

# HELCOM Baltic Sea Action Plan - current priorities and implementation

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*Dmitry Frank-Kamenetsky*  
*Professional secretary, HELCOM*



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# Helsinki Commission (HELCOM)

- Intergovernmental organisation
- 9 coastal countries & EU
- Marine area:
  - 415,000 km<sup>2</sup>
- Catchment area:
  - 1.72 million km<sup>2</sup>  
(4 x size of the sea area)
  - 14 countries
  - 85 million people

## Baltic Marine Environment Protection Commission



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# The goals of BSAP

- *Baltic Sea unaffected by eutrophication*
- *Baltic Sea undisturbed by hazardous substances*
- **Biodiversity and nature conservation segment of the HELCOM Baltic Sea Action Plan**
- **Towards a Baltic Sea with maritime activities carried out in an environmentally friendly way**
- **Development of assessment tools and methodologies**
- *Awareness raising and capacity building*



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# Baltic Sea Action Plan

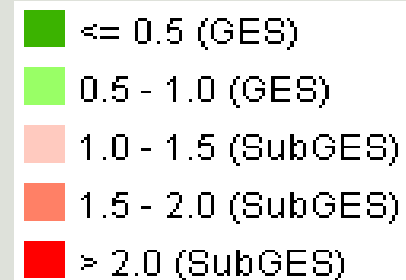
*The overall goal of HELCOM is  
Baltic Sea unaffected by eutrophication*

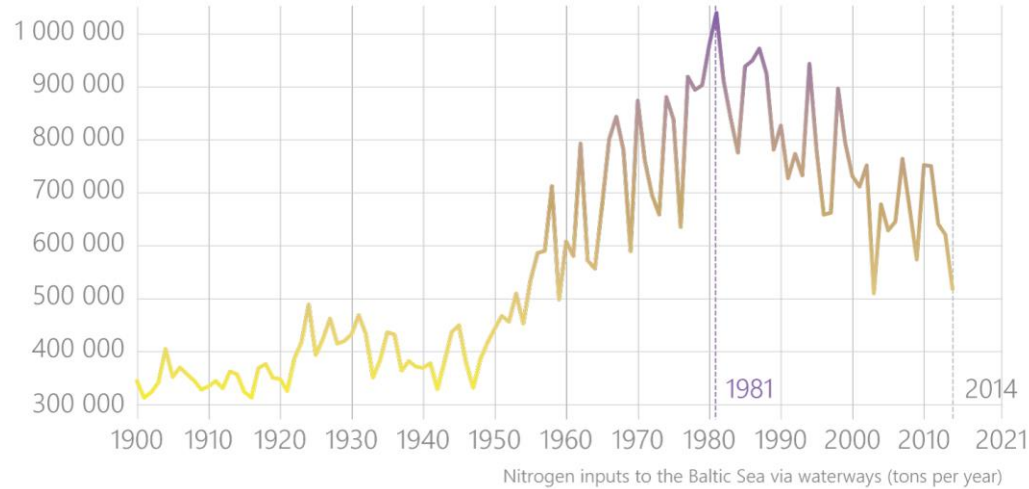


## Ecological objectives

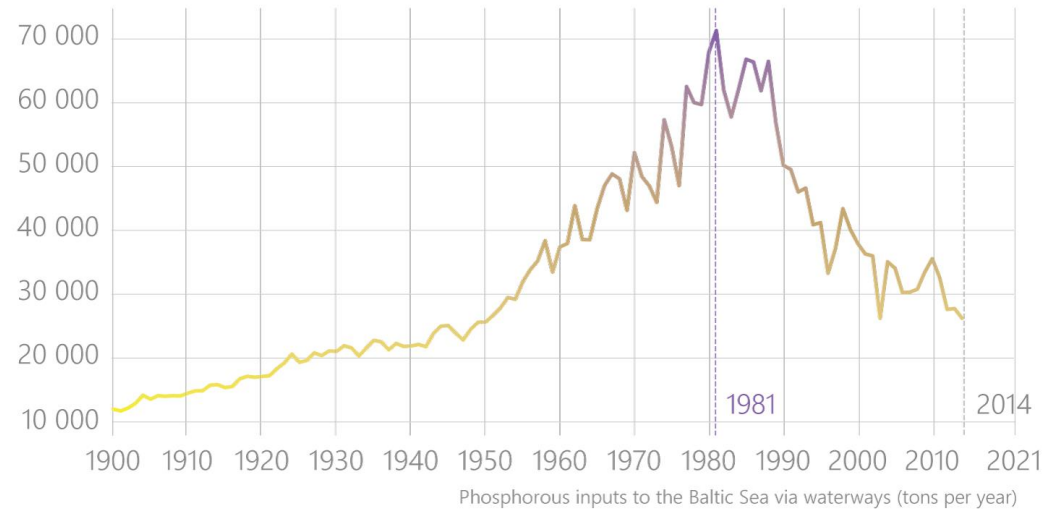
- Concentrations of nutrients close to natural levels,
- Clear water,
- Natural level of algal blooms,
- Natural distribution and occurrence of plants and animals,
- Natural oxygen levels

# Test assessment: Overall eutrophication status 2007-2011



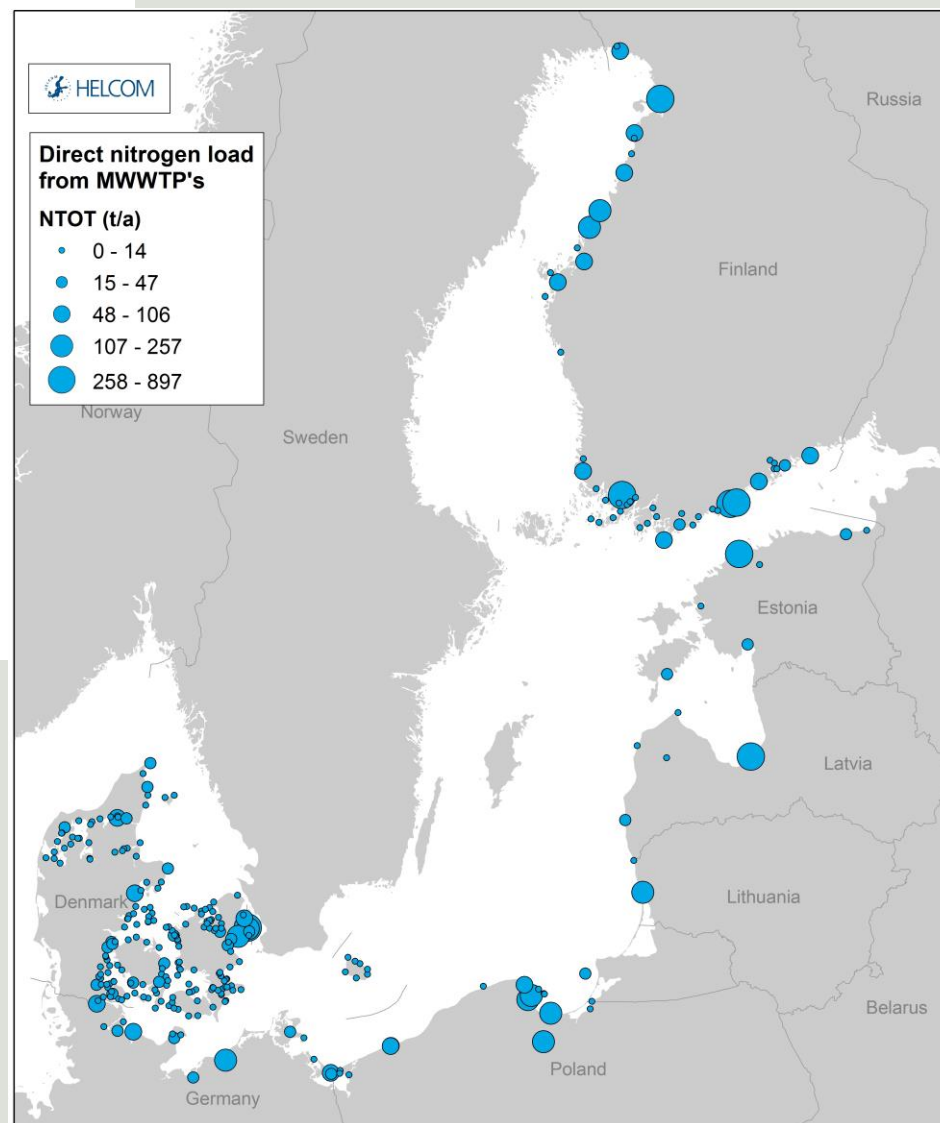
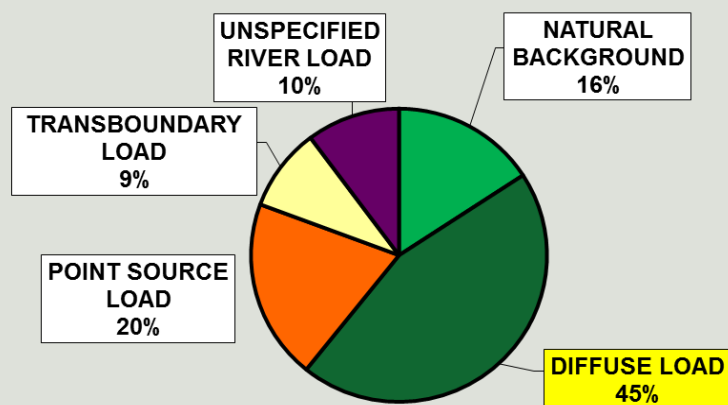
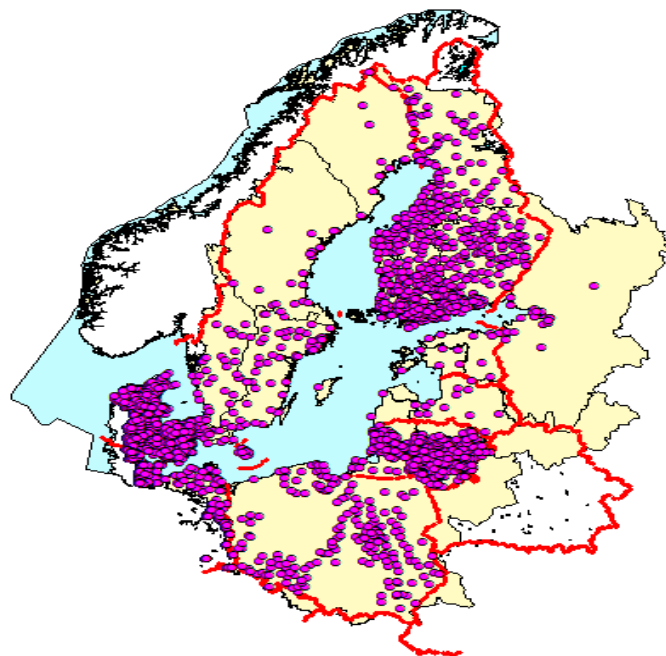


# Long-term trends of nutrient's input into the Baltic Sea 1990-2014





# Sources of nutrients



# Hazardous substances in BSAP

The agreed goal of HELCOM on hazardous substances is a Baltic Sea undisturbed by hazardous substances.

The goal is described by the ecological objectives:

- Concentrations of hazardous substances close to natural levels,
- All fish safe to eat
- Healthy wildlife



The list of substances or substance groups of specific concern to the Baltic Sea was established.



## Hazardous substances prioritised by RECOMMENDATION 31E/1

Substances	Usage	Indicator	Assessment status	Input assessment
1. Dioxins (PCDD), furans (PCDF)	Combustion product	Core indicator	2010, sub GES status	EMEP monitoring
2. Tributyltin compounds (TBT) (TPhT)	Prohibited	Core indicator	2010, variable data	no data
3. Pentabromodiphenyl ether (pentaBDE)	Prohibited	Core indicator	GES exceeded	no data
4. Perfluorooctane (PFOS) (PFOA)	restricted use	Core indicator	2013, shows GES	no data
5. Hexabromocyclododecane (HBCDD)	used	Core indicator	tentative evaluation 2013 show GES	Assessed as 300-700 kg/year
6. Nonylphenols (NP), Nonylphenol ethoxylates (NPE)	restricted use	pre-core indicator	no assessment	no data
7. Octylphenols (OP)	used	pre-core indicator	no assessment	no data,
8a. Short-chain chlorinated paraffins (SCCP, C10-13)	banned or limited	no status	no assessment	no data
8b. Medium-chain chlorinated paraffins (MCCP, C14-17)	used	no status	no assessment	no data
9. Endosulfan	banned	no status	no assessment	no data
10. Mercury	restricted	Core indicator	2011, concentrations close to the targets	EMEP monitoring
11. Cadmium	restricted	Core indicator	2013 show sub-GES for some points	EMEP monitoring

HELCOM Baltic Sea Action Plan – Hazardous Substances

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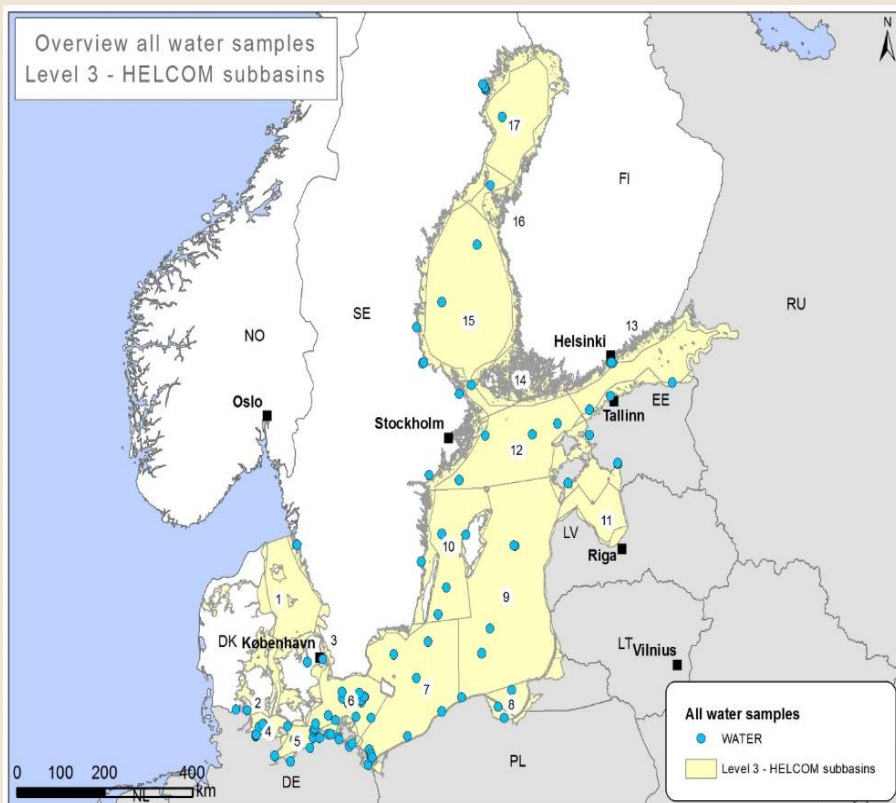
Metal	Industrial	Residential	Service	Stormwater	WWTP
Cadmium	59%	59%	85%	58%	73%
Chromium	5%	6%	8%	0%	0%
Copper	100%	100%	100%	100%	100%
Nickel	77%	76%	85%	75%	82%
Lead	9%	6%	15%	17%	0%
Zinc	100%	100%	100%	100%	100%

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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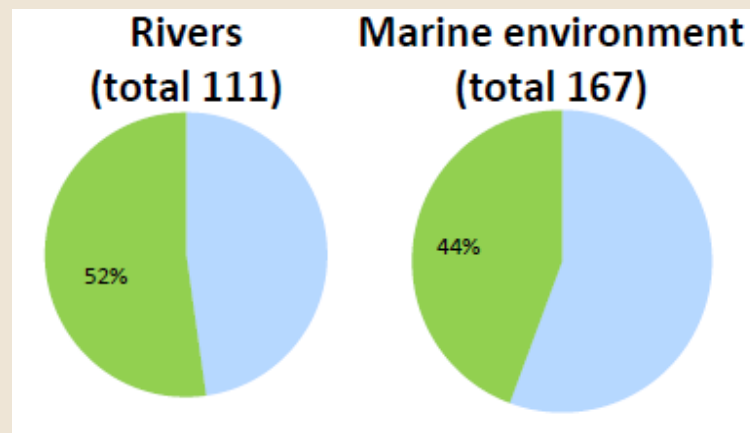
# Contamination of the Sea environment



## The most frequently detected pharmaceuticals:

anti-inflammatory - diclofenac, ibuprofen and paracetamol;  
antimicrobial – Sulfamethoxazole;  
cardiovascular agents - metoprolol, bisoprolol and sotalol;  
central nervous system agents - carbamazepine and primidone.

**4600 measurements reported;**  
**167 pharmaceuticals analysed;**  
**74 detected at least one of the matrices:**  
51 in water, 9 in sediment, 35 in biota samples.





# **Recommendation Regional Action Plan on Marine Litter**

HELCOM 36-2015  
(March 2015)

# Sources of ML in the BS

- Household activities, including sanitary waste, waste collection and transport (48%)
- Coastal-based tourism and recreation (25%)
- Maritime activities (e.g. fishing, shipping, port and maritime industries, recreational boating) (18%)
- Other sources (9%)

## Measures & operational targets

- Addressing land-based sources of ML
- Addressing sea-based sources of ML
- Addressing removal and disposal of existing ML
- Addressing education, outreach & cooperation on ML

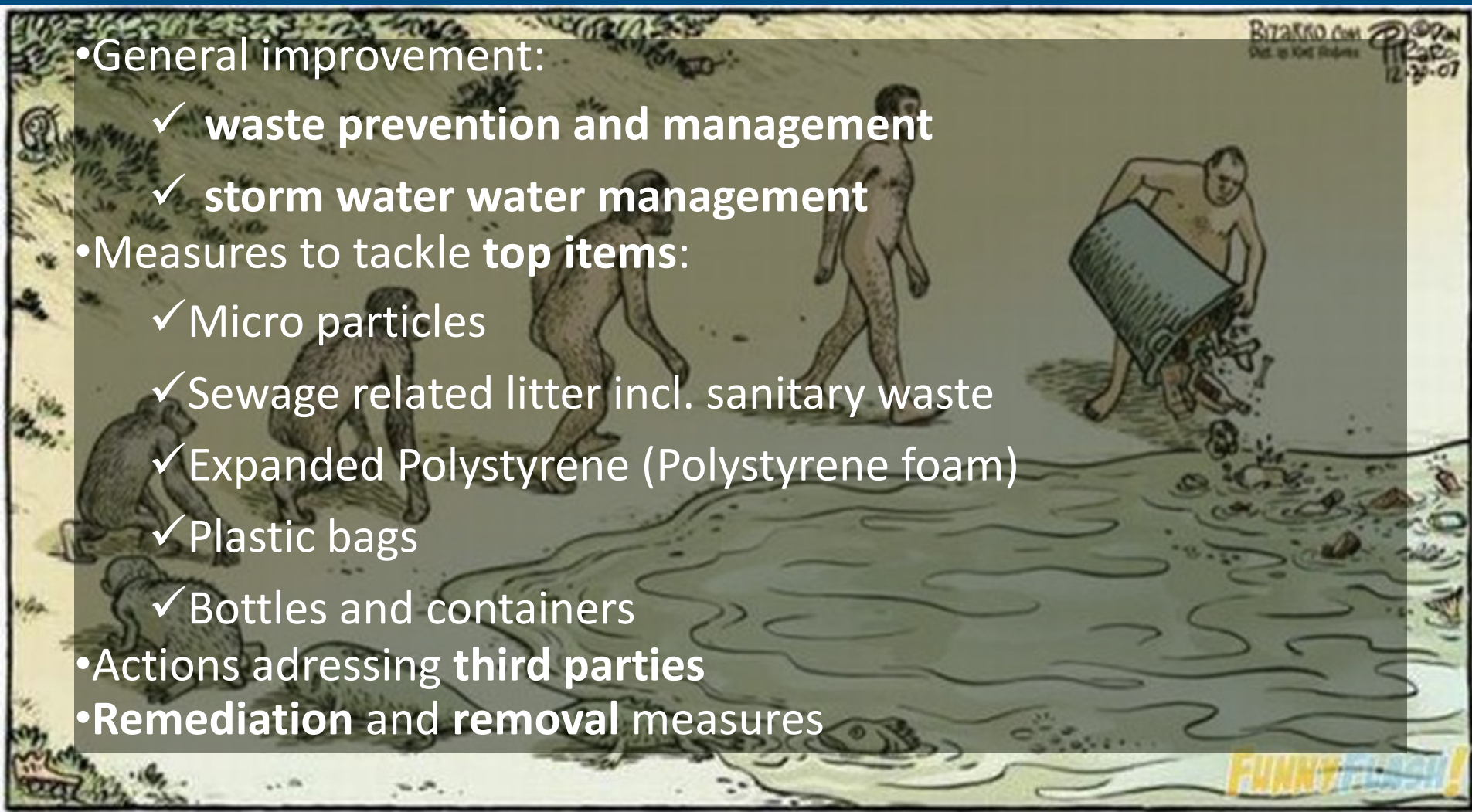
*Probable ML sources in the BS (ARCADIS, 2013)*



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# Regional actions on land-based sources

- General improvement:
  - ✓ waste prevention and management
  - ✓ storm water water management
- Measures to tackle top items:
  - ✓ Micro particles
  - ✓ Sewage related litter incl. sanitary waste
  - ✓ Expanded Polystyrene (Polystyrene foam)
  - ✓ Plastic bags
  - ✓ Bottles and containers
- Actions addressing third parties
- Remediation and removal measures



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# The conclusions of the debates at the HELCOM 38-2017

- Engage municipalities and other local actors more closely to implementing the BSAP commitments;
- Further engage HELCOM observers, including private sector, in practical work and new forms of cooperation;
- Use research and innovative approaches in developing new solutions and techniques to address problems and translate them into policies;
- Engage other regional organisations and use the potential of the existing initiatives within the Baltic Sea region for enhanced cooperation and coordination for strengthened BSAP implementation.



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# *Reduction of inputs of nutrients*

- Advancing of the municipal waste-water treatment plants
- Improvement of waste water treatment for single-family houses and scattered settlements
- Storm-water management
- Restoration of wetlands
- Land planning to minimize nutrients' run off
- Innovative water management – upgrading of drainage
- Recycling of nutrients including promotion of sustainable sewage sludge handling;



# *Prevention of polluting of marine environment*

- Prevention of discharge of industrial waste water to the municipal WWTP
- Advancing of the waste-water treatment processes
- Collection and sustainable treatment of waste-containing hazardous substances (e.g. batteries, accumulators, paints, etc.)
- Promotion of take-back system for non-used pharmaceuticals
- Public procurement procedures minimising the use of products containing priority hazardous substances;



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# *Prevention of littering of marine environment*

- Storm-water management to prevent release of microlitter into marine environment
- Advancing of the WWT technics to prevent release of microlitter into marine environment from households
- General improvement of the waste management preventing littering marine environment
- Cleaning of the coastal areas and collecting litter from surface water
- Maintenance of beaches and other coastal areas used for of public recreation
- Promotion of the adequate waste reception facilities in marinas;



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# *Biodiversity*

- Sustainable management of coastal strip minimising negative impact on the marine ecosystem
- Establishing and maintenance of coastal nature protection areas
- Participation in maritime spatial planning (according to the national legislation)
- Restoration and sustainable use of rivers with migratory species.



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# Contribution to monitoring and reporting

- monitoring and reporting of the effects of measures to reduce nutrient inputs
- screening campaigns to reveal emerging pollutants and their sources and reporting the results to national authorities or projects/initiatives
- monitoring and reporting on the effectiveness of measures to reduce input of hazardous substances from MWWTP
- monitoring of beach litter (for the HELCOM beach litter indicator)
- observations of threatened species and the state of the populations of other species and reporting.



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# *Public-awareness rising*

- Rising the public awareness by various means is one of the key tasks which can be carried out by municipalities.
- Joining to international campaigns such as online actions, international youth camps etc.
- Online information indicating the effect of the undertaken actions e.g. as a web application, online actions etc.



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# Regional initiative

- **The Baltic Sea Challenge.** The initiative of the Mayors of the Finnish cities Turku and Helsinki wanted to do more for improving the state of the Baltic Sea. Now there are about 200 friends of the Baltic Sea committed to the Challenge.
- **The Baltic Sea City Accelerator** is a platform for municipalities and cities to work together to identify cost-effective, smart and innovative solutions to local water- and wastewater-management challenges.
- **Union of the Baltic Cities** Sustainable Cities Commission is the network of around 100 member cities.
- **NonHazCity** is an example of a project-driven initiative involving municipalities from Estonia, Finland, Latvia, Lithuania, Poland, and Sweden committed to contribute into prevention of release of hazardous substances into the Baltic Sea.



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# XIX International Environmental Forum

«Baltic Sea Day»

March 22-23, 2018

St. Petersburg, Russia



## Focus:

- combination of the Forum events with exhibition “Ecology in the Big City”;
- wide involvement of municipalities into the Forum through cooperation with associations, unions and other regional initiatives (e.g. Union of Balti Cities, Baltic Sea Challenge, Race for the Baltic etc);
- integration of educational programmes and promotion of environmental volunteering, including international actions;

The 19<sup>th</sup> Forum will be organized in a few weeks after the HELCOM Ministerial Meeting which will be held in Brussels 6 March 2018.

## Supported by:

- HELCOM;
- Ministry of Environment and Natural Resources of the Russian Federation;
- Government of St. Petersburg.



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THANK YOU