Country Allocated Nutrient Reduction Targets: Nitrogen	1 / 9**
■ Achieving Country Allocated Nutrient Reduction Targets: Phosphorous	
■ Evaluation of effectiveness of national programmes for reduction of nutrients and need for additional measures, in order to reach the country-wise reduction targets	4 / 9
■ Initiate joint activities to address transboundary nutrient inputs from non-Contracting Parties according to the HELCOM nutrient reduction scheme	3 / 8*** Target year: 2020
Specific actions to reduction phosphorus	
■ Target the elimination of phosphorus in laundry detergents for consumer use as soon as possible but not later than by 2015	8 / 9
■ Enhance the recycling of phosphorus (especially in agriculture and wastewater treatment) and to promote development of appropriate methodology	3 / 9
Agriculture	
■ Implement and enforce the provisions of part 2 of Annex III "Prevention of pollution from agriculture" of the 1992 Helsinki Convention	4 / 9
■ Measures to bring all installations for the intensive rearing of cattle, poultry and pigs as well as other agricultural activities in compliance with part 2, Annex III of the Helsinki Convention	4 / 9
■ Apply as a minimum the updated EU's BREF document and Conclusions on BAT for intensive rearing of poultry and pigs, especially for the facilities located within areas critical to nutrient losses	7 / 9
■ Revised palette of measures for reducing phosphorus and nitrogen losses from agriculture. Optional agro-environmental measures to be implemented through corresponding international and national instruments	3 / 9
■ Establish national guidelines or standards for nutrient content in manure with the view to fully utilize nutrient content of manure in fertilization practices and to avoid overfertilization	5 / 9
■ Agreement on national level on measures to reduce nutrient surplus in fertilization practices to reach nutrient balanced fertilization	5 / 9 Target year: 2018
■ Promote and advance towards applying annual nutrient accounting at farm level, taking into account soil and climate conditions, in areas critical to nutrient losses as a first step and with an aim to apply it region-wise	4 / 9 Target year: 2018
Waste water treatment	
■ Advanced municipal waste water treatment under HELCOM Recommendation 28E/5	3 / 9

Compliance and effectiveness

- With the WFD/MSFD/BSAP – a clear focus on ecosystem and ecosystem approach at all levels of regulation: New structure – new incentives!
- A slow trend towards increased pollution reductions
- Advancements have been made with the MSFD/BSAP approach due to continuous evaluations and reports = ‘managerial approach’ to compliance
- Stakeholder involvement!
- Reduction targets makes for a clear target
- HELCOM has the capacity to engage in bilateral projects with non-party states

Enforcement(?) by EU

- EU Court have reviewed cases on the implementation of the MSFD and WFD but often mostly focus on procedural aspects
- EU Court have reviewed cases on the implementation of the MSFD – Referred to the BSAP in some cases but made no official statement on the connection to the BSAP
- EU Court – on Nitrates Directive – often provide derogations
- No court case on the relationship between WFD, MSFD and BSAP
- WFD strict interpretation (Weser judgment in 2015)

HELCOM Evaluation of MAI

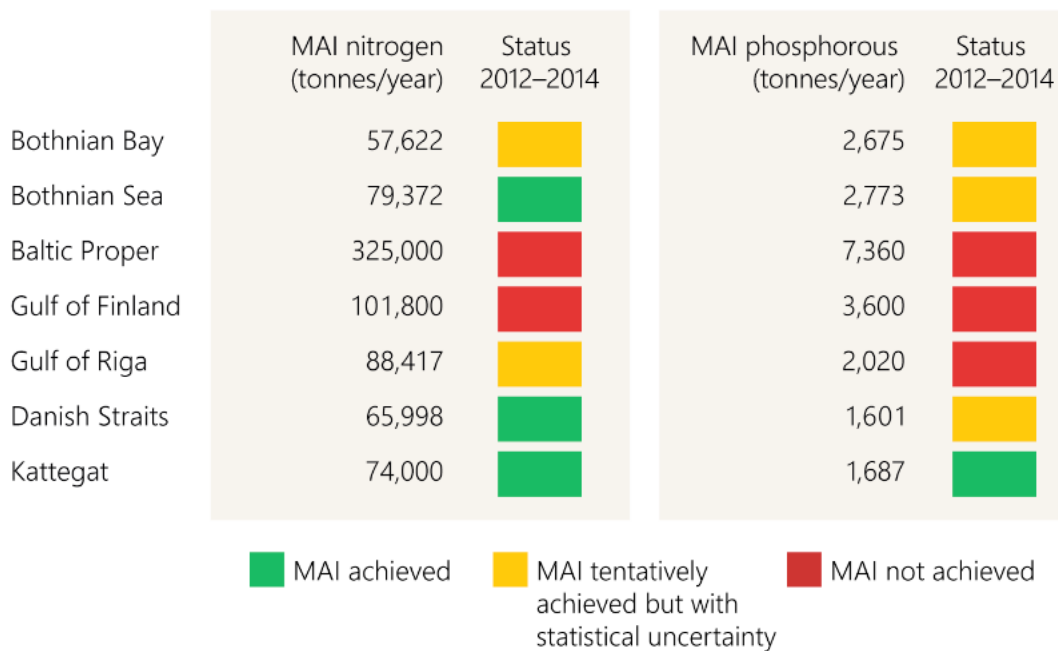


Figure 2.1.5. Achievement of Maximum Allowable Inputs (MAI) of nitrogen and phosphorus in 2012-2014.

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HELCOM data on eutrophication levels 2019



Waterborne and total nutrient inputs

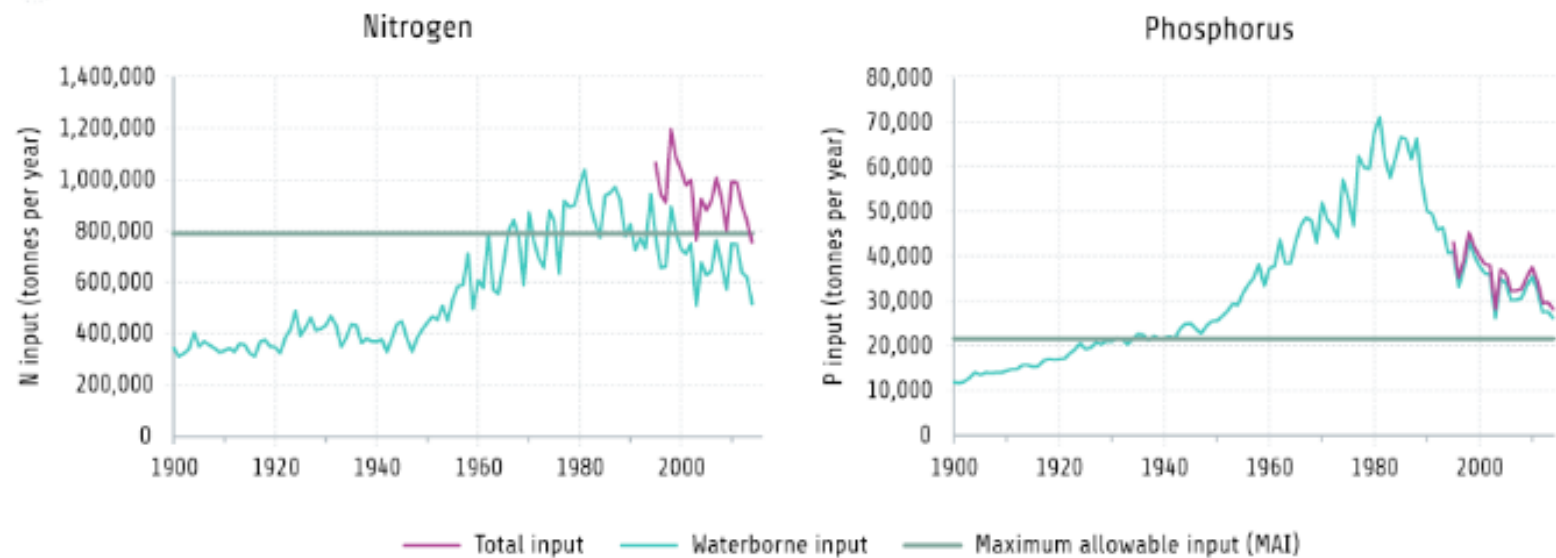


Figure 1.

Temporal development of waterborne and total nutrient inputs to the Baltic Sea from 1900 to 2014 with inputs of nitrogen to the left and of phosphorus to the right. The green line shows the maximum allowable inputs (MAI). Sources: HELCOM (2015a), Gustafsson et al. (2012), Savchuk et al. (2012).

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Tentative summary and concluding points

- New BSAP in 2021?
 - Stronger involvement of the EU/better coordination between EU laws and BSAP
 - Stakeholders
- Focus more on joint actions?
- More focus on measures rather than results?
- Could HELCOM be given more competence?!

Thank you!

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