

HELCOM Recommendation on storm water management

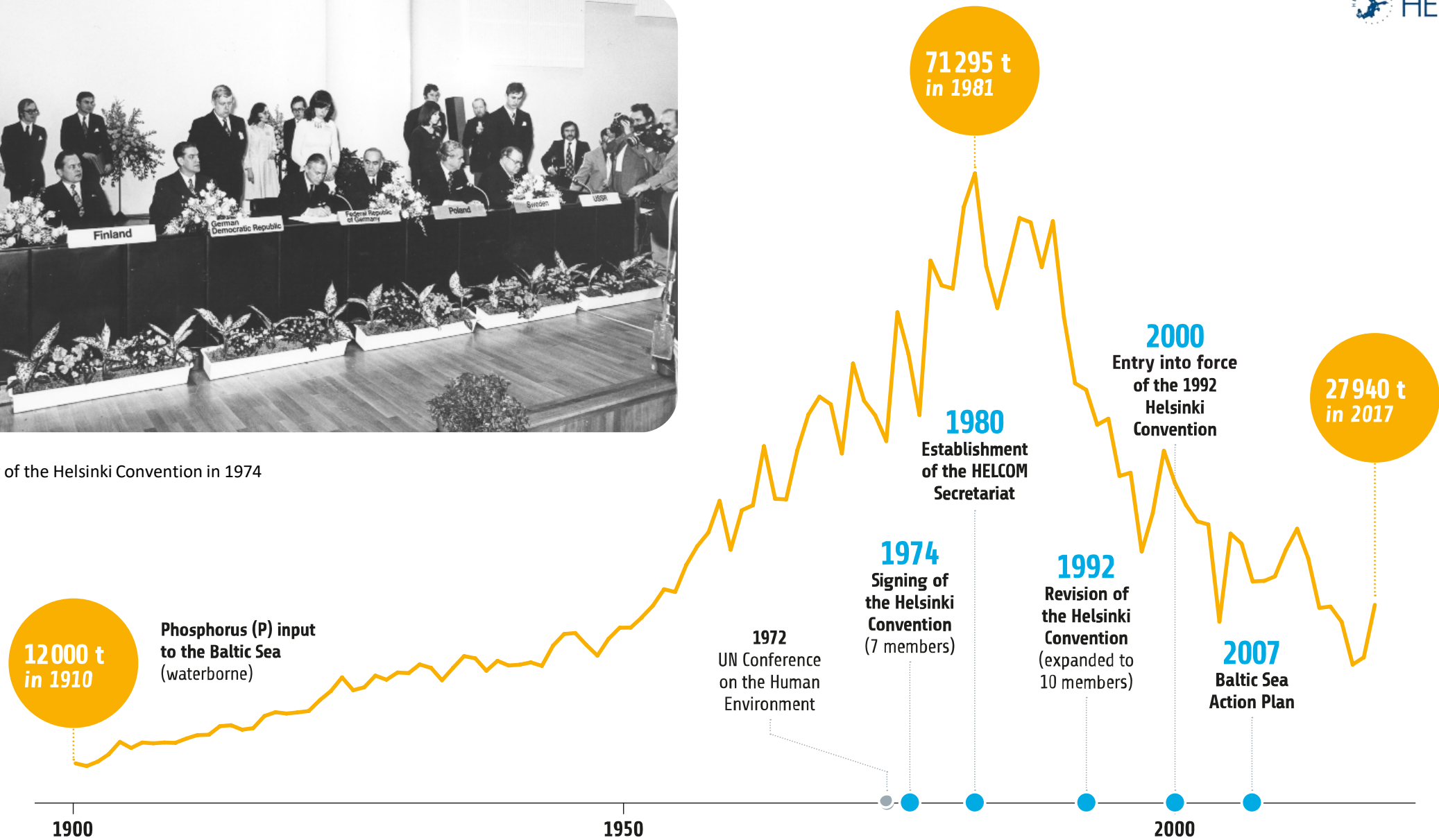
- ***why do we need all that?***

Dmitry Frank-Kamenetsky,
HELCOM





▲ Signing of the Helsinki Convention in 1974



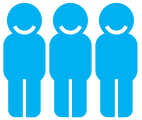
The Baltic Sea



Unique but fragile ecosystem



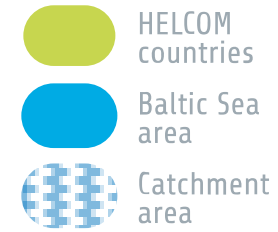
Catchment area:
4x area of the sea



Population (catchment):
85 million

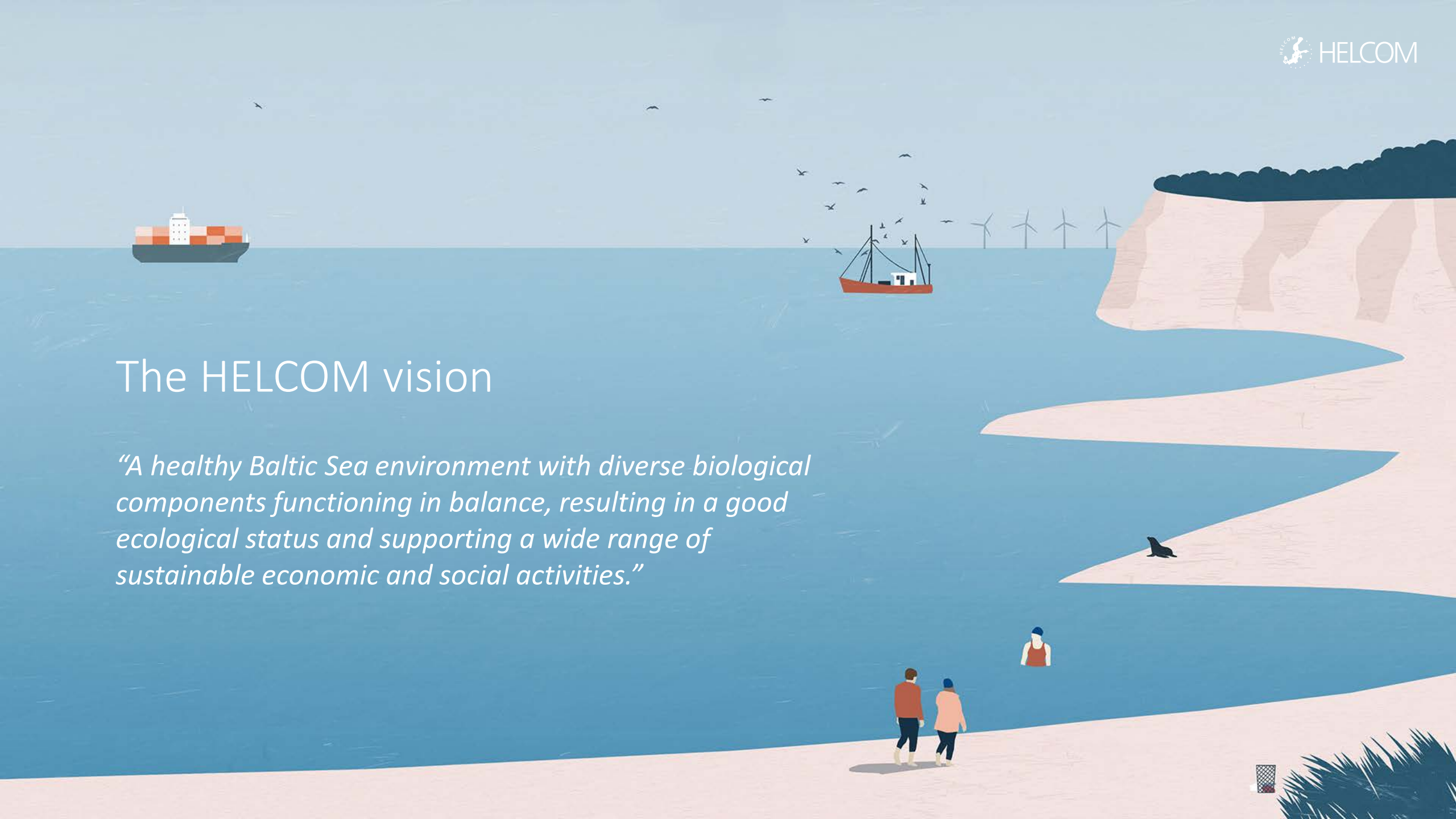


Multitude of pressures

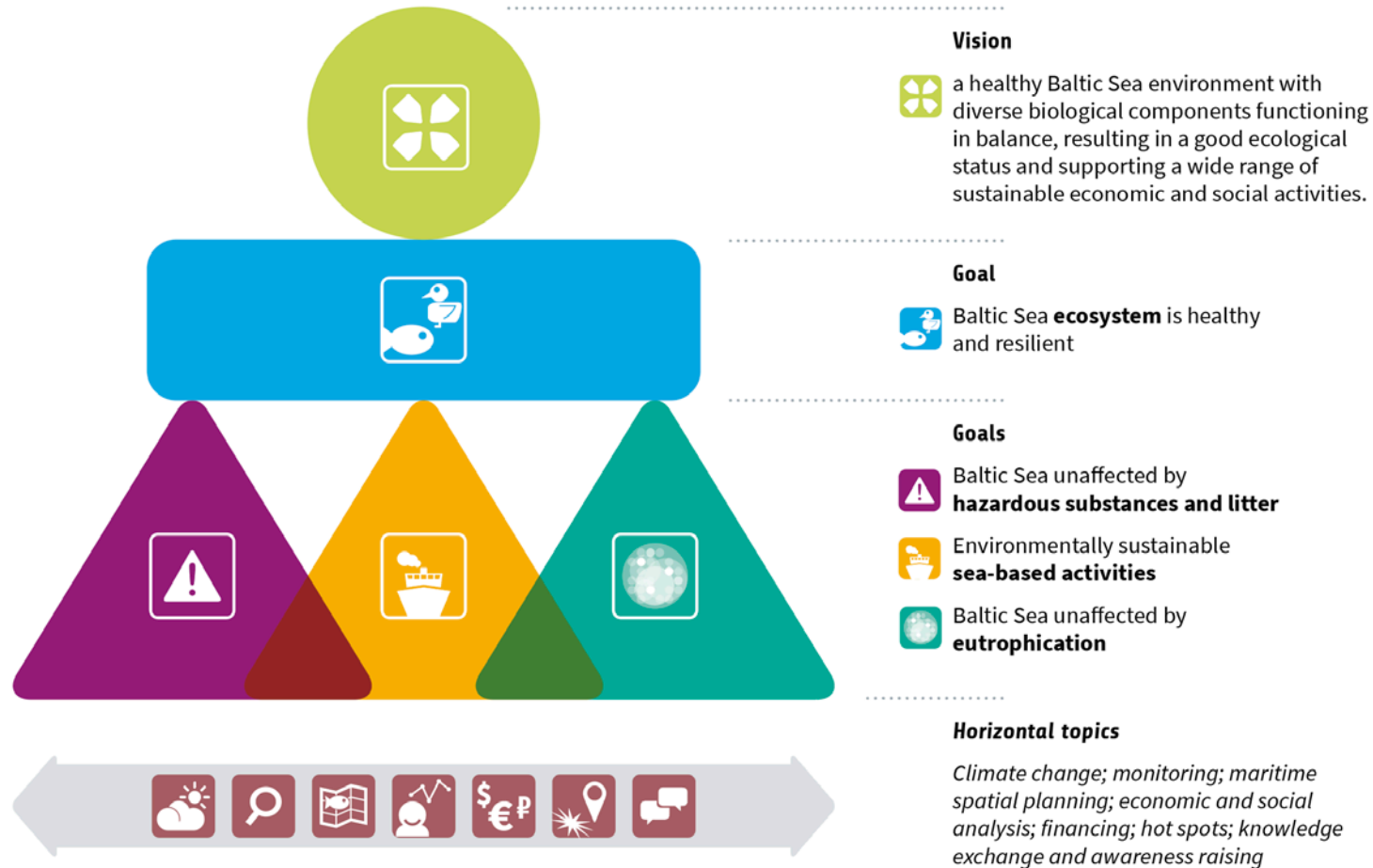


The HELCOM vision

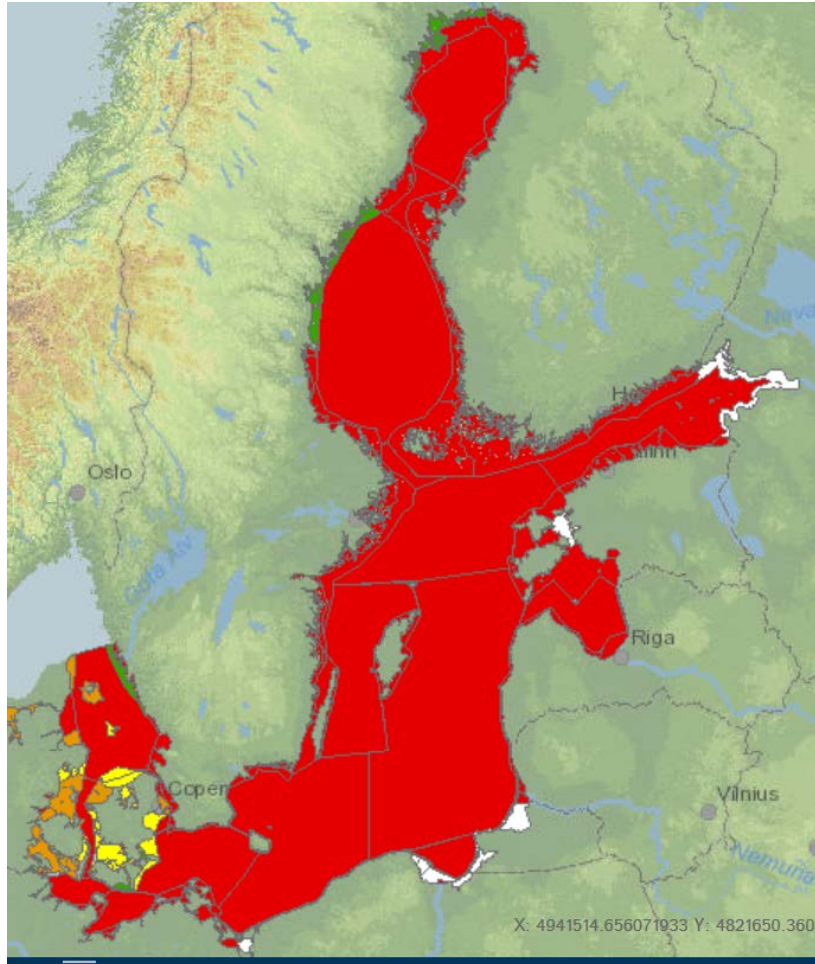
“A healthy Baltic Sea environment with diverse biological components functioning in balance, resulting in a good ecological status and supporting a wide range of sustainable economic and social activities.”



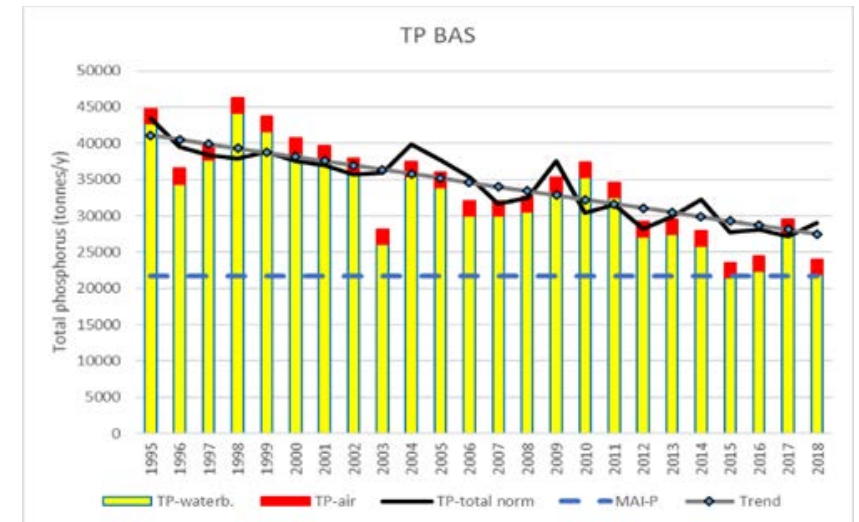
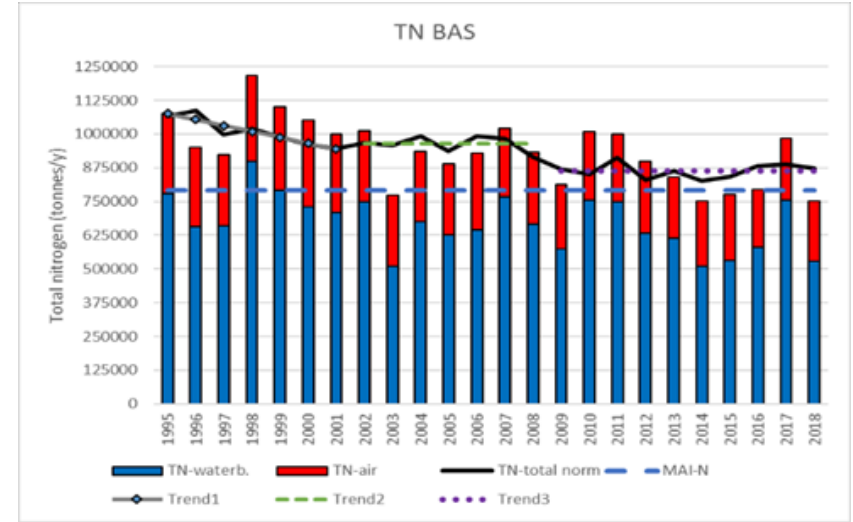
Baltic Sea Action Plan 2030: structure & goals



Eutrophication and input of nutrients



BSAP goal:
Baltic sea unaffected by eutrophication



Substances discharged from urban areas (NonHazCity)

Compound	Chain Length	Industrial	Residential	Service	Stormwater	WWTP
PFBA	3	33%	0%	33%	6%	22%
PFBS	4	10%	0%	8%	28%	26%
PFHxA	5	0%	0%	0%	0%	22%
PFHpA	6	19%	0%	17%	44%	43%
PFHxS	6	45%	50%	17%	36%	63%
PFOA	7	67%	67%	58%	50%	96%
PFOS	8	38%	22%	17%	53%	76%

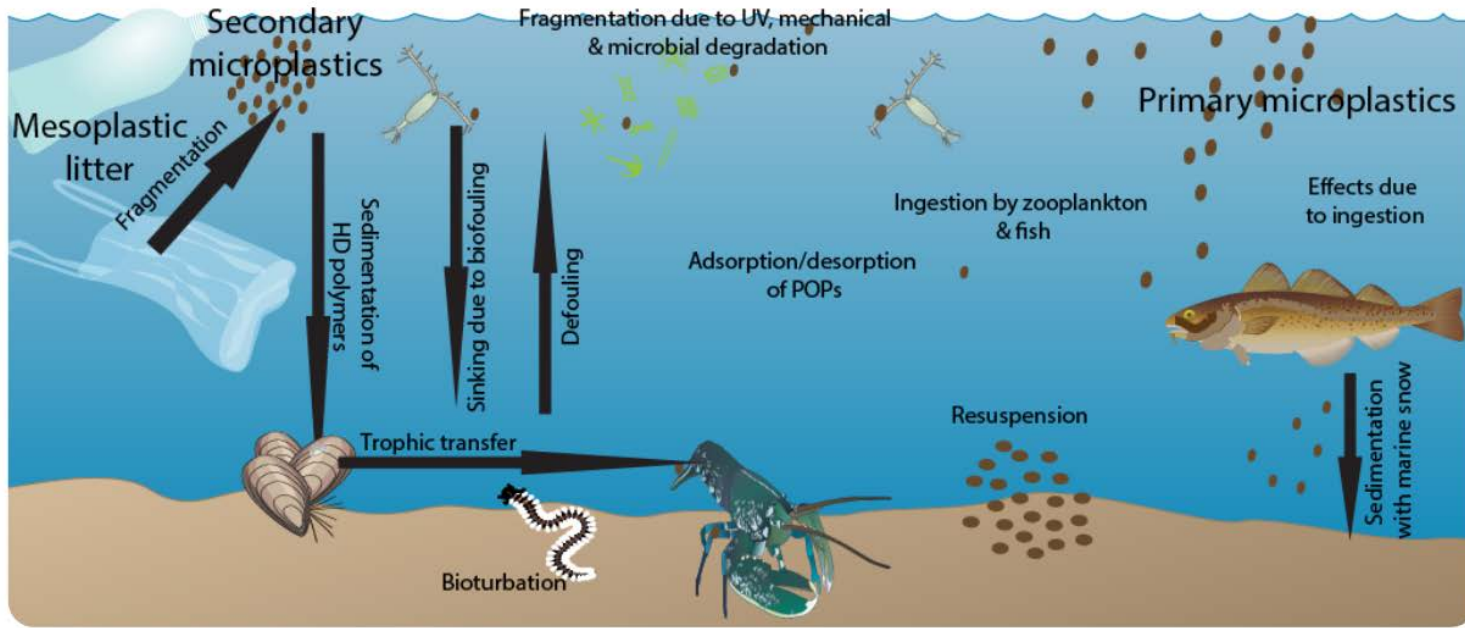
Samples	21	18	12	18	23
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Metal	Industrial	Residential	Service	Stormwater	WWTP
Cadmium	59%	59%	85%	58%	73%
Chromium	5%	6%	8%	0%	0%
Copper	100%	100%	100%	100%	100%
Nickel	77%	76%	85%	75%	82%
Lead	9%	6%	15%	17%	0%
Zinc	100%	100%	100%	100%	100%

Samples	22	17	13	12	11
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Compound Class	Industrial	Residential	Service	Stormwater	WWTP
Alkylphenol	28%	59%	64%	40%	75%
Bisphenol	100%	94%	100%	90%	92%
Pharmaceuticals	11%	59%	29%	10%	75%
Phthalates	94%	100%	86%	100%	100%

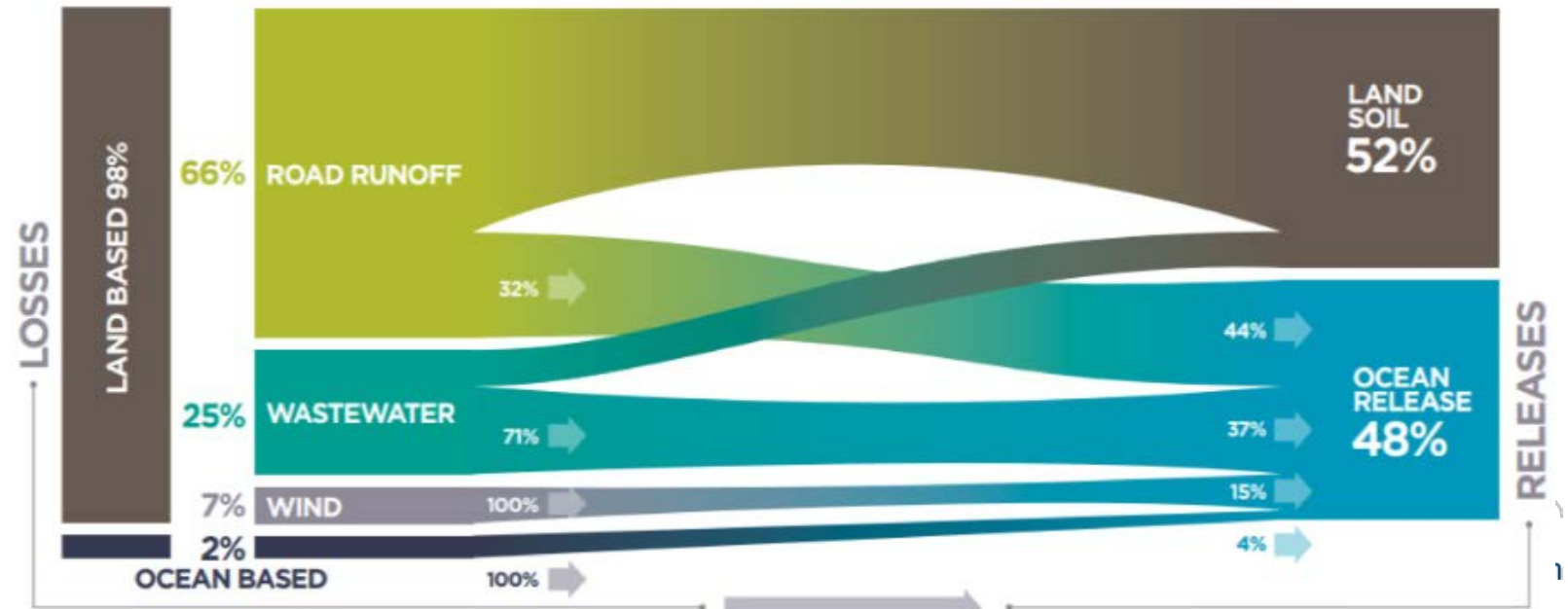
Samples	22	17	13	12	11
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GLOBAL RELEASES TO THE WORLD OCEANS:

CONTRIBUTION OF DIFFERENT PATHWAYS TO THE RELEASE OF MICROPLASTICS

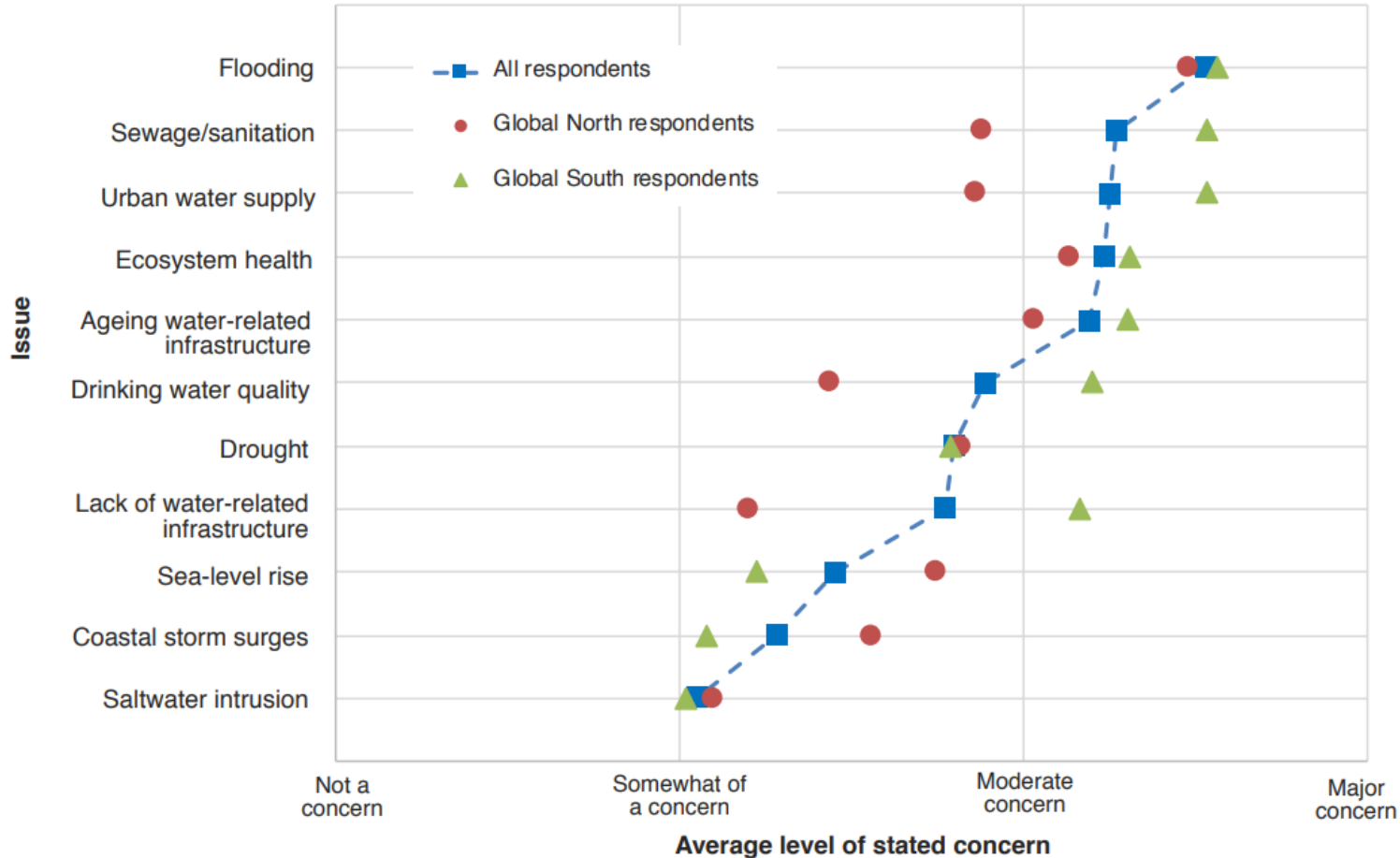
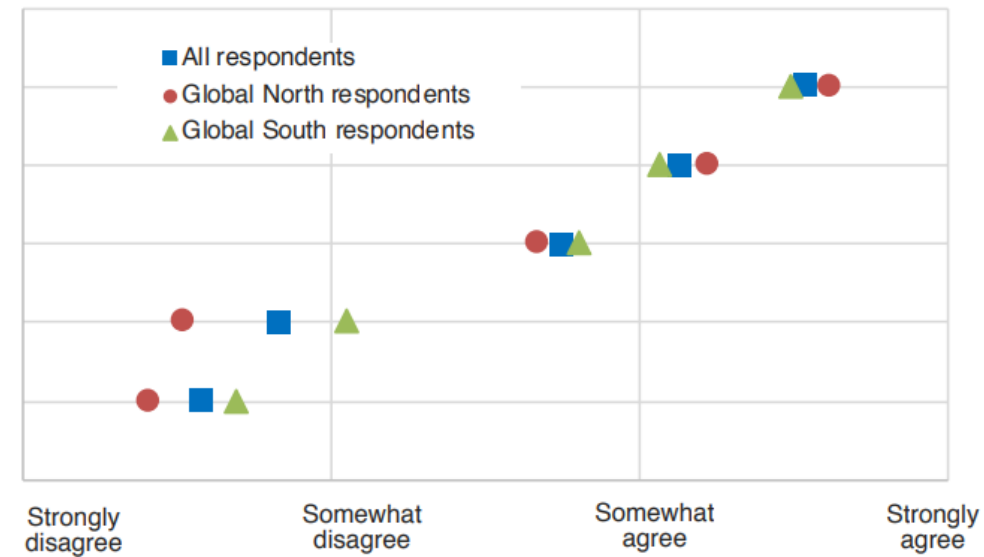
Microplastic



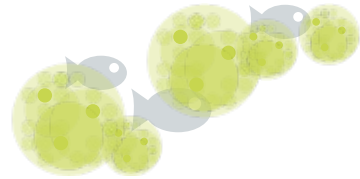
Urban water issues of concern under climate change

- a. "Urban water adaptation is a concern in my city"
- b. "We focus on 'mainstreaming' adaptation into existing policy and planning"
- c. "We address similar kinds of things, but we don't call it adaptation"
- d. "Adaptation can wait - we have other basic water issues to address first"
- e. "Adaptation does not require anything new"

Statement



Urban storm water is:



A remarkable sources of nutrients



One of the significant pathways for hazardous substances



One of the major sources of micro-litter



A subject of high concern in terms of climate change



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. This issue includes the amendments to its Annexes adopted by the Helsinki Commission in 2000, 2001 and 2003. These amendments are listed on page 43.

July 2004

Article 3

Fundamental principles and obligations

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.



Main implementation tools

- **Ministerial Declarations**
 - high level meetings every 3-5 years
 - Assessment of progress and setting of new objectives and commitments
- **Baltic Sea Action Plan (2021-2030)**
 - programme to restore the good ecological status of the Baltic marine environment by 2021
- **Associated documents**
 - Associated documents in this context include documents which contain agreement on actions and/or measures e.g. roadmaps, topic specific action plans, strategies etc.
- **HELCOM Recommendations:**
 - on measures to address certain pollution sources or areas of concern
 - to be implemented by the Contracting Parties through their national legislation





Baltic Marine Environment Protection Commission

HELCOM Recommendation 23/5-Rev.1

Adopted 6 March 2002
amended 4 June 2021
having regard to Article 20,
Paragraph 1 b) of the Helsinki
Convention

**REDUCTION OF DISCHARGES FROM URBAN AREAS BY THE PROPER MANAGEMENT OF STORM
WATER SYSTEMS**

General structure of the revised HELCOM RECOMMENDATION 23/5

- A. Storm water planning
- B. Reduction of discharges of urban areas by proper management of storm waters
- C. Management of high-risk storm waters
- Annex 1 – Supporting information for the implementation of the Recommendation
- Annex 2 – Reporting format



A. Storm water planning

1 ...the ecosystem services approach should be applied in storm water planning;,

2 integrated Storm Water Management (ISWM) should be applied in future urban development processes at all levels – from planning and construction to infrastructure operation and maintenance (see Annex 1 for supporting information),

3 storm water planning should be catchment area based and should take the natural runoff paths of stormwater into consideration,

.....

7 storm water planning tools (e.g. Green Area Factor) should be applied at early urban planning stages and modernization of urban areas when the water drainage is being planned,

8 in order to work systematically with storm water issues, municipalities (or other respective authorities) should develop storm water policies and/or plans,

9 impact of climate change should be taken into account when planning storm water management.



B. Reduction of discharges of urban areas by proper management of storm waters

- 10 storm waters should be managed according to a priority order, adapted to local circumstances. The following general priority order should apply:
- I. storm water to be treated and utilized at the source,
 - II. storm water to be conveyed away from the source with a system that retains and detains the water,
 - III. storm water to be conveyed away from the source in a storm water sewer to retention and detention areas located on public areas before conveying the water to a water body (brook),
 - IV. storm water to be conveyed in a storm water sewer directly to the recipient water body;
 - V. storm water to be conveyed in a combined sewer to wastewater treatment plant,

.....

12to prevent environmental impact of the overflow, main overflow spots should be identified, and measures such as local infiltration, retention basins, treatment of the overflow...



B. Reduction of discharges of urban areas by proper management of storm waters...*continuation*

13 assessment of local storm water impact should be carried out for the waterbodies' catchment areas;....

14 areas with high storm water flood risk should be mapped and risk of contamination of the aquatic environment by chemicals, oil or litter, including micro litter, should be assessed,

15 measures to ensure storm water quality should be taken already at the source to prevent the deterioration of the quality of storm water....,

16 dumping of the street cleaning snow directly to sea or to any other water bodies should be prevented....



C. Management of high-risk storm waters

17 storm water from heavily polluted areas should be treated separately on site (e.g. Water Sensitive Urban Design, WSUDs, oils separators...

18 contaminated waters from industrial areas, production plants, leachate from landfills, service stations, mechanical workshops and other plants as well as storm waters from areas where oil is handled or stored should not, without effective water pollution control and treatment measures, be connected to a storm water system or discharged to the recipient.



Reporting and revision

RECOMMENDS that the Contracting Parties assess regularly the implementation of this recommendation, specify reporting format by 2025 and report the results of the assessment to the Commission every six years starting in 2033 with data from 2030,

DECIDES that this Recommendation should be reconsidered in 2035.



PLATFORM BSR WATER



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