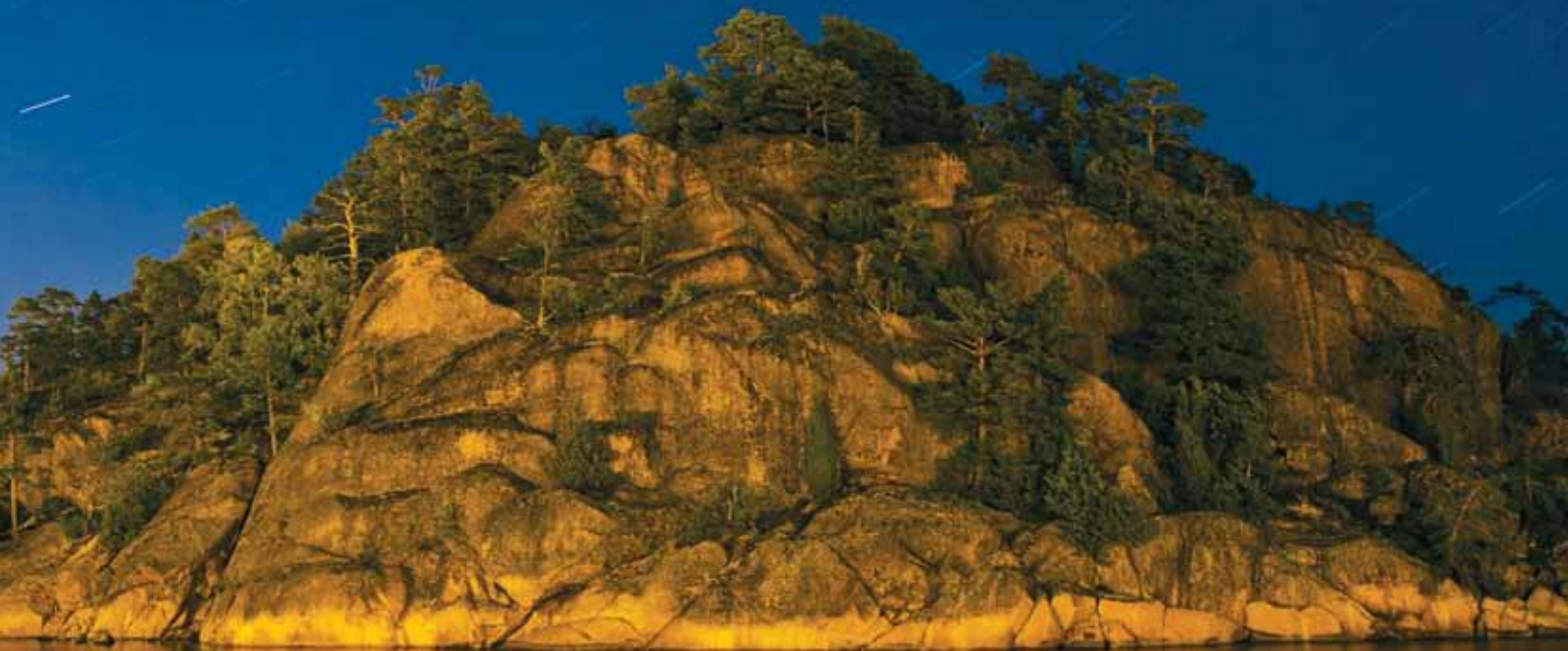




# Activities report

# 2013



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This year, in 2014, it is 40 years since the historical signing of the Helsinki Convention. The graphs selected in this report reflect the four decades of HELCOM work and the many changes since. Due to its natural features, Baltic Sea recovers slowly. Despite the long delay between cause and effect in the marine environment, some positive signs can already be seen.



The imagery in this report is from a project by two professional photographers, LAURI ROTKO and JUKKA RAPO. 'See the Baltic Sea' started four years ago and has so far produced a book as well as an exhibition. "We fixed our eyes not only upon the Baltic but also on ourselves and the relationship between mankind and the sea." Jukka below the surface and Lauri on the shore. "For us, it was important to portray the Baltic Sea as it is: rough, monotonous, polluted and murky. To be honest"





**HELCOM**, the Baltic Marine Environment Protection Commission, is an intergovernmental organisation that works for the protection of the Baltic marine environment based on a regional treaty from 1974 and amended in 1992. HELCOM's members are the nine Baltic coastal nations of Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden as well as the EU.

**THE HELSINKI CONVENTION** obliges the countries to take all appropriate legislative, administrative or other measures to prevent and eliminate pollution of the Baltic and follow HELCOM Recommendations and the Baltic Sea Action Plan, crafted to ensure that a healthy status of the vulnerable marine environment of the Baltic Sea is achieved.

### **WORKING STRUCTURE**

The chairmanship of HELCOM rotates between the Contracting Parties every two years, according to their alphabetical order in English. Denmark currently holds the chair until 30 June 2014 after which Estonia takes over. The working structure of HELCOM, supported by the Secretariat, comprises the Helsinki Commission, the Heads of Delegation, six main groups and three platforms, together with tens of other working and expert groups and projects.

**THE HELCOM BALTIC SEA ACTION PLAN**, central to HELCOM's work, is an all-embracing programme for reaching Good Environmental Status of the Baltic Sea by 2021. The plan provides an integrated and holistic approach to address all major environmental problems affecting the Baltic Sea in four priority areas: eutrophication, hazardous substances, biodiversity and maritime activities.

**HELCOM'S VISION** for the future is 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.

*About one third of the previously agreed actions have been assessed as accomplished.*

# FOREVIEW

## Dear reader

The Ministerial Meeting held on 3 October 2013 in Copenhagen, Denmark, was the conclusion of several years' hard work for protecting the Baltic marine environment. This was the second HELCOM Ministerial Meeting since the inception of the Baltic Sea Action Plan in 2007, and the ripe time to assess the Plan's effectiveness and overall progress towards Good Environmental Status of the Baltic Sea by 2021.

In a nutshell, about one third of the previously agreed actions have been assessed as accomplished. The rest are either in the planning phase, partly achieved, or at varying degrees of implementation in different countries. This was a starting point for the negotiations of the Ministerial outcome, which took several months and culminated on 3 October.

Some of the major questions the Contracting Parties needed to address were: What are our common priorities for new actions? What is HELCOM's role and its possibilities to interact with sectorial policies? Can we ensure sufficient resources to match the ambition level of the commitment?

Eventually, the Ministers and the High-Level Representatives of the Contracting Parties to the Helsinki Convention came to terms and adopted the Declaration along with a number of other deliverables, including new HELCOM Recommendations.

This issue of the HELCOM Activities Report provides an insight into the major topics and outcomes of the negotiation process as well as some other flagship HELCOM activities.

The major achievement is the adoption of the updated figures on Maximum Allowable Inputs of nutrients to the Baltic Sea, and on the sharing of the pollution reduction burden between HELCOM countries. The revised HELCOM nutrient reduction scheme now also includes airborne nitrogen and explicitly extends to sources outside member countries, allowing for more cost-efficient and comprehensive action to fight eutrophication.

*A new promising path is the launch of the Baltic cooperation platform for green shipping and alternative fuels.*

# Word

In the future, HELCOM will focus on adjusting the follow-up system to the new scheme to be able to track the reduction levels more precisely.

According to the most recent information presented to the Ministers, the strategic objective of the Baltic Sea Action Plan to achieve favorable conservation status of biodiversity, has not been reached. In total, 1,753 species and 209 biotopes have been assessed as being under risk of extinction in the Red List reports; 69 Baltic Sea species and 59 biotopes have also found to be under such risk. The efforts made and the work carried out to gather the results by HELCOM experts is unprecedented. Moreover, the knowledge gained during the five-year-long assessment process will make it possible to protect more effectively the biodiversity of the Baltic Sea.

The establishment of the Baltic Sea Nitrogen Oxide Control Area (NECA) under the IMO regime has proven a difficult issue to solve; however, a new promising path is the launch of the Baltic cooperation platform for green shipping and alternative fuels to engage governments, industry and the scientific community into introduce new technologies for less emissions from ships.

The amendment of the Helsinki Convention to extend the legal basis for the coastal countries to act in case of a major pollution on the shore, and the decision to develop a Regional Marine Litter Action Plan by 2015 are other tangible results.

Last but not least, the adopted Monitoring and Assessment Strategy of HELCOM introduces new and overarching thinking into the core activities of HELCOM for more cooperative and cost-efficient environmental monitoring and timely assessments, better serving policy needs.

For HELCOM, equally important as the ambitious contents of the actual Ministerial Declaration is to transform words into action - to ensure that all governments, the HELCOM community and other stakeholders act together and make it happen.

*Monika Stankiewicz*  
Executive Secretary

# HELCOM MINISTERIAL MEETING COPENHAGEN 3 OCTOBER 2013



# Highlights

from Copenhagen

*HELCOM Copenhagen Ministerial Declaration was agreed on by the Ministers and high-level representatives of the Baltic coastal countries and the EU on 3 October 2013.*

*The 2013 Declaration is an extensive package of further actions to implement the HELCOM Baltic Sea Action Plan, first adopted in 2007. Careful assessments on all fronts preceded the 2013 Ministerial Meeting, to ensure that the decisions are based on accurate and relevant information.*

From left: Nuritdin Inamov, Russia; Almantas Petkus, Lithuania; Karl Falkenberg, EU; Fritz Holzwarth, Germany; Ida Auken, Denmark; Edmunds Sprudzš, Latvia; Lena Ek, Sweden; Andrzej Jagusiewicz, Poland; Helle Pilsgaard, HELCOM Chair; Monika Stankiewicz, HELCOM Executive Secretary; and Harry Liiv, Estonia



## New targets for reducing nutrient pollution

The major achievement of the 2013 Ministerial Meeting was the adoption of the new nutrient reduction scheme.

When in excess, nutrients pollute the Baltic Sea and cause the biggest environmental problem of today; this is why HELCOM's work focuses on reducing nutrient inputs, namely phosphorus and nitrogen.

After several years' work, the new, updated targets for reducing nutrient inputs to the Baltic Sea and their country-wise allocations were adopted by the Ministerial Meeting on 3 October 2013. The overarching scheme for combatting eutrophica-

tion in the Baltic Sea obliges each coastal country to fulfil particular targets for reducing nutrient pollution through measures addressing discharges and emissions from land and air. The new scheme thus feeds into changes in regional environmental policies and into sharing the responsibilities. It takes into account the nutrient pollution originating from both HELCOM and non-HELCOM countries, as well as from shipping and sources outside the region.

The revised pollution reduction scheme represents the best available knowledge based on the HELCOM 'TARGREV report'

on eutrophication status targets, a scientific report by the Baltic Nest Institute in Sweden supporting the modelling work as well as producing an updated and improved pollution load (PLC-5.5) dataset.

The Ministerial agreement can be considered a triumph for HELCOM – and the marine environment since sharing the burden of the needed pollution reduction in a fair manner was not an easy issue to negotiate and agree on. The first HELCOM nutrient input reduction scheme was agreed on in 2007 as one of the core elements of HELCOM Baltic Sea Action Plan.

## Sources outside the Baltic are expected to reduce their share

Tonnes per year. Certain shares of the needed pollution reduction have been allocated to other countries in and outside the catchment area of the Baltic Sea, as well as shipping. SOURCE: HELCOM

AIRBORNE NITROGEN FROM NON-CONTRACTING PARTIES	18.720
NITROGEN FROM SHIPPING	6.930
WATERBORNE NITROGEN FROM BELARUS AND UKRAINE	3.230
WATERBORNE PHOSPHORUS FROM BELARUS AND UKRAINE	800



*The following documents were part of the Ministerial Meeting agenda as major HELCOM outcomes, decided on by all Contracting Parties. They will serve for further implementation work.*

## Adopted new HELCOM Recommendations

- 34E/1 "Safeguarding important bird habitats and migration routes in the Baltic Sea from the negative effects of wind and wave energy production at sea"
- 34E/2 "Further testing and developing the concept of pro-active route planning as well as other e-navigation solutions to enhance the safety of navigation and protection of the marine environment in the Baltic Sea Region"
- 34E/3 "Amendments to Annex VII 'Response to Pollution Accidents' of the 1992 Helsinki Convention, concerning response on the shore"
- 34E/4 "Airborne surveillance with remote sensing equipment in the Baltic Sea Area"

## Presented and utilized assessments and reports

- Climate Change in the Baltic Sea Area - HELCOM thematic assessment in 2013
- HELCOM Red List of Baltic Sea biotopes, habitats and biotope complexes
- HELCOM Red List of species in danger of becoming extinct
- Overview of the status of the network of Baltic Sea marine protected areas
- Eutrophication status in the Baltic Sea 2007-2011 - A concise thematic assessment
- Extended summary of the updated Fifth Baltic Sea Pollution Load Compilation (PLC-5.5)
- Summary report on the development of revised Maximum Allowable Inputs (MAI) and updated Country Allocated Reduction Targets (CART) of the Baltic Sea Action Plan
- Overview of implementation of the HELCOM Baltic Sea Action Plan (BSAP)
- Implementing the ecosystem approach - HELCOM regional coordination
- The Baltic Sea between blue growth and green limits - The HELCOM Youth Forum 2012 Proceedings



## Major Ministerial outcomes



### Adopted strategies and guidance

- HELCOM Monitoring and Assessment Strategy
- Regional Baltic Maritime Spatial Planning Roadmap 2013-2020
- HELCOM Response Manual Volume III "Response to Pollution Incidents on the shore"
- Joint HELCOM/OSPAR Guidelines on the granting of exemptions under the International Convention for the Control and Management of Ships' Ballast Water and Sediments, Regulation A-4
- BSHC-HELCOM Revised Baltic Sea Harmonized Hydrographic Re-Survey Scheme
- HELCOM Interim Guidance on technical and operational aspects of delivery of sewage by passenger ships to port reception facilities
- Revised Palette of measures for reducing phosphorus and nitrogen losses from agriculture
- Palette of measures on cost-efficient management options to reduce discharges, emissions, and losses of hazardous substances

### Other documents

Several recent documents further assisted in the creation of the Ministerial Declaration:

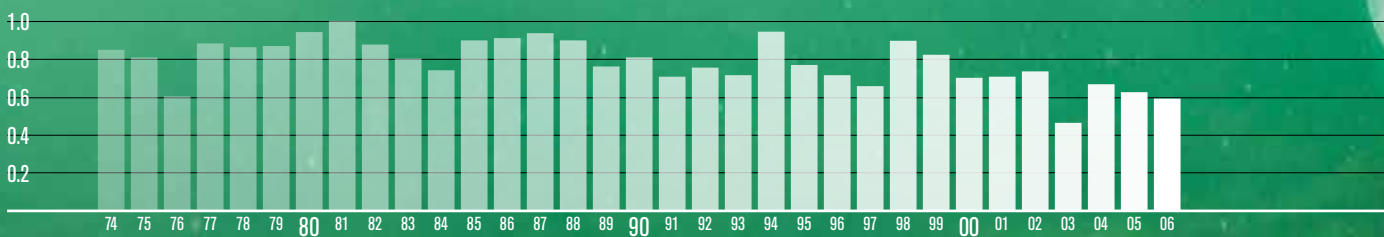
- Baltic Sea Action Plan - Index of Actions on country-wise implementation
- Report on implementation of HELCOM Recommendations within the competence of HELCOM LAND adopted since HELCOM BSAP (2007)
- Status of national management plans for seals
- HELCOM Red List Biotope Information Sheets (BIS)
- HELCOM Red List Species Information Sheets (SIS)
- Progress with the integration of oiled wildlife response into response planning by 2013
- HELCOM core indicators - Final report of HELCOM CORESET project
- HELCOM core set of biodiversity and hazardous substances core indicators
- Approaches and methods for eutrophication target setting in the Baltic Sea region
- Thematic assessment of long-term changes in radioactivity in the Baltic Sea, 2007-2010
- Chemical Munitions Dumped in the Baltic Sea - Report of the ad hoc Expert Group to Update and Review the Existing Information on Dumped Chemical Munitions in the Baltic Sea (HELCOM MUNI)
- Improved flight permits for the HELCOM surveillance aircraft fleet
- BalticSTERN Summary Report – Worth it: Benefits outweigh costs in reducing eutrophication in the Baltic
- Final report on the implementation of the Hot Spots Programme under the Baltic Sea Joint Comprehensive Environmental Action Programme (JCP), 1992-2013
- BASE project report - Report on the status of Russian hot spots (in English and Russian)
- Joint HELCOM-VASAB Maritime Spatial Planning Working Group Report 2010-2013

All documents can be found on the HELCOM web page [www.helcom.fi/helcom-at-work/ministerial-declarations/](http://www.helcom.fi/helcom-at-work/ministerial-declarations/)

# Monitoring and assessment

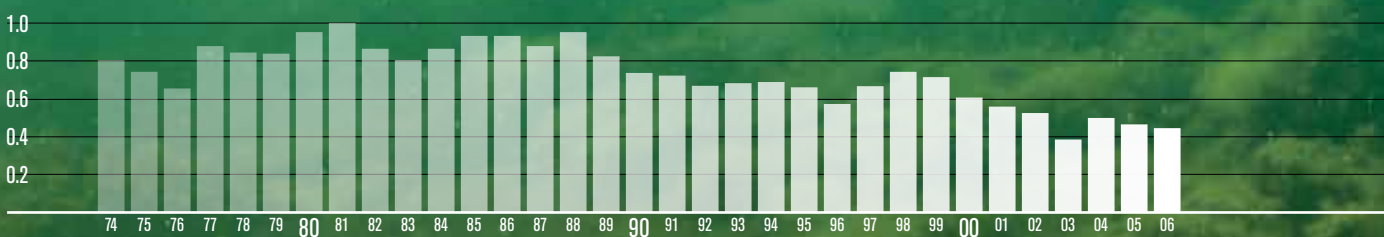
## Nitrogen waterborne load

In tonnes per year. Normalized 1–0 (1 = 1,025,991 tonnes). SOURCE: BALTIC NEST INSTITUTE & HELCOM



## Phosphorus waterborne load

In tonnes per year. Normalised 1–0 (1 = 68,714.11 tonnes). SOURCE: BALTIC NEST INSTITUTE & HELCOM



*The quality assured monitoring and assessment have since long been a well-established function of the Helsinki Convention. They are the basis for making sound decisions on how to restore the Baltic Sea ecosystem.*

## Monitoring and Assessment Strategy revised and ready

### MONAS

Continuously improving the coordinated monitoring of the Baltic Sea is a task which HELCOM has successfully pursued for decades. A major document adopted by the 2013 Ministerial Meeting was the revised HELCOM Monitoring and Assessment Strategy, implying a six-year monitoring and assessment cycle and showing direction to the larger revision process of the HELCOM monitoring and assessment work.

The plan for a new holistic assessment of the Baltic ecosystem health is taking form to follow up the highly popular assessment covering the years 2003–2007. The Ministers agreed last year that such a holistic assessment will be updated by the end of 2016. The report will include information on the state of the marine environment and human derived pressures; an assessment of distance to good environmental status; social and economic considerations of protecting the sea; as well as an update of solutions for how to reach good environmental status.

### MORE PROJECT

Work will continue to develop guidelines for a scientifically sound, well-coordinated and cost-effective joint HELCOM monitoring programme. The programme will provide the necessary data for HELCOM's Baltic-wide indicator-based assessment activities, focusing on the state of the marine environment as well as on human-induced pressures impacting the status.

The MORE Project, in particular, is carrying out work to develop a joint web-based monitoring manual, intended to be updatable online. The manual will provide documentation and presenta-

tions of the regionally coordinated joint monitoring system, including strategic aspects, legal background, description of the full monitoring system and specific monitoring programmes. Furthermore, the manual is intended to document the countries' monitoring activities while offering an opportunity for those Contracting Parties that are also EU member states a cost-efficient approach to reporting according to the needs of the EU Marine Strategy Framework Directive.

### BALSAM PROJECT

A pilot project on testing new concepts for integrated environmental monitoring of the Baltic Sea (BALSAM) kicked off in November 2013 and will bring another important piece to the on-going HELCOM monitoring revision process. A key focus of the EU-funded project is on strengthening the capacity of the Baltic Sea states to develop their monitoring programmes, including the compatibility of data from different monitoring schemes, and ultimately to lift the integrated joint monitoring to a new level regionally.

Other main areas of the BALSAM project consortium, coordinated by the HELCOM Secretariat, involves cross-border coordination and joint activities especially related to the monitoring of biodiversity, i.e. marine mammals, water birds and non-indigenous species in ports and benthic biotopes. Also, a decision support tool will be developed for non-indigenous species monitoring in ports for use under the EU Marine Strategy Framework Directive as well as the IMO Ballast Water Management Convention.

### BALTIC2BLACK PROJECT

The final straight started in exchanging best practices on environmental monitoring between the Baltic and the Black Seas in the EU-funded project Baltic2Black (2011–2013) or "Environmental monitoring of the Black Sea with focus on nutrient pollution". For three years, the project maintained close contact between expert networks in these regions to share knowledge and develop new assessment methods for systematic monitoring of the largely similar marine environments. The Baltic Sea Marine Environment Protection Commission (HELCOM) and the Black Sea Commission were the key organizing forces.

A central contribution from HELCOM experts to the Black Sea experts has been the details of the new nutrient reduction scheme, adopted by the HELCOM Ministers in October 2013, including the calculations of maximum allowable inputs of nutrients and the country-wise reduction targets. Other key items of exchange include the harmonized monitoring of marine eutrophication, e.g. via remote sensing techniques and other new valuable methods; and the benefits and further development of the HELCOM eutrophication assessment tool "HEAT" in the Black Sea context, creating "BEAST", its modified version. The regions have cooperated closely on BEAST to provide harmonized assessments of the eutrophication status in the entire Black Sea.

## Indicator work – At the core of things

### HELCOM CORESET PROJECTS

HELCOM core indicators form the critical set of indicators that will be used to regularly assess the status of the Baltic Sea marine environment against targets that reflect good environmental status; in other words, to measure progress towards a healthy Baltic Sea.

Completing the set of core indicators on ecosystem health was at the heart of the Ministerial Meeting, now that the first core indicator reports have recently been published on the HELCOM website. The 2013 Ministerial Declaration expressed support for the first set of core indicators of environmental status and pressures, and also decided to put more emphasis on both marine litter and underwater noise in

the coming years. Furthermore, a regional action plan for marine litter should be developed by 2015.

The HELCOM core indicators will form the backbone of the coordinated monitoring programme in the Baltic Sea. While HELCOM recently adopted a new monitoring and assessment strategy, it is now revising its coordinated monitoring programme.

The need for a Baltic Sea-wide, coherent assessment of the state of the marine environment triggered HELCOM to launch the specific CORESET (2010–2013) project. In 2013, the first set of 17 core indicators for biodiversity and nine for hazardous substances were agreed on to complement the previously agreed indicators on eutrophication.

The work on developing the biodiversity and hazardous substance indicators continues in CORESET II by meeting further development needs and by operationalizing the completed indicators, which includes agreeing on good environmental status, developing assessment protocols, and setting up long-term data management practices to ensure regular updates of the assessments. A new EUTRO-OPER project, working on a regularly updated high-quality thematic assessment of eutrophication status, will also continue to improve the existing eutrophication status core indicators.

## Coordinating it all

### GEAR GROUP

In 2013, work continued on the Roadmap of HELCOM activities on the ecosystem approach, intended as a planning tool for HELCOM's work and for communicating specific tasks to HELCOM's subsidiary bodies. The on-going process for a new, streamlined HELCOM has had a fertile breeding ground in the reflections within

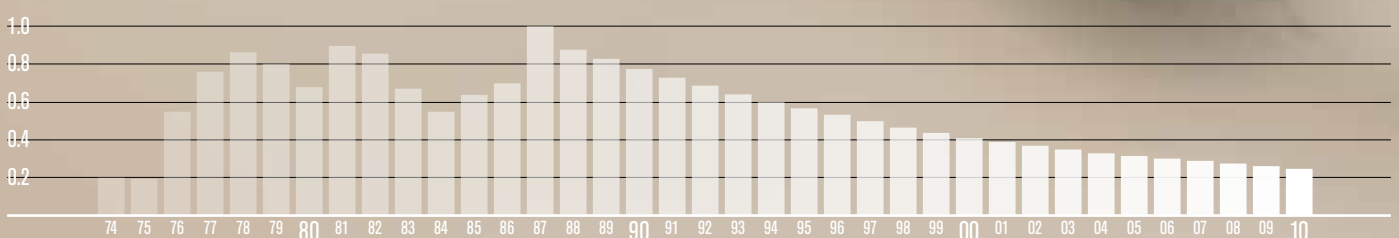
GEAR work. Well-coordinated HELCOM processes and deliverables will ensure that HELCOM continues to create added value and provides support to its Contracting States.

The Group also facilitates regional coordination for the implementation of the EU Marine Strategy Framework Directive, as well as the Maritime Doctrine of the Russian Federation. A key aim of GEAR is to achieve respective and coherent national marine strategies.

## Radioactivity

HELCOM MORS Expert Group released a new assessment in 2013. While radioactive substances occur naturally in the environment there are also man-made radioactive substances in the Baltic Sea, mainly due to nuclear weapon tests in 1950–80 and the Chernobyl nuclear power plant accident in 1986, as well as routine operations of nuclear power plants and research reactors. Normalized 1–0 (1 = 162).

SOURCE: HELCOM, 2013. THEMATIC ASSESSMENT OF LONG-TERM CHANGES IN RADIOACTIVITY IN THE BALTIC SEA, 2007–2010. BSEP NO. 135.



## Tackling the pollution loads

### LOAD EXPERT GROUP

Probably the most important HELCOM achievement of 2013, the Ministers' adoption of the new pollution load reduction targets, has its solid roots in the complex calculations on pollution loads (see more in C. - HELCOM 2013 Copenhagen Ministerial Meeting – summary). Several related projects were guided by the HELCOM LOAD Expert Group.

LOAD is elaborating a core pressure indicator on nutrient inputs and an annual progress report of HELCOM countries towards reaching their respective national targets. HELCOM LOAD is exploring options on how the follow-up system for progress could be set up, taking into account the new allocation principles and the available pollution load data.

### PLUS PROJECT

The development of a HELCOM Pollution Load User System (HELCOM PLUS project) started in 2013. It is a major undertaking to modernize the HELCOM waterborne pollution load compilation (PLC) database and develop a web application to access the data. This will provide a more efficient data system both for reporting and retrieving data derived from pollution discharges into the Baltic Sea. It will also introduce an automatic quality assurance system ensuring more comparable, consistent and validated data.

The work so far has included specification of the revised PLC database model and the finalization of the data model and the Quality Assurance process.

### PLC-6 PROJECT

The Sixth Baltic Sea Pollution Load Compilation project (HELCOM PLC-6) has made much progress in 2013 with the development of the PLC-6 guidelines that assist countries in their pollution load reporting. The project is an implementation of HELCOM Recommendation 26/2 to carry out a pollution load assessment (PLC) every six years that includes the quantification of waterborne point, diffuse and natural sources. The timing of the PLC-6 report will also provide those Contracting Parties that are EU member states with input for 2018 reporting requirements under the EU Marine Strategy Framework Directive.

In 2013, the Project has also successfully completed an intercalibration and intercomparison activity led by Denmark, with the final report published in October. Furthermore, a report on standardized methodology to calculate uncertainties in national datasets was published.

## Warming in the Baltic Sea region is expected to continue

### NEW ASSESSMENT ON CLIMATE CHANGE

The Baltic Sea region is warming faster than the Earth as a whole, states a HELCOM report on climate change from 2013. The report, an important contribution to the 2013 HELCOM Ministerial Meeting, looks into historical and more recent changes in the region's climate and changes that are projected to take place in the future. Climate is an important controlling factor for

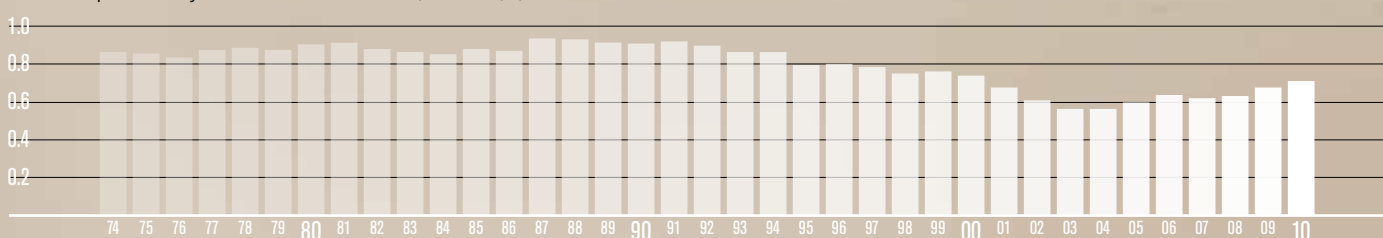
the marine ecosystem. The report examines possible future changes in the Baltic Sea and explains what future climate change may mean for the protection of the sea.

The report is a result of close collaboration between HELCOM and Baltic Earth, the successor programme to BALTEX. It is based on the Second Assessment of Climate Change for the Baltic Sea that is to be released in 2014. The material used for

this assessment has been produced by more than 120 experts from the Baltic Sea region within the framework of BALTEX/Baltic Earth. The proposals for action stem from the work of HELCOM.

## Maximum ice cover

There has been a significant decreasing trend in the annual maximum ice extent of the Baltic Sea, amounting to a decrease of 20% over the past 100 years. Normalized 1–0 (1 = 228,5). SOURCE: HELCOM, 2013. CLIMATE CHANGE IN THE BALTIC SEA AREA: HELCOM THEMATIC ASSESSMENT IN 2013. BSEP NO. 137.



# Agriculture

## Multiplying sustainable resource management

### BALTIC IMPULSE CLUSTER

Baltic Impulse, operational from September 2012 until September 2013, was a cluster of nine environmental projects running under the Baltic Sea Region Programme 2007–2013. The aims of the cluster was to support the implementation of the Baltic Sea Action Plan by ensuring further use of and wider access to project outcomes; to intensify

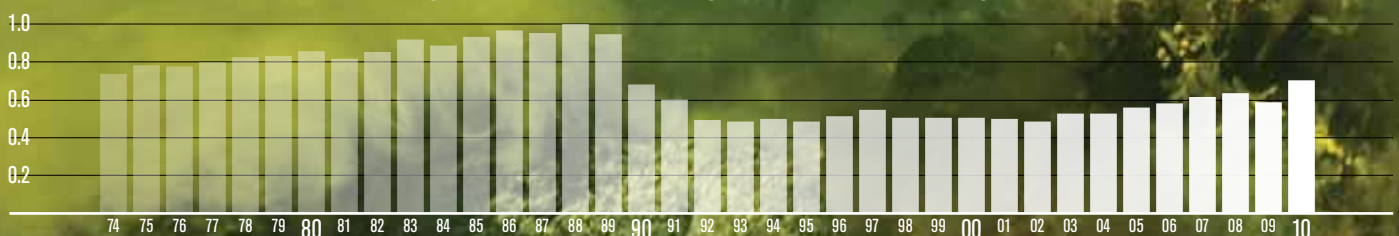
the exchange of experiences and ideas; and to further develop cooperation through cluster partner workshops.

The main cluster outcome is the synthesis report, Sustainable resource management for a healthy Baltic Sea. The recommendations cover the use of waste biomasses for energy production; good farming practices and the involvement of farmers; better man-

agement of wastewater; and improved governance frameworks, among others. The projects involved in the cluster are Baltic Compass, Baltic Deal, Baltic Manure, BERAS Implementation, COHIBA, PURE, PRESTO, SMOCS and Waterpraxis. There were also 15 partners involved and included the Baltic Sea Action Group, the Finnish Environment Institute (SYKE) and HELCOM.

## Nitrogen fertilizers (N total nutrients) consumption in the Baltic catchment

Normalized 1–0. Faostat data (assuming 2002old=2002new) using catchment % in Nehring e.a. 1995. SOURCE: H. BACKER/HELCOM



## Fertilizing fields ecologically in Kaliningrad

### BASE PROJECT

For some time now, HELCOM has been running agriculture-related projects in Russia, aimed at turning manure into fertiliser products. Currently, the efforts are concentrated in the EU-funded project BASE – Implementation of the

Baltic Sea Action Plan. The good results achieved earlier in Leningrad Region are being repeated in Kaliningrad Region by several BASE components. Starting in 2012 and continuing until 2014, the project has been collecting data on manure generation and dis-

posal, compiling a register of manure handling techniques, and preparing guidelines on how to use technological and environmental criteria in investment projects for large animal farms.

## Main actions concerning agriculture

### AGRI/ENV FORUM; LAND GROUP

Agriculture, a crucial sector for the success of reaching good environmental status of the Baltic, was a key focus area in the HELCOM 2013 Ministerial Meeting. To facilitate sustainable agricultural production through efficient use of resources, the Meeting agreed on measures that include annual nutrient accounting at farm level by 2018. Moreover, targeted and cost-effective manure handling actions, e.g. steps towards utilising manure nutrient content by 2016/2018, are also a part of the 2013 Ministerial Declaration.

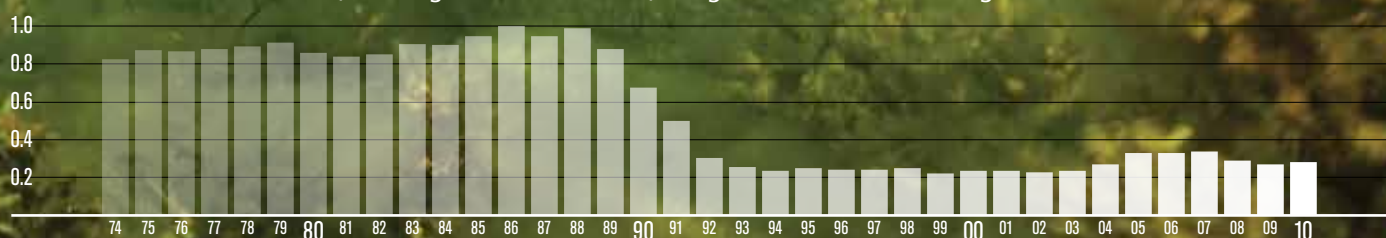
Furthermore, the positive examples of cost-efficient implementation of the HELCOM Palette of measures for reducing phosphorus and nitrogen losses from agriculture in many HELCOM countries continue to show the way towards sustainable agriculture.

Actions concerning agriculture have long been on HELCOM's agenda and stipulated in the HELCOM Baltic Sea Action Plan, such as major reductions of nutrient inputs from farming as well as measures to curtail phosphorus and nitrogen losses. The regular activities of the HELCOM Land Group since

2000 ensure the follow-up of these and other land-based pollution issues in a regional context. Within three years since its establishment in 2010, through Agriculture and Environment Forum (Agri/Env Forum), HELCOM has enhanced the dialogue between agricultural and environmental authorities on the development and application of sustainable agricultural practices with the least environmental impact on the Baltic Sea.

## Total phosphate fertilizers consumption in the Baltic catchment

Normalized 1–0. Faostat data (assuming 2002old=2002new) using catchment % in Nehring e.a. 1995. SOURCE: H. BACKER/HELCOM



# Fisheries

## Improving knowledge on coastal fish

### FISH-PRO II

Coastal fish communities are important components of the Baltic Sea ecosystems; moreover, many species of coastal fish are also of a high socio-economic value for coastal societies, small

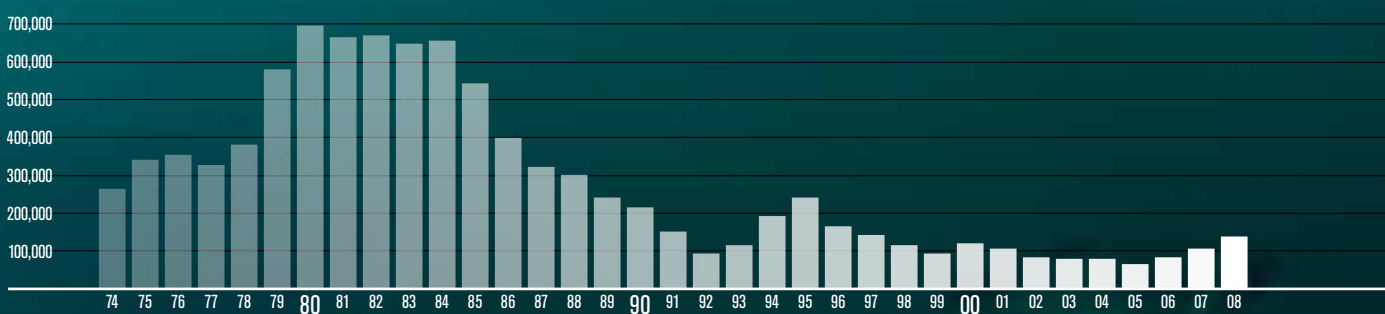
scale coastal fisheries and recreational fishing. The FISH-PRO II Project continues to update and improve knowledge on coastal fish based on all relevant data; to further develop monitoring methodologies for coastal fish; and to

compile indicators with targets and reference values as a basis for thematic assessments of coastal fish communities.

## Eastern Baltic cod

In Spawning Stock Biomass (SSB) tonnes. Many factors influence the cod population, including environmental conditions and fishing pressure. For making cod fisheries sustainable in the Baltic, Maximum Sustainable Yield levels should not be exceeded.

SOURCE ICES





*HELCOM works to ensure that the fish populations are less affected by human pressures.*

## Restoring lost biodiversity: Protecting the Baltic sturgeon

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### **STURGEON PROJECT**

The Baltic Sea Action Plan calls for enhancing the restoration of lost biodiversity by reintroducing the Baltic sturgeon to its potential spawning rivers in certain areas. The 2013 Copenhagen Ministerial Declaration supports the measures to protect the Baltic sturgeon, as well as raising public aware-

ness concerning the reintroduction of sturgeon among fishermen, other relevant stakeholders and the public.

The HELCOM Project Group on Baltic sturgeon remediation was launched in 2013 in collaboration with the Priority Area Bio of the EU Strategy for the Baltic Sea Region and with financial support from the Seed Money Facility

of the Strategy. As its main objectives, the project aims to reintroduce sturgeon to rivers in Poland, Kaliningrad, Lithuania, Latvia and Estonia; establish self-sustaining populations in the Odra and Vistula river basins; and develop long-term management plans, among others.

## Balancing nature protection and fisheries management

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### **BALTFIMPA PROJECT**

One aspect in HELCOM fisheries work is to improve fishing practices and equipment in order to minimise by-catches and avoid damage to sensitive habitats. Since all the Baltic coastal states have agreed on certain conservation goals of Marine Protected Areas in the Baltic Sea, the main objective of the BALTFIMPA Project has been to identify measures to address fisheries practices which have a negative impact on such conservation targets. Furthermore, the project has looked into possible harmful impacts on threatened or declining species and habitats, and for prospects

to initiate new measures.

The main output of BALTFIMPA in 2013, a Flagship project under Priority Area BIO in the EU Strategy for the Baltic Sea region, was the release of a preliminary version of the HELCOM generic decision-support tool, focusing entirely on the interactions of fisheries and conservation areas. These are a part of a much broader picture where other anthropogenic impacts, such as pollution or eutrophication, can have a major role in determining the ultimate conservation status. In its present state, the tool is not meant to give a comprehensive account of other pressures or a

perspective view where all impacts are evaluated and scaled accordingly.

The generic tool was developed by HELCOM's national experts with technical assistance from the Danish Institute of Aquatic Resources (DTU Aqua) and in cooperation with industry representatives and the International Council for the Exploration of the Sea (ICES).

The Baltic Sea already has a solid network of marine protected areas that covers 12% of its area; within these areas, however, fishing activities are only marginally regulated and further work remains essential.

## Environmental and fisheries authorities sharing the table

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### **FISH/ENV FORUM**

For over six years, the dedicated Fisheries and Environment Forum has provided a platform for discussion between the fisheries and environmental authorities, building on the long HELCOM tradition to promote sustainable fisheries management according to scientific advice and the precautionary principle. The forum supports a cross-

sectorial integration of environmental and fisheries policies. Within HELCOM, by adopting the Baltic Sea Action Plan, the Baltic Sea states recommended that fisheries management should be based on the ecosystem approach; to this end, a set of actions has been approved.

The Fish/Env Forum prepared several issues that were well noted in the 2013 Ministerial Declaration, such as recom-

mendations for riverine and estuarine management and conservation measures for migratory species; evaluation of the impacts of recreational fisheries on the marine environment; the facilitation of data sharing on fisheries activities such as for maritime spatial planning; and the development of sustainable aquaculture in the Baltic Sea region.

## Improving measures on waste handling

### **PHOSPHOGYPSUM WASTE HANDLING SITES**

Addressing environmental risks from phosphate fertiliser production and phosphogypsum waste handling sites remained on HELCOM's agenda in 2013. To prevent the

fertiliser industry from generating excessive pollution, regular monitoring in the vicinity of respective industrial sites and the phosphogypsum piles has continued. Additional clarifications for some sites' details were requested and received. In the summer

months, cooperation between Ministers from Finland and Poland was publicised on the joint sampling and assessment of the situation near the Wislinka phosphogypsum site in Gdansk, Poland.

## Dumped chemical munitions still pose a risk

### **HELCOM MUNI**

An Ad hoc Expert Group to update and review the existing information on dumped chemical munitions in the Baltic Sea (HELCOM MUNI)

A HELCOM report from 2013 on chemical munitions dumped in the Baltic Sea, compiled by a group of experts from all HELCOM countries, presents the latest available knowledge on dumping activities of the past, the state of these materials, and the potential threat to the marine environment and humans. The possibility

of people encountering chemical warfare materials while working in the marine environment of the south-western Baltic Sea still cannot be ruled out – hence the need for information prevails.

The report, prepared by an ad hoc HELCOM Expert Group to update and review the existing information on dumped chemical munitions in the Baltic Sea (HELCOM MUNI), is an update of the 1994/1995 report. The new report re-adjusts formally drawn conclusions and recommendations in order to adequately reflect the current

state of knowledge.

With increasing utilisation of the sea-floor for economic purposes, the risk of encountering various underwater objects is growing. Risks of unintentional catches of chemical warfare materials are still present for the crews of fishing vessels operating in the vicinity of dumping areas; moreover, in certain areas of concern in the southern Baltic Sea beach, visitors are at risk of getting burns from coming into contact with white phosphorus.

## Easing off the impact of pharmaceuticals

### **BASE PROJECT**

The Ministerial Declaration of 2013 addressed pharmaceuticals as an increasing threat to the Baltic environment, and stated that preventative measures to minimise their impact must be developed.

Under the BASE Project, one concrete activity is identifying sources, substance flows and the release patterns of pharmaceuticals in wastewater treatment plants in St. Petersburg. The component is carried out in cooperation with the State Unitary

Enterprise Vodokanal. The efforts have evoked much interest and the experts have been involved in the activities related to the Priority Area HAZARD of the EU Strategy for the Baltic Sea Region: Reduce the use and impact of hazardous substances.

## Guidance for industries and authorities

### **PALETTE OF MEASURES ON HAZARDOUS SUBSTANCES**

A palette of measures on hazardous substances was adopted by the Ministers in October 2013. The palette is a

management guide for national authorities and industries in the Baltic region, providing information on the Hazardous Substances component of the HELCOM Baltic Sea Action Plan. The palette contains

both source-reduction and end-of-pipe solutions, represented by technical, managerial and legislative measures.

# Indus

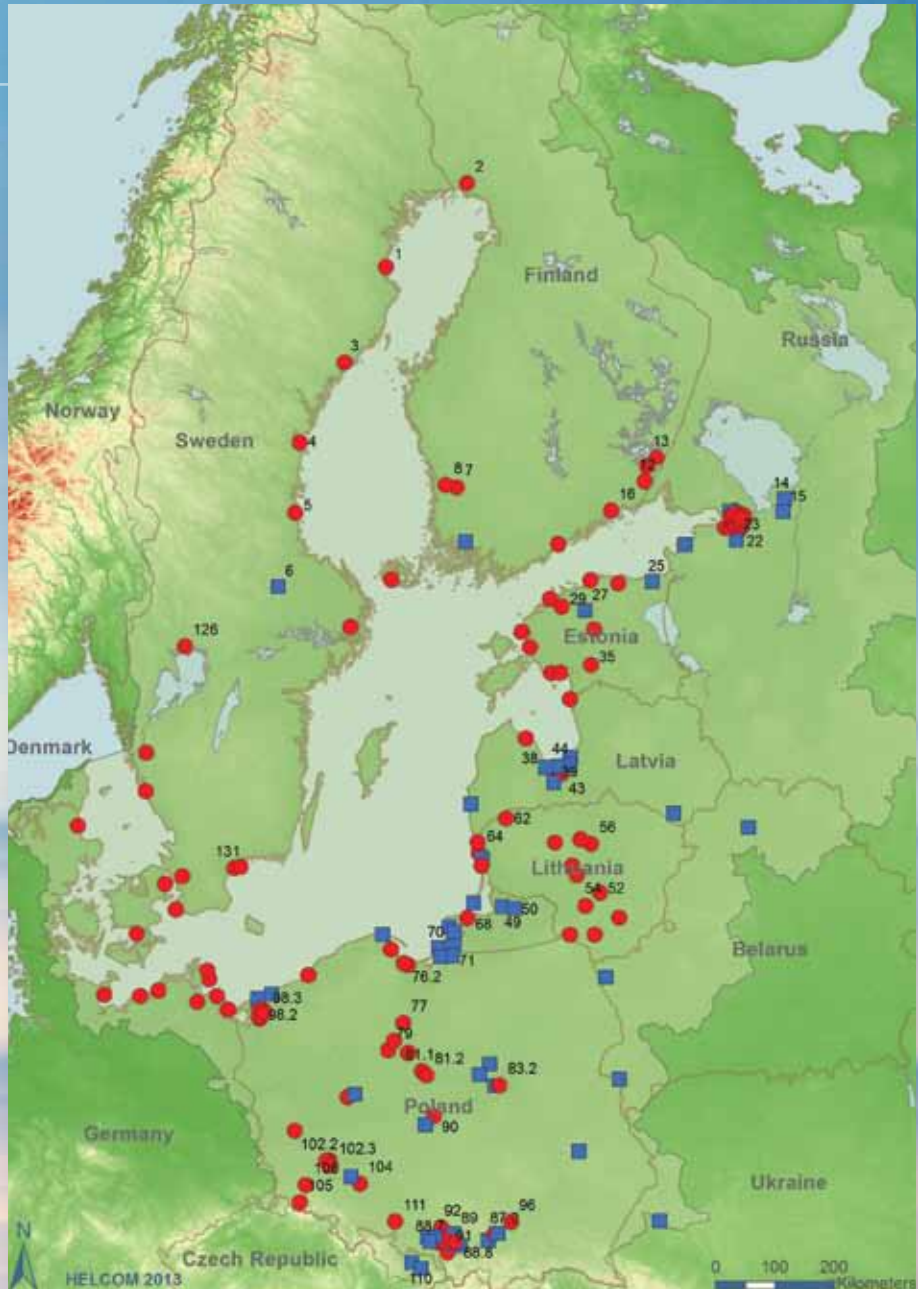
# Final straight for tackling Hot Spots

## HOT SPOTS

For two decades, the HELCOM Baltic Sea Joint Comprehensive Environmental Programme (JCP) has been a key tool in mitigating the most polluted sites (Hot Spots) in the Baltic Sea. About 160 Hot Spots have been listed and a series of actions to remediate them have been undertaken. A comprehensive report on the implementation of the JCP programme 1992–2013 was released last year. An inventory of the status of hot spots in Russia, prepared within HELCOM BASE project, was also released in 2013.

The inventory report analysed the status of twelve Russian hot spots. The report was based on a questionnaire sent to the authorities of the City of St. Petersburg and Kaliningrad and Leningrad Regions as well as to the representatives of enterprises and organizations included on the hot spot list. While the report proposes the exclusion of some of the hot spots from the list, it mainly serves as a tool for authorities and owners of the enterprises to continue remediation work.

Outside of the inventory, the BASE project has significantly improved the capacity of the Kaliningrad Port Oil Terminal by assessing the contamination of the site and pollutants leaching from the site to the Baltic Sea. The project has recommended measures for the remediation of the site and evaluated further steps needed in order to fulfill the criteria for deletion from the HELCOM Hot Spot list.



## HOT SPOTS

JUNE 2013, TOTAL 162 ● DELETED 110 ● ACTIVE 52

# trial releases

## Establishing protected zone in Curonian spit

### **BASE PROJECT**

On the Curonian spit between Kaliningrad and Lithuania, the ecological coherence of the Baltic Sea Protected Areas network would improve by including the adjacent water areas within the boundaries of the

Russian part of the Curonian Spit National Park.

Due to the strict classification of different types of protected areas in the Russian legislation, the BASE project has facilitated a discussion between relevant stakeholders in

Kaliningrad to determine the correct legal status of the intended protected area. As a conclusion, the project aims to support the establishment of a protected zone adjacent to the Curonian Spit National Park.

# Marine protected areas

## Data on HELCOM marine protected areas

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### **PROTECT PROJECT**

The PROTECT project started in April 2013 with the main purpose of collecting and publishing current data on the Baltic Sea Protected Areas (BSPAs) network. As a supporting document of the 2013 Ministerial Declaration, an overview of the status of the network of Baltic Sea marine protected areas was released in the same year. The overview report is based on the updated data on the BSPAs, and assesses whether targets set by HELCOM, the EU and the UN have been reached. While in the past ten years good progress has been made in enlarging the network of protected areas – between 2004 and 2013 the protected marine area has increased from 3.9% to 11.7% – there are still issues lagging behind such as the inclusion of off-shore areas and the contents of management plans.

In addition, PROTECT has assisted with the renewal of HELCOM Recommendation 15/5 on the HELCOM network of coastal and marine Baltic Sea protected areas. Also, the work aims to modernise HELCOM's protected areas data management capacity and to prepare an analysis of the ecological coherence of the network.

A map of the Baltic Sea region, including parts of Sweden, Finland, Estonia, Latvia, Lithuania, and Poland. The map highlights various marine protected areas (BSPAs) in red, showing a significant increase in the number and size of these areas over time. The background is a light blue gradient representing the sea.

*Protected areas are essential for ensuring versatile ecosystems and healthy biodiversity.*



# Maritime

*Planning is the art of thinking ahead  
– how can we do this for an entire sea area?*

*HELCOM, with VASAB, has for many years been in  
the forefront of maritime spatial planning of the Baltic Sea.*

## Maritime Spatial Planning Roadmap adopted in 2013

### **HELCOM-VASAB MSP WORKING GROUP**

A blueprint is now available on ecosystem-based Maritime Spatial Planning (MSP) and the important linkages created between MSP and policy goals, such as in the HELCOM Baltic Sea Action Plan adopted by the HELCOM Ministerial Meeting, to

achieve good environmental status of the marine waters.

Many of the countries are in the process of developing new plans for either the territorial waters or the Exclusive Economic Zone, or both. Guided by the principles adopted in 2010 and the roadmap of 2013, HELCOM and Visions and Strategies

for the Baltic Sea (VASAB) are working together to ensure a regional and ecosystem-based dimension to optimally plan the future of the Baltic Sea. The MSP Roadmap is planned to be forwarded for adoption also by the VASAB Ministerial Conference in September 2014.



# time spatial planning

## HELCOM co-leading MSP in EU Strategy for the Baltic Sea region

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### **EU SBSR HORIZONTAL ACTION**

Together with VASAB, HELCOM is co-leading the Horizontal Action (HA) 'Spatial Planning' of the EU Strategy for the Baltic Sea region (EUSBSR). In

2013, HA Spatial Planning supported selected project consortia on maritime spatial planning (MSP) that applied for project development money from the EUSBSR seed money facility. One of the

project preforms is "BALTWISSE Seed" led by SYKE, Finland, planning for a larger regional MSP project involving partners from the Russian Federation as well as Baltic EU countries.

## Design awards for HELCOM project

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### **PLAN BOTHNIA**

During 2013, the MSP book 'Planning the Bothnian Sea' (Plan Bothnia 2013) was released electronically as well as in Vietnamese, translated by the Development Strategy Institute (DSI), under the

Ministry of Planning and Investment of Vietnam.

The information design of the book has won three major awards: in the renowned international design competition Design & Art Direction (D&AD);

in the Best of Finnish Advertising and Design competition ('Vuoden huiput'); and in the Antalis Finland awards. The book was the final outcome of the Plan Bothnia pilot initiative.

## Easier access to vast HELCOM GIS archives

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### **GEODATA**

Planning at sea requires comprehensive geographic (GIS) data and expertise. HELCOM is now working to make its vast and free GIS archives - currently scattered in different parts of the HELCOM GIS - more easily accessible

and tailored to regional maritime spatial planning (MSP) users through a dedicated MSP GIS Service, with some technical assistance from the EU Strategy for the Baltic Sea Region. The current work is based on forty years' experience from regional

exchanges of both environmental and maritime data, dedicated GIS staff at the HELCOM Secretariat, and licences to the required industry standard software.

## International oil spill response exercise off Rostock completed successfully

### **BALEX DELTA**

On 13 June 2013, twenty-three oil response ships from Denmark, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden were involved in responding to a simulated major oil spill under the direction of the Central Command for Maritime Emergencies (CCME), Germany. The HELCOM BALEX DELTA exercise took place off the coast of Mecklenburg-Vorpommern in calm weather, assisted by two airplanes and a helicopter.

A spill of over 50 m<sup>3</sup> in size (considered major) was simulated to good effect by 70 m<sup>3</sup> of floating popcorn, the movements of which were also monitored by the surveillance aircrafts.

Since the 1970s, HELCOM has enabled immediate assistance from the neighbouring countries in case of a large-scale oil spill in the Baltic Sea, made possible by the Helsinki Convention covering legal and financial arrangements as well as practical procedures. All the Baltic coastal states have committed to maintaining this cooperation both through expert working groups and the annual HELCOM BALEX DELTA response exercises.



# Response

## Strengthening international shoreline response

### **HELCOM RECOMMENDATION 34E/3**

In order to strengthen international pollution response cooperation in situations where oil or other substances have reached the shore, the 2013 Ministerial Meeting agreed on amendments to the Helsinki Convention to more explicitly include such onshore responses along-

side offshore and coastal operations. In contrast to the established framework on response cooperation at sea, in place since the original 1970s adoption of the Helsinki Convention, onshore response has so far largely been a national matter. In addition to the new amendments (Recommendation 34E/3), a related manual was likewise

adopted by the Ministers. HELCOM Response Manual Volume III defines a common approach on how to plan and carry out international combating operations for onshore response in the Baltic Sea region.

## Decreasing trend continues in detected spills

### **ANNUAL REPORT ON ILLEGAL DISCHARGES**

The latest jointly approved compilation of illegal pollution covers the data from 2012, regularly observed by HELCOM aerial surveillance since 1988.

In 2012, the Member States of HELCOM reported a total of 139 illegal

discharges from ships observed by national surveillance planes in the Baltic Sea area during 5,090 flight hours. The trend in the number and size of detected oil spills has steadily decreased. However, a small increase in the number of spills can be seen from 2011 when the number was the lowest recorded

to date (122 spills). Of the 139 spills recorded in 2012, 115 were smaller than 100 litres and no spill was estimated to be larger than 3.3 m<sup>3</sup>, meaning that the total estimated volume of the spills in 2012 is the lowest recorded so far.



## New HELCOM Recommendation on aerial surveillance

### HELCOM RECOMMENDATION 34E/3

Environmental offenders in the Baltic Sea area are more likely to get caught after the new HELCOM Recommendation (34E/4) on aerial surveillance adopted by the 2013 Ministerial Meeting will be enforced. Compared to the previous HELCOM surveillance Recommendations, the document, negotiated and agreed on by all the coastal coun-

tries of the Baltic Sea, enables more flexible border crossings of surveillance aircraft listed in the operational HELCOM manual for pollution response (Response Manual).

The possibility to cross the limits of national airspace enables the gathering of evidence of environmental crimes or even catch offenders red handed

from sea areas beyond the borders of the home state of the aircraft. Until recently, the right for such a border crossing had to be applied for in advance, thus making rapid operations in neighbouring countries more challenging.

# e to spills

## Surveillance flights for oil spills

### SUPERCEPCO

HELCOM Coordinated Extended Pollution Control Operations (CEPCOs) enable a realistic estimation of the total number of oil spills discharged into the Baltic Sea during a randomly selected period. Typically, two CEPCOs are arranged annually by HELCOM in the Baltic Sea: one in the south and one in the north. Dur-

ing the CEPCO flights, several HELCOM countries jointly carry out continuous aerial surveillance activities for 24 hours or more along predetermined routes in areas where operational spills are likely. CEPCO flights also support national aerial surveillance data by detecting illegal discharges that would not otherwise be disclosed by routine activities.

Every second year, a SuperCEPCO operation is conducted, during which the selected area is surveyed for a longer period of time – in 2013, the operation lasted for 74 hours.

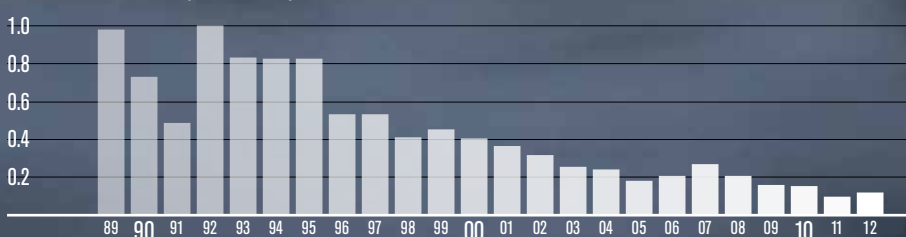
HELCOM's regular aerial surveillance operation this time was organized by the Central Command for Maritime Emergencies in Germany from the NATO airbase in Nordholz. The detected five spills included two minor mineral oil spills, one spill of fish oil and two spills of palm oil. The operation involved six surveillance aircraft from Denmark, Estonia, Finland, Germany, Netherlands and Sweden, as well as several patrol vessels which assisted out at sea.

Cooperation on aerial surveillance within the Baltic Sea area has been established within the framework of the Helsinki Convention and coordinated by the HELCOM Informal Working Group on Aerial Surveillance (IWGAS).

## Oil pollution as observed from aircraft

Adjusted for increased surveillance (pollution per flight hour).

Normalized 1–0 (1 = 0.223). SOURCE: HELCOM



# Species &

## Five years of red listing species, habitats and biotopes completed

### HELCOM RED LIST

The outcome of the five-year-long HELCOM project on red listing species, habitats and biotopes was finalised and released in time for the Ministerial Meeting. The RED LIST outcomes served the Ministers to agree to take measures so that by 2020, regionally, the loss of all red listed marine habitats and biotopes in the Baltic Sea will be halted and will have largely recovered. Another commitment is to develop a new HELCOM Recommendation by 2015 on conservation plans for species, habitats and biotopes that are at risk of extinction.

### ALMOST FOUR PER CENT OF BALTIC SEA SPECIES IS THREATENED BY REGIONAL EXTINCTION

In the first ever data-driven Red List assessment by HELCOM, the most important release of 2013, a total of 2,794 species were considered and an assessment according to the IUCN Red List criteria was carried out for 63% of them. The species that were considered can be seen with the naked eye and include well-known large predators such as grey seals, and less familiar small plants such as the foxtail stonewort. Some of the more cryptic species are rarely recorded in regular monitoring and sampling activities - the most common reason for not assessing a species was the lack of data.

There are numerous threats that are acting on the species. Eutrophication is a large-scale phenomenon affecting the whole Baltic Sea area except for its northernmost parts and it is also the most commonly mentioned threat factor for threatened species. The main adverse effects of eutrophication on species are the worsened underwater light conditions, hypoxia and the overall reduction in water and habitat quality. By-catch of fisheries is a

threat often mentioned by experts for red-listed sea birds, fish and mammal species. Both commercial fisheries as well as recreational fishermen unintentionally trap and kill animals when using for instance gill nets, thus posing a threat to red-listed species. By-catch is currently poorly monitored in the Baltic Sea and thus its magnitude and impact are insufficiently understood.

The changes in the use of coastal areas affect species composition and can result in certain species becoming threatened. Cattle grazing has previously kept coastal areas open revitalising certain sensitive plant species; however, these species are now tending towards the threat of extinction due to the decline of grazing. Newcomers, such as the invasive mink, are also a risk to native species.

### UNDERWATER BIOTOPES, HABITATS AND BIOTOPE COMPLEXES LISTED

The other major part of Red List project was also completed and published in 2013. Eutrophication, fishing and construction are the top three pressures pushing underwater biotopes in the Baltic Sea towards collapse. Out of the assessed biotopes, 59 (28%) were red-listed – they have either declined or are predicted to decline in extent or quality to such a high degree that they are threatened by collapse. However, not all of these 59 biotopes are imminently at risk to fail.

Only one biotope characterised by deep muddy bottoms and communities dominated by the ocean quahog clam (*Arctica islandica*) was categorised in the highest threat category. This biotope is seen to be in threat of disappearing completely from the Baltic Sea in the coming 50 years mainly due to the depletion of oxygen in deep areas and a lower salinity level due to fewer saltwater inflows.

The threat of collapse for the biotopes has been assessed based on common criteria. The International Union for Conservation of Nature (IUCN) has developed a first set of criteria for assessing ecosystems. In the HELCOM Red List project, these criteria were adapted to assessing underwater biotopes in Baltic Sea conditions.

Biotopes and habitats are not monitored regularly in the Baltic Sea. Red List criteria assess changes over time. As very little information is available, especially on historical changes, this Red List is an assessment based on harmonised criteria with a medium to low confidence. The next HELCOM Red List of biotopes is expected in 2019, by which time more information is expected from currently on-going mapping projects. It will be interesting to see if any biotopes will be assessed to have an improved threat category by then.

### HELCOM HUB

In total, 328 underwater biotopes and habitats and ten biotope complexes have been defined and organised in the new HELCOM Underwater Biotope and habitat classification system (HELCOM HUB). The classification system identifies well-known biotopes, such as sandy seafloors where clams and worms are dug down and rocky bottoms with thick vegetation of colourful algae, but also less well-known biotopes such as rocky bottoms covered with moss animals. The classification creates a common understanding of the types of existing biotopes and habitats, the environmental factors that shape them, what characteristics the communities consist of, and nomenclature. The classification will be a valuable tool in underwater habitat mapping and the management of the use of marine space.

# habitats

## Attention to critically endangered harbour porpoise

### SEAL GROUP

To celebrate the International Day of the Baltic Harbour Porpoise in May, HELCOM established a dedicated web-page to bring more focus to the critical situation of this threatened species. For many years now, HELCOM has been actively contributing to the protection of the harbour porpoise in the Baltic Sea through its everyday work, particularly through the work of the SEAL Expert Group.

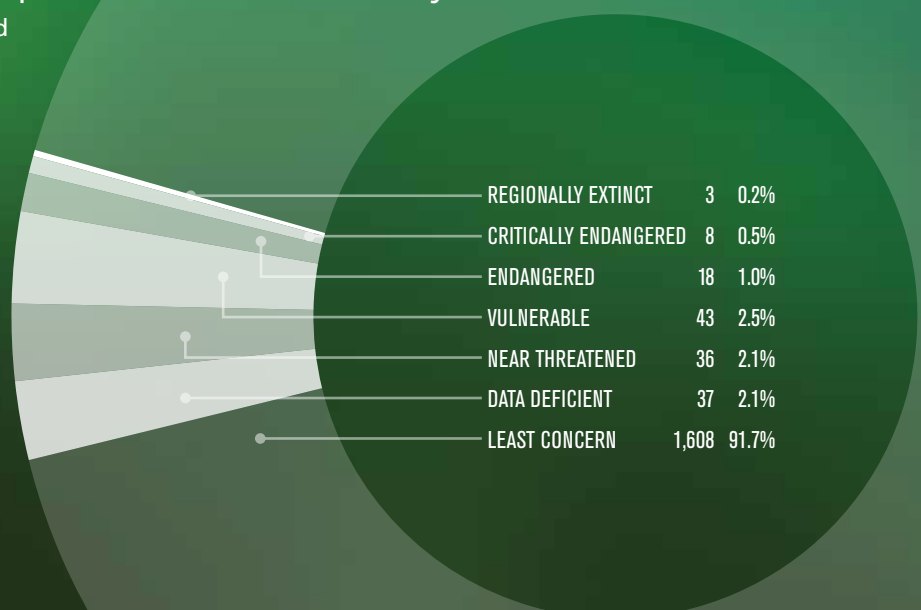
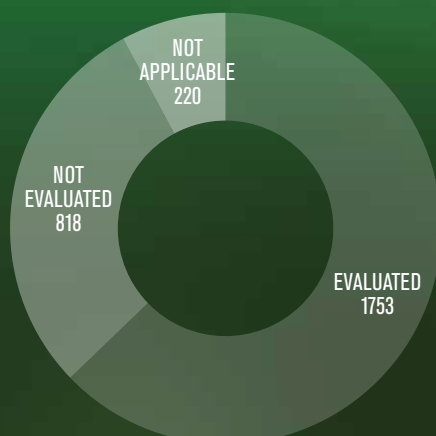
The SEAL Group consists of regional marine mammal experts, scientists, and managers as well as representatives of the fisheries sector. Since 2006, it has

worked for the wellbeing of all seal populations in the Baltic, including the harbour porpoise, the only 'whale' – species of cetacean – native to the Baltic Sea, and one of the smallest marine mammals worldwide. The regular meetings of HELCOM SEAL ensure that the harbour porpoise database is also under constant review, and that the national plans regarding Baltic marine mammals would be harmonised with the HELCOM seal conservation objectives.

In 2013, the group produced a report on the status of the management plans for seals.

## Four per cent of Baltic Sea species are threatened by extinction

Proportion of evaluated, not evaluated and not applicable units for species and other assessment units. Right: The proportion of Red List categories within the "evaluated" species unit.



*Since 1970s HELCOM has worked to prevent any pollution from ships – deliberate operational discharges as well as accidental pollution.*

# Shipping

## Major progress in ballast water management

### HELCOM/OSPAR BWM GUIDELINES

The Ministers adopted the joint HELCOM/OSPAR Guidelines on the granting of exemptions under the ships' international Ballast Water Management Convention – a major achievement in the process to better protect coastal ecosystems from alien species.

The joint efforts in the Baltic Sea and in the North-East Atlantic by HELCOM and OSPAR, respectively, are needed as the two organisations share many member countries and because the marine traffic causes a high level of interdependency between the two regions. A Baltic Sea starting point

for this joint work was the HELCOM Ballast Water road map, adopted in the HELCOM 2007 Ministerial Meeting, and a series of ballast water exchange guidelines developed by HELCOM and published by IMO.

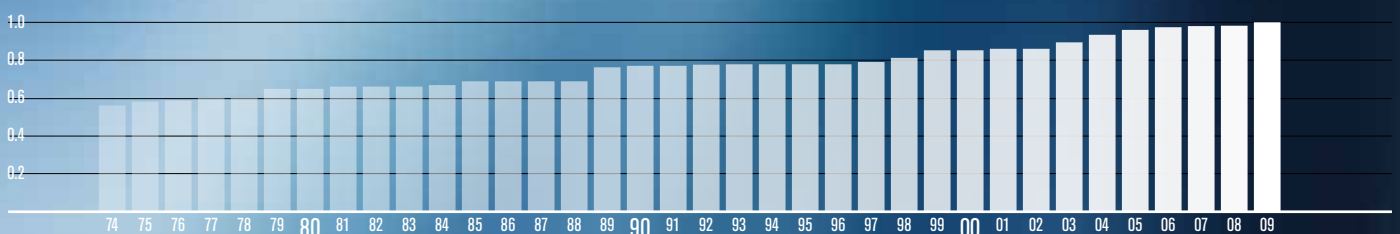
The need for regional approaches to exemptions for the IMO Ballast Water Management Convention (BWMC) from 2004 has emerged, since the convention enables the exemption from ballast water treatment procedures for certain voyages, which can be shown to pose only a negligible risk of the transfer of harmful alien species. The methods for assessing whether a ship does not have to treat

or exchange ballast water should be commonly agreed on to avoid undermining the implementation of the BWM Convention.

The basis for the 2013 joint guidelines are the innovative, regionally harmonised methods for information collection and risk assessments on invasive species in the Baltic Sea, which were presented in early 2013 in the final report of HELCOM's ALIENS 2 Project. The work on implementing the guidelines continues within the joint HELCOM-OSPAR task group on ballast water issues, meeting two to three times annually.

## Alien species introductions

Cumulative number of new introductions. Normalized 1–0 (1 = 99 species). SOURCE HELCOM



## HELCOM supports the development of cutting edge navigation technology

### HELCOM RECOMMENDATION 34E/2

The HELCOM Ministerial Meeting adopted a new HELCOM Recommendation (34E/2) on e-navigation. The document commits the Baltic Sea countries and the EU to test e-navigation in the

region by 2015 and implement concrete solutions by 2017 in close cooperation with the International Maritime Organisation (IMO) and the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA).

A related seminar by the Baltic Sea Region e-Navigation Forum, established to offer guidance to national maritime authorities and other stakeholders and harmonise practices on e-navigation, was hosted by HELCOM in August 2013.

## Process of designating Baltic Sea as NOx Emission Control Area

### NECA PROCESS

In the 2013 Ministerial Meeting, the future designation of the Baltic Sea as a Nitrogen Oxide Emission Control Area (NECA) under the MARPOL Convention of the International Maritime Organisation (IMO) emerged as the main topic

for negotiations among the Ministers. After lengthy negotiations, the Meeting concluded by recalling the earlier commitment regarding the designation, and specified that it would lead to a reduction of nearly 7,000 tonnes of nitrogen to the sea every year. The

Ministerial outcome further stresses that the achievement of a Baltic Sea unaffected by eutrophication relies on additional reduction efforts by the shipping sector.

## Towards alternative fuels and green technology for ships

### GREEN TECHNOLOGY AND ALTERNATIVE FUELS PLATFORM FOR SHIPPING

During 2013, the Contracting Parties and Observers worked in HELCOM in various ways to also enable the maritime traffic sector to contribute to solving the eutrophication challenge in the Baltic Sea.

Enhanced regional cooperation on alternative fuels for ships to cut emissions from maritime traffic was

an emerging key issue in 2013. A new "Green Technology and Alternative Fuels Platform for Shipping" was initiated at the 2013 HELCOM Ministerial Meeting to advance sustainable shipping and reduce the emissions of pollutants such as Sulphur (SOx) and Nitrogen (NOx) in the Baltic; and to promote, for instance, Liquefied Natural Gas (LNG) and methanol as fuels as well as other propulsion technologies. The platform was launched in coopera-

tion with the Finnish presidency of the Council of the Baltic Sea States (CBSS) as well as the Northern Dimension Partnership on Transport and Logistics (NDPTL). The aim of the platform is to bring together business communities, financial experts and policy makers and administrations, along with research and development representatives to work on a joint understanding on the way forward.

## New video: Baltic Sea shipping visualized

### AIS WORKING GROUP

Since 2005, the Baltic region has had a system in place for gathering signals from all the Automatic Identification System (AIS) devices on ships – the HELCOM AIS network. This network provides real-time surveillance and

statistics of the movement of ships, and is administered by the HELCOM AIS Working Group, meeting annually since 2002. E-navigation uses such information to create a second generation of electronic services for enhanced safety and environmental performance.

An innovative short video, 'Baltic Sea shipping visualised', based on HELCOM AIS data on ship movements and accident data premiered at the 2013 Ministerial Meeting.

## Cooperation moves ahead on better sewage handling in ports

### PORT RECEPTION OF SEWAGE

Adequate management of sewage from passenger ships will reduce harmful nutrients polluting the Baltic Sea. The patient work on less sewage discharges to the Baltic Sea within the HELCOM Cooperation Platform on Port Reception Facilities led to the endorsement of the HELCOM Interim Guidance

by the 2013 Ministerial Meeting. It concerns the technical and operational aspects of the delivery of sewage by passenger ships to port reception facilities.

During 2013, the Secretariat also produced a state-of-the-art compilation of the current status of sewage PRFs in all the main ports of the Baltic Sea, as

well as trends in cruise and passenger traffic. The compilation was made in cooperation with the Baltic Ports Organization (BPO), national administrations and ports that provided the data. The final overview was published on the HELCOM website in February 2014 and will be updated continuously.

*Improving municipal waste water treatment is a highly cost-efficient measure to reduce phosphorus loads, a major cause of pollution in the Baltic Sea.*

# Waste

## Potential for less nutrients from scattered communities in Russia

### BASE PROJECT

The BASE Project has a component regarding the treatment of wastewater and the nutrient reduction potential from small and scattered communities in Leningrad and Kaliningrad Regions. The pilot activity has also studied a concrete model pilot project for a waste-

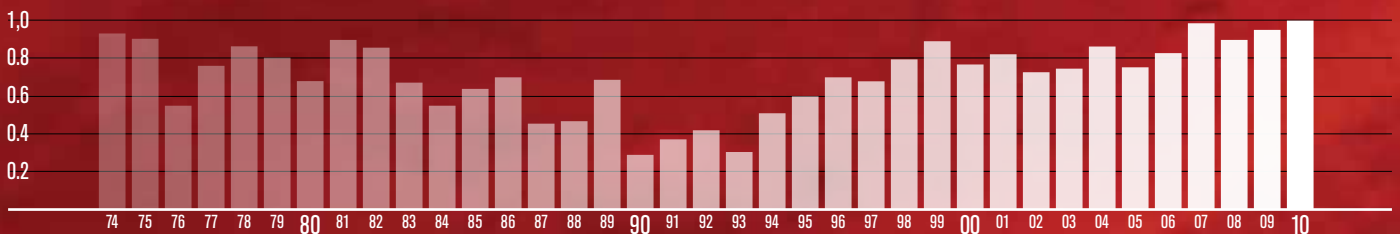
water treatment system on the Isle of Valaam. The final report is available at the project website. The pilot has been developed in close cooperation with the Vodokanal waterworks company, St. Petersburg.

BASE has also raised awareness of good practices for the treatment of

wastewater in scattered settlements, including phosphorus-free detergents. The pilot activity has been aligned with past and on-going programmes working towards similar goals (e.g. RusNIP, MOMENT, Coalition Clean Baltic activities, and SUE Vodokanal-BSAG cooperation).

## Hypoxic area

Autumn (August-September) hypoxic area variations, km<sup>2</sup> covered by water with O<sub>2</sub><2ml/l. Normalized 1-0 (1 = 69,373). SOURCE HELCOM



*There is growing concern for hazardous substances in waste water and the countries in the Baltic region are increasingly monitoring them.*

# water

## Engaging a wider network of municipalities

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### **LAND-BASED POLLUTION GROUP**

The 2013 Copenhagen Ministerial meeting expressed concerns about the low level of activities in certain areas and stressed the need to fulfill HELCOM requirements by the agreed deadlines, in particular in further improvements in municipal wastewater treatment. For this reason, the Meeting agreed to prioritise the further upgrading of wastewater treatment, inter alia, through engaging a wider network of municipalities and, where appropriate, enhancing cooperation in the environmental field under the EU Strategy for the Baltic Sea Region.

In addition to the implementation of advanced nutrient removal from wastewater treatment plants, the Ministerial Meeting called for actions on the sewage treatment sector's emerging challenges, such as preventing and minimising the discharge of pharmaceuticals, microplastics and nanoparticles.

### **WARSAW**

Prior to the upgrade of the Czajka wastewater treatment plant in Warsaw, Poland, 75% of Warsaw's sewage ended up in the River Vistula untreated. After major renovations, the plant was officially opened in early 2013. The expansion has more than doubled both the plant's former daily inflow and sludge production.

The Czajka project, comprising the plant upgrade, the construction of a thermal drying facility for the sludge, new transmission sewers and the modernisation of the wastewater system in northern Warsaw, was the final stage of a major Warsaw water supply and wastewater treatment scheme. Since 2013, the Czajka WWTP has also been in compliance with the HELCOM discharge requirements for phosphorus not exceeding 0.5 mg/l.

### **ST. PETERSBURG**

The level of advanced wastewater treatment according to HELCOM requirements in St. Petersburg, Russia, has reached 98.4% after the completion of a major environmental project in October 2013. Significant progress has been made since before 1978, Leningrad (the former St. Petersburg) had almost no wastewater treatment in place.

The Northern Tunnel Collector Construction is a major sewer pipeline with pumping stations that receive sewage from residential houses, offices, kindergartens, schools, hospitals and industries before delivering it to wastewater treatment plants. With the Collector in place, 76 direct wastewater discharges could be closed and around 22 million m<sup>3</sup> of wastewater less per year ends up in the River Neva and the Gulf of Finland.

# Data and maps

*HELCOM data selection has increased rapidly during recent years, adding up to more than 300 map layers*

## HELCOM launches new website

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### **WWW.HELCOM.FI**

On the eve of the 2013 Ministerial Meeting in October, HELCOM launched its new website with a more modern approach, clearer structure and thematic areas to ensure easier access to the many issues HELCOM is involved with. The section 'Action areas' has compact headings - each area con-

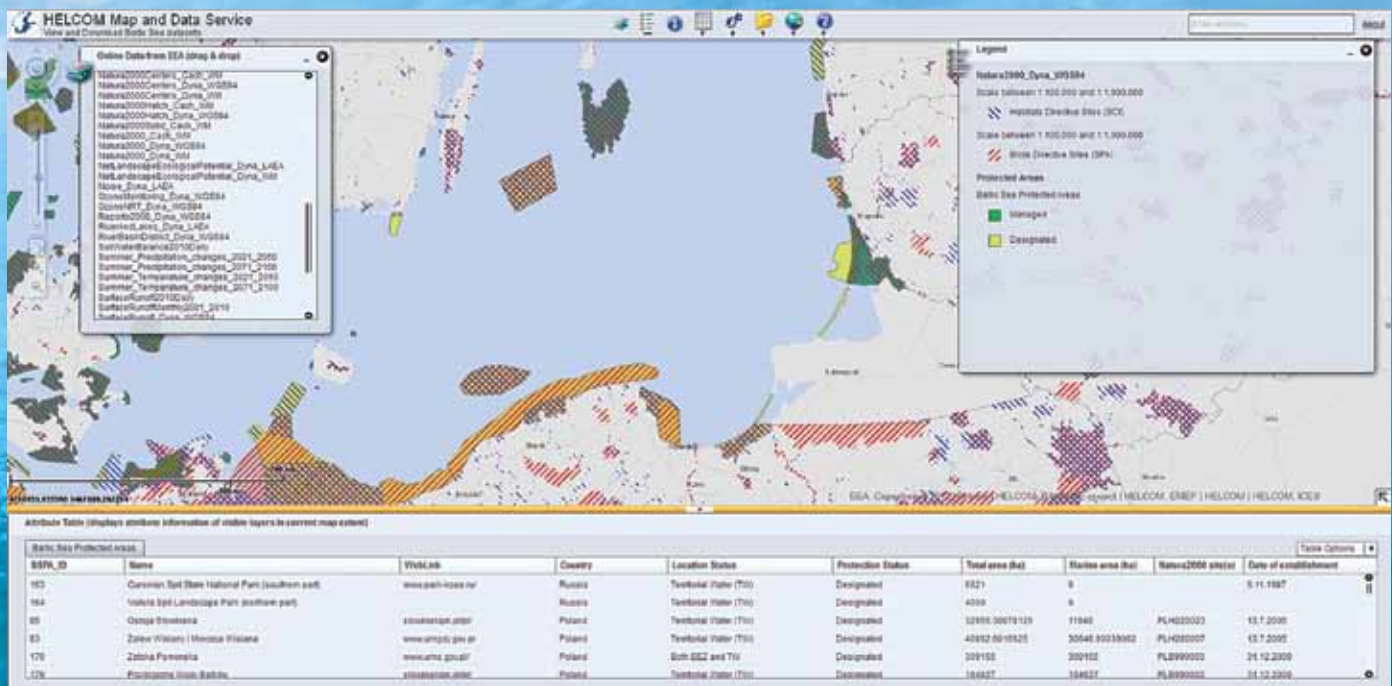
nects the visitor to the different aspects of HELCOM work. 'Baltic Sea trends' mainly focuses on the outcomes of the joint monitoring and assessment efforts, structured under the four ecological goals as set out in the Baltic Sea Action Plan. The action plan has its own sub-section, to facilitate exploring the follow up of progress at the

national level as well as shedding light on the intricate background behind the plan.

The new HELCOM registration, document management and meeting system will soon be ready. It is built on the same platform and enables access to the latest updates concerning all the meetings.



Uploading of files from the European Environment Agency (EEA) is now possible with the upgraded interface of HELCOM data and map service.



## HELCOM upgrades its free-of-charge map and data service

### HELCOM DATA AND MAPS

Environmental information was made even easier to access and share after the launch of HELCOM's upgraded, free-of-charge map and data service of in July. The many improvements of the new service make the overall viewing, downloading and searching for information more efficient to any interested user.

The HELCOM data selection has increased rapidly during recent years, adding up to more than 300 map layers currently available. The updated service

allows users to access and visualise this wide range of data on activities within the Baltic Sea and the status of the sea and pollution loads affecting the Baltic marine environment, including information on monitoring activities and regional preparedness for accident response. As before, users can view, create, save and/or print their own maps, download datasets and create live links to the HELCOM GIS website. The improved data infrastructure also makes the sharing of data and information more user-friendly.

The data that are available through the HELCOM map and data service has been compiled through various different sources over several years. A large amount of work carried out by different HELCOM groups, experts, projects as well as the HELCOM Secretariat staff has contributed to the broad selection of data. Moreover, data produced by other organizations and projects can be displayed in the map service, either by uploading data with the new upload tool or by using the online access to other data sources.

# Miles

Forty years ago, the state of the Baltic Sea was dire. Baltic Sea was lacking oxygen and the excess algae growth was on the increase. The technological, social and economic developments had sped the rate at which the marine environment was getting polluted.

The seven countries around the Baltic Sea decided that things must change. Despite the steep political division to East and West, two years after the UN Stockholm Conference on the Human Environment, experts and politicians came together and signed the Helsinki Convention on 22 March 1974.

Despite the region's continuous economic growth, carrying with it risks of more, or new, pressures to the sea, the polluting nutrients have nevertheless decreased with over 40% during these decades. HELCOM can claim its share for the achievement, having well succeeded in keeping up regular cooperation between all the coastal states and developing environmental policies.

## 1960s

Awareness of Baltic Sea pollution increases

## 1962

EC's Common Agriculture Policy launched

## 1972

UN Conference on the Human Environment in Stockholm 1973 First intergovernmental expert meeting

## 1974

**SIGNING OF THE HELSINKI CONVENTION (22 MARCH)**

## 1975

Regional Seas Conventions and related Protocols

## 1979

"Antonio Gramsci" oil spill (5,500 tonnes)

## 1980

Regular HELCOM work starts

## 1980

The 1974 Convention enters into force 3 May 1980

## 1981

"Globe Asimi" oil spill (16,000 tonnes)

## 1983

Manual on co-operation in combating marine pollution

## 1986

Chernobyl accident

## 1987

First Baltic Sea Pollution Load Compilation

## 1988

HELCOM Ministerial Declaration on the Protection of the Marine Environment of the Baltic Sea Area - Agreement to reduce 50% of nutrient discharges by 1995

# Timeline

- 1989**  
First oil response exercise (Balex Delta)
- 
- 1990**  
First joint airborne surveillance for spills
- 
- 1990**  
Prime Ministerial Meeting in Rönneby. Ad hoc high level Task Force established to coordinate and prepare the joint comprehensive programme
- 
- 1991**  
EU Urban Waste Water Treatment Directive
- 
- 1992**  
Helsinki Diplomatic Conference - Baltic Sea Environmental Declaration (relates to the new Convention)
- 
- 1992**  
New Helsinki Convention – Expansion to catchment area and the newly independent states
- 
- 1992**  
Establishment of HELCOM Hot Spot list (JCP)
- 
- 1993**  
Gdansk Declaration on Resource Mobilisation for the Baltic Sea Joint Comprehensive Environment Action Programme
- 
- 1993**  
First Assessment of the State of the Coastal Waters
- 
- 1994**  
Establishment of the Baltic Sea Protected Areas (BSPAs)
- 
- 1996**  
Human-induced eutrophication is reconfirmed in HELCOM assessment
- 
- 1996**  
Baltic strategy for port reception facilities
- 
- 1996**  
The Visby summit
- 
- 1996**  
Kalmar Communiqué (Council of the Baltic Sea States - CBSS)
- 
- 1996**  
First Nitrate Vulnerable Zones established
- 
- 1998**  
Communiqué of HELCOM Ministerial Session; several commitments and a decision that HELCOM structures, procedures and programmes will be reviewed during 1998
- 
- 1998**  
Objective set for hazardous substances
- 
- 1998**  
Red List compiled on threatened biotopes
- 
- 2000**  
The 1992 Convention enters into force 17 January 2000
- 
- 2000**  
EU Water Framework Directive
- 
- 2001**  
Maritime Doctrine of the Russian Federation
- 
- 2001**  
HELCOM Copenhagen Declaration on the Safety of Navigation and Emergency Capacity in the Baltic Sea Area
- 
- 2003**  
One third of HELCOM Hot Spots cleaned
- 
- 2003**  
HELCOM Bremen Declaration – Ecosystem approach
- 
- 2003**  
First indicator fact sheets
- 
- 2005**  
South-West waste water treatment plant established in St. Petersburg
- 
- 2006**  
New Water code in Russia adopted
- 
- 2007**  
HELCOM Baltic Sea Action Plan adopted
- 
- 2007**  
HELCOM Recommendation on improving waste water treatment
- 
- 2008**  
EU Marine Strategy Framework Directive
- 
- 2010**  
HELCOM Moscow Ministerial commitment Declaration on the implementation of the HELCOM Baltic Sea Action Plan
- 
- 2010**  
The whole Baltic Sea, except for northernmost areas and North-West Kattegat, is a eutrophication problem area in HELCOM assessment
- 
- 2011**  
Ban on sewage from passenger ships – Baltic Sea the first such special IMO area in the world
- 
- 2012**  
Two thirds of Hot Spots cleaned
- 
- 2013**  
HELCOM Copenhagen Ministerial Declaration – Taking Further Action to Implement the Baltic Sea Action Plan – Reaching Good Environmental Status for a healthy Baltic Sea
- 
- 2013**  
98% of the sewage treatment in St. Petersburg is meeting HELCOM standards
- 
- 2014**  
New EU Common Agricultural and Fisheries Policies implementation starts

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