



REPUBLIC OF ESTONIA
MINISTRY OF THE ENVIRONMENT



HELCOM

Nutrient management from source-to-sea in the Baltic Sea

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Unique but fragile ecosystem
(brackish water, ice winters...)



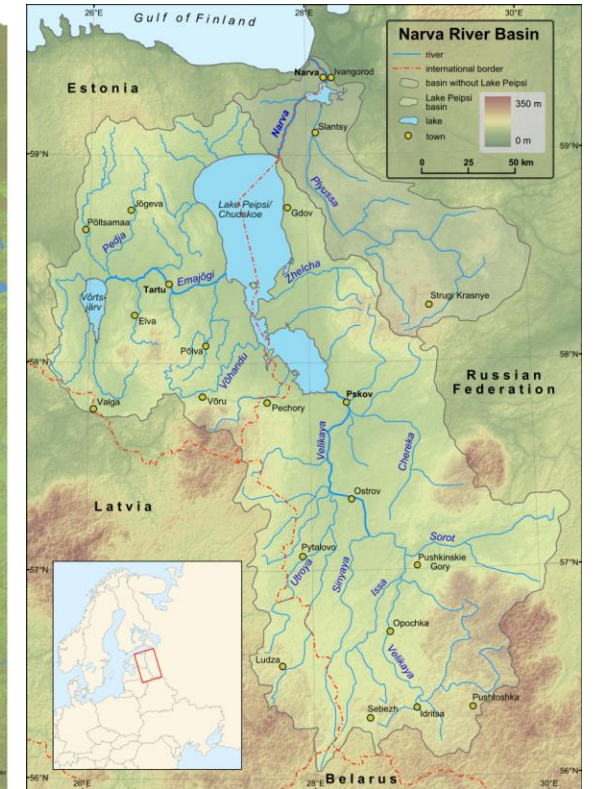
Catchment area:
4* area of the sea



Population (catchment):
85 million



Multitude of
pressures



Main environmental problems and SDG-s to be addressed in the region

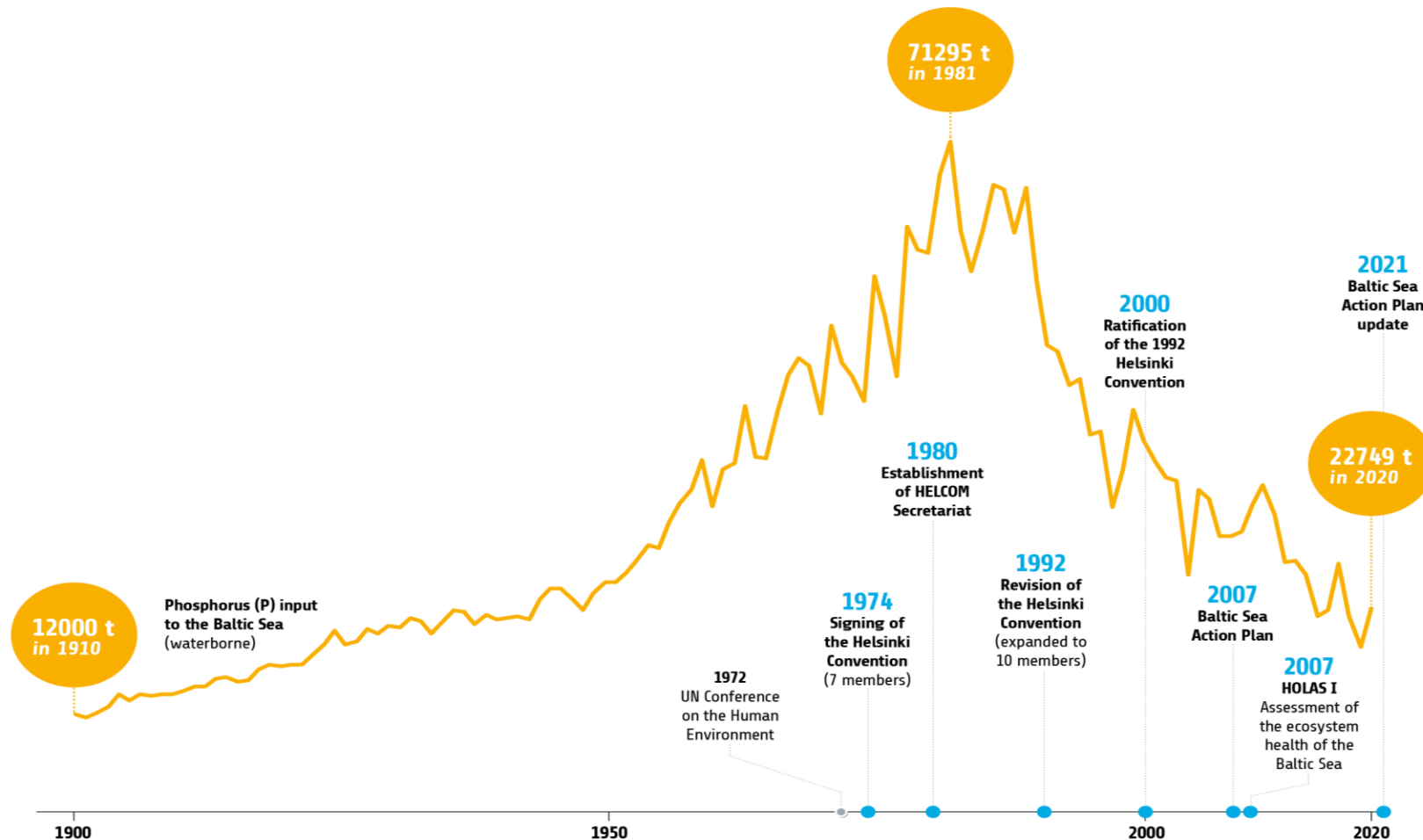
Problems

- High level of nutrients from land based sources to the lakes, rivers, groundwater and coastal waters
- Eutrophication of lakes and coastal waters
- Hydro morphological barriers in rivers (hydro energy production, water reservoirs), obstructing the movement of migrating fish
- Industrial releases and pharmaceutical residues in rivers, lakes and coastal waters
- Litter and debris from land based sources, such as wastewater treatment plants, agriculture, industries, storm water systems
- Rivers, lakes and coastal waters not in the good status
- Marine areas not in the good environmental status

Relevant SDG-s

- 14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
- 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans
- 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
- 6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

Nutrients and eutrophication in the Baltic Sea



General approach for the nutrient management

- The goal is to improve the status of the sea, lower the nutrient content in the sea.
- For each sub-basin of the sea **maximum allowable nutrient inputs** are defined.
- Nutrient reduction needs are divided by HELCOM countries.
- Each HELCOM country has its **Nutrient Input Ceiling** for each sub-basin.
- Each country is expected to decrease the nutrient loads from its territory and stay below the input ceiling.
- Pollution loads of transboundary rivers take into account inputs of all countries in the catchment area.
- Countries identify pollution sources on land and their share in total nutrient load.
- Measures to lower the pollution load are designed and implemented by river basin management plans.
- Measures for transboundary waters are agreed or coordinated in transboundary water commissions.

Measuring and managing progress

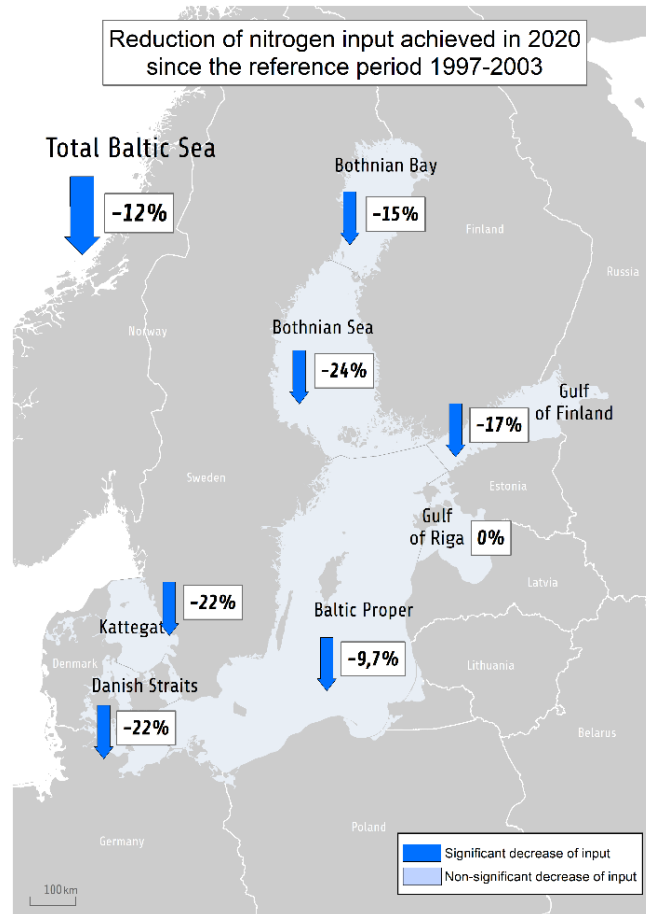


Table 2a. Net nutrient input ceilings (NIC) of nitrogen for the HELCOM countries, non-HELCOM countries in the Baltic Sea catchment area, other countries with airborne input, Baltic Sea shipping and North Sea shipping (in tonnes/year).

	Bothnian Bay	Bothnian Sea	Baltic Proper	Gulf of Finland	Gulf of Riga	Danish Straits	Kattegat
Germany	947	3,920	34,077	1,645	1,747	23,647	4,661
Denmark	280	1,148	9,025	421	462	28,067	28,538
Estonia	113	404	1,478	11,334	13,099	22	24
Finland	35,087	28,700	1,827	20,457	295	76	89
Lithuania	108	495	25,878	305	8,820	66	80
Latvia	73	330	6,457	246	43,074	31	34
Poland	668	3,125	151,997	1,407	1,596	1,480	1,443
Russia	839	1,993	10,317	61,503	3,296	238	245
Sweden	17,718	32,633	30,690	626	525	6,056	32,799
Other countries with airborne input	1,375	5,008	26,947	2,986	2,188	4,933	4,502
Belarus	-	-	13,456	-	12,820	-	-
Czech Republic	-	-	3,551	-	-	-	-
Ukraine	-	-	1,693	-	-	-	-
Baltic Sea shipping	284	1,141	5,180	675	345	651	701
North Sea shipping	131	475	2,427	196	150	729	884

Some technical considerations

- Pollution Load Compilations by participating countries at regular intervals.
- Monitoring and reporting of waterborne pollution input from rivers.
- Modelled data on airborne nutrients.
- Coordinated data reporting, data management, processing and quality assuring.
- Annually reported information includes total inputs of nutrients, from monitored rivers, unmonitored areas, and point sources discharging directly to the sea.
- Continuous improvement in data quality and target setting.
- Main constrains – unmonitored areas, missing data.
- Effective and coordinated information exchange among all participants.

For additional information, please visit:
www.helcom.fi