

# HELCOM news

3/2005 Newsletter



HELCOM developing a Baltic Sea Action Plan, page 3

HELCOM EUTRO – a pilot project aiming to develop new tools for assessing eutrophication, page 6

HELCOM deletes three Lithuanian Hot Spots from the list of major polluters, page 10

Major new wastewater treatment plant opens in St. Petersburg, page 10

Baltic Sea Regional Project running at full steam ahead, page 12

HELCOM BSPA Project to strengthen and expand the network of marine protected areas, page 13

HELCOM launches a common Baltic maritime traffic monitoring system, page 13

HELCOM fleet rehearses oil spill response off the Swedish coast, page 15

# HELCOM

## 3/2005 Newsletter



At the 17<sup>th</sup> Meeting of the Heads of Delegation, held on 14-15 June 2005 in Helsinki, Finland, the Helsinki Commission resolved to develop a strategic Baltic Sea Action Plan by 2007, to ensure that all possible measures are taken to reduce pollution in the Baltic Sea and to repair the damage done to the marine environment.

HELCOM's ongoing work developing Ecological Objectives for the Baltic will provide the foundation for this Action Plan. The Ecological Objectives and their associated indicators will be used to evaluate the efficiency of existing environmental measures and to provide guidance for the development of future management measures for the region. The development of the Action Plan will involve all the Baltic Sea coastal countries. Input and active participation from all major stakeholder groups in the region will also be required, to ensure that the Action Plan is relevant and can be effectively implemented in practice.

*Anne Christine Brusendorff*  
Executive Secretary

### **HELCOM 3/2005 Newsletter**

Published by: Helsinki Commission  
Katajanokanlaituri 6 B  
FI-00160 Helsinki, Finland

E-mail: [info@helcom.fi](mailto:info@helcom.fi)  
Internet: <http://www.helcom.fi>

Editor: Nikolay Vlasov  
Helsinki Commission

Language revision: Fran Weaver

Design and layout: Leena Närhi

Cover photos: Agne Petrauskaite,  
Visa Hietalahti, Mervi Kunnasranta

## Contents

- Foreword, by the Executive Secretary, page 2
- HELCOM developing a Baltic Sea Action Plan, page 3
- Ecological Objectives to form the core of the Baltic Sea Action Plan, page 5
- Ministers and parliamentarians on the HELCOM Action Plan, page 6
- HELCOM EUTRO – a pilot project aiming to develop new tools for assessing eutrophication, page 6
- Fewer chemical munitions found by Baltic fishermen in 2004, page 7
- HELCOM Indicator Fact Sheets: Latest assessments of riverine inputs of heavy metals and nutrients into the Baltic Sea, page 8
- HELCOM deletes three Lithuanian Hot Spots from the list of major polluters, page 10
- Major new wastewater treatment plant opens in St. Petersburg, page 10
- HELCOM to tackle dioxin pollution, page 11
- Baltic Sea Regional Project running at full steam ahead, page 12
- HELCOM BSPA Project to strengthen and expand the network of marine protected areas, page 13
- HELCOM launches a common Baltic maritime traffic monitoring system, page 13
- HELCOM fleet rehearses oil spill response off the Swedish coast, page 15
- Illegal oil discharges in the Baltic Sea continue to decrease, page 16
- Swedish Coast Guard team wins HELCOM Trophy again, page 17
- HELCOM Youth Forum charts an environmentally-friendly course for the Baltic Sea region, page 18



- Latest HELCOM publications, page 19
- Upcoming HELCOM Meetings, page 20
- New staff at the HELCOM Secretariat, page 20

# The Baltic Sea Action Plan

## A new environmental strategy for the Baltic Sea region

### Time for action

The Helsinki Commission (HELCOM), the inter-governmental organisation responsible for overseeing the protection of the Baltic marine environment, is preparing a Baltic Sea Action Plan to ensure that every possible step is taken to improve the state of the Baltic Sea.



To protect our common sea, the countries around the Baltic have been working closely together for 30 years to reduce pollution and repair the damage done to the marine environment. These efforts have led to noticeable improvements, enabling people to bathe on beaches that were once polluted, and helping endangered wildlife populations to recover.

But there is still a lot to do, as many of the Baltic's environmental problems are proving difficult to solve, and it could take several decades for the marine environment to recover.

The European Marine Strategy foresees a regional approach to the protection of the marine environment across European seas through the development of separate action plans. This gives extra political momentum to co-ordinated international efforts to solve the problems affecting the Baltic. The Baltic Sea Action Plan involves all the Baltic coastal states, including Russia as the only non-EU member, as well as other countries in the Baltic's catchment area.

### Getting everyone on board

The Baltic Sea Action Plan must be based on our common understanding of what we want our sea to be like in the future. This means that the action plan should be drawn up with

active participation from stakeholders at many levels – from international organisations and governments; through activities which pollute the sea or depend on the sea for their livelihoods; right down to individual citizens, whose choices can help to reduce pollution.

The Baltic Sea Action Plan aims to safeguard the Baltic's natural ecosystems while also allowing valuable marine resources to be used sustainably in the future. The social and economic effects of the measures proposed for the plan will be carefully assessed, as well as their environmental benefits.

### Setting targets

The sensitive nature of the Baltic Sea means that tailor-made measures must be applied to limit all the kinds of pollution that affect the sea.

The Baltic Sea Action Plan is to be based on **Ecological Objectives** defined to reflect our common vision of a healthy Baltic Sea, with balanced ecosystems able to support a wide range of sustainable economic activities.

This jointly agreed set of ambitious but realistic objectives will show how everyone around the Baltic Sea can work towards shared goals.

Progress towards these objectives will be assessed through measurable ecological **indicators** devised by HELCOM's scientific experts. Objectives and indicators will be carefully selected to reflect the needs and wishes of everyone who has an interest in the Baltic Sea.



### Key issues requiring action:

#### Eutrophication

The natural balance of the Baltic Sea has been seriously disrupted by excessive nutrient inputs, which originate from diffuse sources like over-fertilised farmland and air pollution, as well as point sources like sewage treatment plants and industrial wastewater outlets. Symptoms of this eutrophication process include abnormal algal blooms and lifeless areas on the seabed.

#### Objective

#### **A Baltic Sea undisturbed by excessive inputs of nutrients**

- No excessive nutrient concentrations
- Clear water
- Natural oxygen levels
- No excessive algal blooms
- Natural distribution of plants and animals

### Actions

- Reduce the amounts of nutrients entering rivers from diffuse sources, especially farmland
- Reduce nutrient pollution from the remaining “hot spots”, such as wastewater treatment plants
- Reduce airborne nutrient pollution

### **Hazardous substances**

In spite of efforts to reduce pollution, concentrations of hazardous substances remain abnormally high in the Baltic Sea and its marine life. Levels of dioxins in fish, for instance, are still above EU safety levels for foodstuffs.

### Objective

#### **Concentrations of hazardous substances close to natural levels**

- Concentrations near background levels
- No health problems among animals
- All fish safe for consumption

### Actions

- Prevent the environmentally harmful use of hazardous substances
- Further reduce the amounts of hazardous substances entering the sea in rivers and from the air
- Safely dispose of old stocks of chemicals or equipment containing hazardous substances



### **Maritime activities**

The Baltic’s crowded shipping lanes are becoming busier as the economies of the countries around the Baltic Sea grow. This can lead to increased pollution and other pressures on the marine environment. The risk of a potentially disastrous oil spill is particularly rising as traffic intensifies.

### Objective

#### **Maritime traffic and offshore activities carried out in an environmentally friendly way**

- Accidents and the consequent harm to the marine environment minimised
- Maritime activities cause no harm to the marine environment

### Actions

- Further reduce emissions and waste discharges
- Improve maritime safety
- Improve preparedness to respond to any accidents and pollution incidents

### **Biodiversity**

The Baltic’s unique conditions limit the diversity of life in the sea, and make ecosystems exceptionally sensitive to pollution, the effects of commercial fisheries and offshore activities, and the introduction of non-native species.

### Objective

#### **Favourable conservation status of biodiversity**

- Natural landscapes and seascapes
- Thriving and balanced communities of plants and animals
- Natural species diversity
- Viable populations of species

### Actions

- Set up a representative network of marine and coastal protected areas
- Prevent the introduction of non-native species
- Curb inputs of nutrients and hazardous substances

### **Building on 30 years of experience**

HELCOM naturally plays a leading role in the realisation of our vision of a healthy Baltic Sea, by deciding on internationally agreed protective measures. But the future ultimately lies in the hands of everyone whose activities affect the Baltic marine environment. For this reason it is very important that the responsibility for creating and implementing the Baltic Sea Action Plan is shared by all stakeholders in both the private and the public sectors.

**HELCOM invites everyone interested in rescuing the troubled Baltic Sea to get actively involved in drawing up and carrying out the Baltic Sea Action Plan.**



Photo: Tommi Heinonen

# Ecological Objectives to form the core of the Baltic Sea Action Plan

A set of draft Ecological Objectives (EcoOs) and associated indicators make up the core of the innovative Baltic Sea Action Plan. These are parts of the ecosystem assessment concept developed by the HELCOM EcoQO Project (Development of Ecological Quality Objectives for the Baltic Sea). The results of the recently finalised project will be scrutinised and revised by HELCOM expert groups during autumn 2005.

The creation of Ecological Objectives for the Baltic Sea has been part of HELCOM's post-Bremen efforts towards implementing an ecosystem approach for the Baltic Sea. In order to complete the task of defining "good environmental status" for the Baltic Sea in quantifiable terms HELCOM has selected a stepwise approach.

The first step is the joint setting of general targets, embodied as Strategic Goals and Ecological Objectives. These "headlines" can then be used to communicate with a wider stakeholder community ranging from scientists and politicians to ordinary citizens. The aim is to use the Ecological Objectives as a tool to link environmental monitoring, assessments, research and management.

The HELCOM EcoQO Project has also sown the seeds for the next step in the process by drafting sets of measurable indicators for each ecological objective, thus also contributing to the ongoing revision of the HELCOM monitoring programs. Using a common system of indicators will enable the monitoring results obtained by individual countries, agencies and scientists to be compared more easily, greatly facilitat-

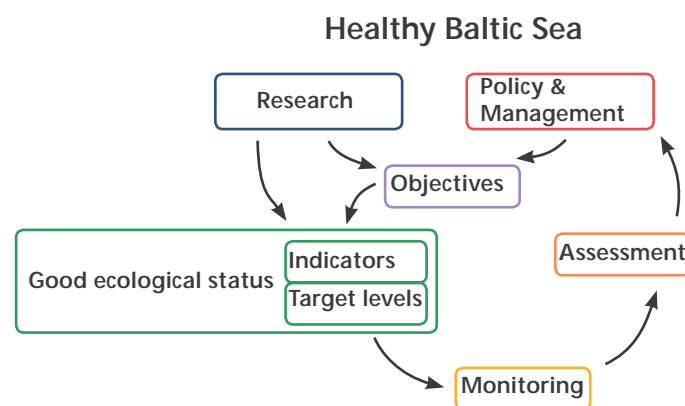


Photo: Czesław Kozłowski

ing the evaluation of the present state of the Baltic marine environment.

The final and most crucial step in implementing the ecosystem approach, defining exact target levels for the indicators, is a complex issue requiring intensive research and modelling work. This work has already been initiated for eutrophication within the HELCOM EUTRO Project,

and will continue for other parameters over the coming years. A new HELCOM project "Marine ecological quality in the conceptual framework for assessing eutrophication" will specifically address biodiversity assessment issues. The project will run with EU funding until 2007.

## Ministers and parliamentarians on the HELCOM Action Plan

The HELCOM initiative to draw up a Baltic Sea Action Plan has already received support from the Council of the Baltic Sea States (CBSS). A communiqué from the 13<sup>th</sup> Ministerial Session of the CBSS, which was held on 9-10 June 2005 in Szczecin, Poland, reiterated the significance of the work of the Helsinki Commission and welcomed the role of HELCOM in the development of the Action Plan. CBSS underlined that the plan could also be an important contribution to the Euro-

pean Marine Strategy, which foresees a separate action plan for each European sea.

The 6<sup>th</sup> VASAB Conference of Ministers responsible for spatial planning and development of the Baltic Sea Region, held on 19 September 2005 in Gdansk, Poland, also welcomed the HELCOM Baltic Sea Action Plan, stating that it should be duly considered when dealing with spatial planning issues related to the marine environment.

A resolution made by the 14<sup>th</sup> Baltic Sea Parliamentary Conference, held in Vilnius, Lithuania, on 29-30 August 2005, following the presentation of the HELCOM Baltic Sea Action Plan, underlined the importance of the harmonised implementation of the European Marine Strategy in the whole catchment area of the Baltic Sea by making use of the established regional cooperation within HELCOM.

## HELCOM EUTRO – a pilot project aiming to develop new tools for assessing eutrophication

One of HELCOM's priority goals is to reduce eutrophication. This requires a consensus on assessment procedures as well as a subsequent linking of effects and activities taking place across the Baltic Sea drainage basin. The HELCOM EUTRO Project was launched in November 2004 to

develop practical tools for the harmonisation of eutrophication assessment criteria and procedures all around the Baltic. One important task of the Project is the establishment of reference conditions for different parts of the Baltic Sea. This is necessary in order to compare the present state to

pristine conditions. Another aim of the Project is to serve as a test case for the preliminary Pan-European guidance on the assessment of eutrophication in European waters, adapted to suit the specific features of the Baltic Sea.

The work of HELCOM EUTRO is closely scheduled and coordinated with a suite of related activities such as the EU Water Framework Directive, the European Marine Strategy, the European Eutrophication Activity and two other HELCOM Projects on Ecological Objectives and the revision of HELCOM's system of monitoring and assessments.

A new trial tool named HEAT (HELCOM Eutrophication Assessment Tool) has already been developed within the framework of HELCOM EUTRO. HEAT is to be tested in the future assessment of the eutrophication status of the Baltic Sea. The new tool also meets the requirements of the EU Water Framework Directive.



Photo: Visa Hietalahti

## Fewer chemical munitions found by Baltic fishermen in 2004

Only 4 small scale incidents of World War II chemical munitions being caught by fishermen in the Baltic Sea were reported during last year, compared to 25 in 2003, according to annual statistics submitted by Denmark to HELCOM. This is the lowest figure for annual catches since 1999. However, experts are not yet attributing the decrease to any specific factors. The reason for the dramatic decrease is unknown, as was the case for the dramatic increase in 2003. The variations are probably due to a combination of different factors, such as the intensity of fishing activities in the areas close to the dumped chemical munitions, and the recommendations issued by the authorities.

As the Lead Country for monitoring dumped chemical munitions, Denmark prepared the report based on information received as of 9<sup>th</sup> of April 2005. Most of the netted chemical munitions were completely corroded and consisted of lumps of mustard gas and sneeze gas. All the catches occurred east of Bornholm, near an area where large amounts of chemical munitions were dumped after World War II. Three separate incidents involved mustard gas, with a total weight of approximately 140 kg of netted in clay-like lumps. The other episode involved a 20 kg lump of sneeze gas caught by a fishing vessel. Most of the catches were released by fishermen at sea, although one catch was brought ashore for safe disposal.

The year 2003, when a total of 1,110 kg of gas-derived lumps was netted in 25 incidents represented one of the biggest increases in both the numbers of incidents and the total weight of

the chemical munitions caught in the Baltic Sea since the mid-1990s. Over the period 1995-2002, about 3 -11 incidents were reported annually, with the total weight of munitions involved not exceeding 512 kg a year. The highest number of incidents during the last 20 years was in 1991 when 5,378 kg of munitions was netted in 103 incidents.

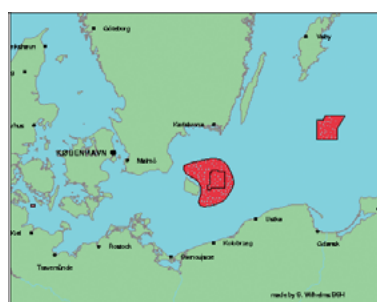
About 40,000 tonnes of chemical munitions were dumped into the Baltic Sea after the Second World War – mostly in the area to the east of Bornholm, southeast of Gotland and south of the Little Belt. It is estimated that these chemical munitions contained some 13,000 tonnes of chemical warfare agents. Dumping areas are marked as foul, with “anchoring and fishing not recommended” on nautical charts. However, fishing in these waters is not prohibited, and commercial fishing is continuing.

Warfare agents are also discovered outside the dumping areas from time to time, especially near Bornholm. Fishermen in these waters regularly find bombs, shells or fragments of munitions and even lumps of mustard gas in their bottom trawl nets. The crews of fishing vessels risk contamination from chemical warfare agents if lumps of viscous mustard gas or chemical munitions caught in bottom trawls are hauled on board. Simply touching these chemical agents or inhaling their vapours is very dangerous.

Chemical warfare agents break down at varying rates into less toxic, water-soluble substances. Some compounds, however, show an extremely low



solubility and slow degradability (e.g. viscous mustard gas, Clark I and II, and Adamsite). These compounds cannot occur at higher concentrations in water, therefore, wide-scale threat to the marine environment from these dissolved chemical warfare agents can be ruled out. HELCOM has carried out extensive assessments and concluded that any threat from residues of warfare agents or chemical munitions to coastal areas is also unlikely.



**WWII chemical munitions dumping areas**

# HELCOM Indicator Fact Sheets:

## Latest assessments of riverine inputs of heavy metals and nutrients into the Baltic Sea

### Riverine heavy metal loads decrease, but still no clear trend in total inputs

During the period 1994-2003 riverine heavy metal loads (notably cadmium and lead) seem to have decreased for most of the Baltic Sea countries. In 2003 the reported riverine (including coastal areas) mercury load entering the Baltic Sea amounted to 7.3 tonnes, the lead load to 285.8 tonnes, and the cadmium load to 8.1 tonnes.

However, incomplete data from some countries makes it difficult to draw conclusions concerning the total heavy metal loads entering the Baltic Sea. Shortcomings in national monitoring programmes and the lack of proper laboratory equipment in some countries meant that heavy metal figures

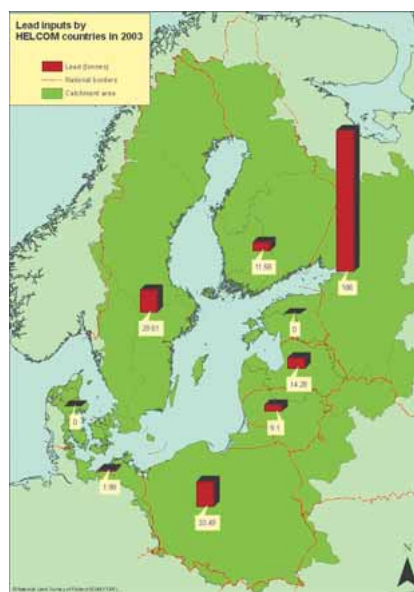
were not obtained in many cases, or that the methods used to estimate the recorded loads are not fully harmonized. The data sets from small rivers and coastal areas are even more incomplete.

High concentrations of heavy metals in biota of the Baltic Sea are mainly caused by loading from land-based sources. About 50 % of mercury, 60-70 % of lead, and 75-85 % of cadmium enters the Baltic Sea via rivers or as direct waterborne discharges. Atmospheric deposition also significantly contributes to total heavy metal loads.

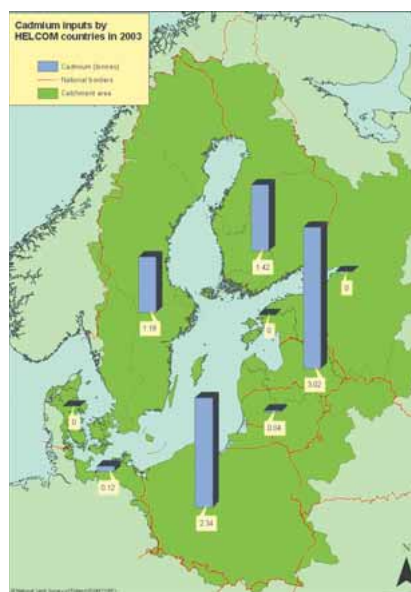
Excessive heavy metal concentrations may pose a health risk to marine biota and to humans. In the Baltic Sea high

concentrations of mercury, cadmium and lead have been measured in fish, in birds' eggs and in seal tissue, for instance. Measured concentrations of heavy metals have typically been as much as an order of magnitude higher than concentrations in the North Sea. The main reason behind these high concentrations in the Baltic Sea is intense industrial activity, high populations in the catchment area, and above all the long renewal time of the seawater.

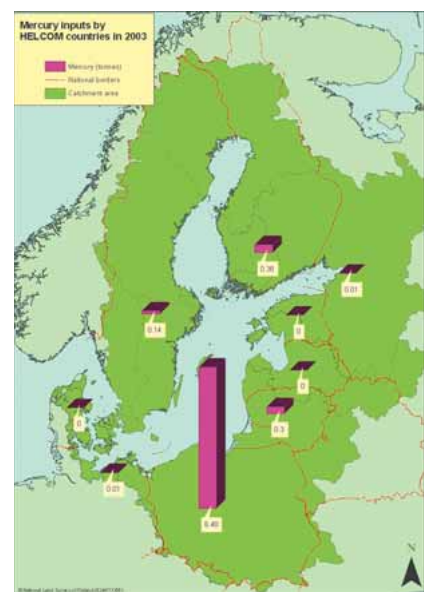
A few large rivers account for the major part of total riverine heavy metal loads. Comparing the riverine inputs into different sub-basins, the Gulf of Finland received the highest lead load, while mercury inputs were highest for the Baltic Proper. For



**Figure 1.** Riverine loads of Lead entering the Baltic Sea in 2003 from the 9 coastal countries (tonnes).



**Figure 2.** Riverine loads of Cadmium entering the Baltic Sea in 2003 from the 9 coastal countries (tonnes).



**Figure 3.** Riverine loads of Mercury entering the Baltic Sea in 2003 from the 9 coastal countries (tonnes).





## HELCOM deletes three Lithuanian Hot Spots from the list of major polluters

The Helsinki Commission this summer deleted three Lithuanian Hot Spots from the list of the Baltic Sea's most significant pollution sources.

The deleted Hot Spots are the capital Vilnius, which is also Lithuania's largest city, and the municipalities of Alytus and Marijampole. The wastewater treatment plants in all three localities have been thoroughly modernised in recent years.

"We very much welcome Lithuania's progress in the reduction of pollution from point sources such as municipal wastewater treatment plants," said

HELCOM Executive Secretary Anne Christine Brusendorff. "Wastewater treatment efficiency in Vilnius, with its population of over half a million, now meets the requirements of the relevant HELCOM Recommendations, and is also in compliance with the EU requirements."

HELCOM's experts also welcomed the reduction of pollution loads from the wastewater treatment plants in Lithuania's third largest city, Klaipeda, but could not yet support the deletion of this Hot Spot, since the HELCOM requirement for phosphorus is still being exceeded in wastewater outflows.

The "Hot Spots" list of the most significant point sources of pollution around the Baltic Sea was first drawn up under the Baltic Sea Joint Comprehensive Environmental Action Programme (JCP) in 1992. A total of 87 Hot Spots and sub-Hot Spots remain on the list today, following the deletion of 62 of the original 149 Hot Spots/sub-Hot Spots. Investment and remediation projects carried out at pollution Hot Spots around the Baltic Sea have contributed substantially towards overall pollution load reductions in the Baltic Sea catchment area.

## Major new wastewater treatment plant opens in St. Petersburg

The leaders of Russia, Finland and Sweden on 22<sup>nd</sup> September 2005 inaugurated the new St. Petersburg Southwest Wastewater Treatment Plant, which will greatly reduce the amount of untreated sewage entering the Gulf of Finland from the largest city in the Baltic Sea catchment area.

The Russian President Vladimir Putin, the President of Finland Tarja Halonen,

the Swedish Prime Minister Göran Persson and St. Petersburg's Governor Valentina Matvienko were among the hundreds of dignitaries taking part in an official opening ceremony held at the new plant to mark the completion of one of the largest environmental co-operation projects in the Baltic Sea region in recent years.

A delegation of the Helsinki Commission Secretariat, led by the Executive Secretary, Anne Christine Brusendorff, also attended the ceremony at the invitation of the Governor of St. Petersburg.

"The completion of the plant is an extremely important and very welcome development for the city of St. Petersburg and the Baltic marine environment as a whole," said Anne Christine Brusendorff. "The plant will drastically cut the effluent loads that St. Petersburg is currently discharging untreated into the Gulf of Finland. This is one of the highest priority water protection projects in the whole of the Baltic Sea region. At HELCOM we see the new plant as a major step towards a cleaner Baltic marine environment, and we would like to congratulate the St. Petersburg authorities, the municipal water utility Vodokanal and everyone who has contributed to this outstanding success."

With its 4.6 million inhabitants, St Petersburg is by far the largest city



**An artistic impression of St. Petersburg Southwest Wastewater Treatment Plant**

in the Baltic's catchment area; and wastewater from the city of St. Petersburg is the Baltic Sea's single biggest pollution point source. Reducing the consequent effluent load has been one of HELCOM priority objectives in order to improve the condition of the whole Baltic Sea.

According to Vodokanal, the new plant has an average daily capacity of 330,000m<sup>3</sup> and will treat the wastewater from the homes of 720,000 residents of southwestern districts of the city in line with the standards recommended by the Helsinki Commission. This will halve the total amount of untreated wastewater currently discharged from the city directly into the sea. The plant will reduce nutrient inputs into the Gulf of Finland by some 2,200 tonnes of nitrogen and 360 tonnes of phosphorus every year.

Experts estimate that the St. Petersburg wastewater treatment system will now reduce the overall amount of untreated wastewater discharged from the city into the sea to about 15% of the total. The next planned improvement concerns the construction of a drainage tunnel to take wastewater

from the city's central districts to the Northern Wastewater Treatment Plant. This will virtually eliminate the discharge of untreated wastewater from St. Petersburg into the sea.

Begun in the days of the former Soviet Union, and then postponed due to lack of funds, the construction of the St. Petersburg Wastewater Treatment Plant was resumed on 21 March 2003. The current project was financed from a total of 15 different Russian, Western European and Scandinavian sources, notably through bank loans, government grants and donations. The financing bodies involved have included the European Bank for Reconstruction and Development, the Nordic Investment Bank, the European Investment Bank, the Northern Dimension Environmental Partnership, NEFCO, Swedfund International AB, the EU's TACIS Fund (Technical Assistance to the Commonwealth of Independent States), the Finnish Fund for Industrial Cooperation, the Finnish Ministry of the Environment and the Swedish International Development Agency. This project is the largest of its kind in Europe, with its total cost estimated at around € 180 million.



**Swedish Prime Minister Göran Persson, Finnish President Tarja Halonen, Russian President Vladimir Putin, St. Petersburg's Governor Valentina Matvienko, and Vodokanal's Director General Felix Karmazinov touring the plant**



**HELCOM Executive Secretary Anne Christine Brusendorff, with the Director General of the St. Petersburg Public Organization "Ecology and Business", Leonid Korovin, and Vodokanal's Director General Felix Karmazinov**

## HELCOM to tackle dioxin pollution

Experts from the Helsinki Commission are planning to develop a new Recommendation for the Baltic Sea coastal countries to promote further reductions in dioxin pollution in the Baltic Sea. The proposal to develop the new measures was discussed at the regular meeting of the HELCOM Land-based Pollution Group (HELCOM LAND), which took place in Bonn 31 May - 2 June, focussing on the need for further actions to combat eutrophication and hazardous substances in the Baltic Sea.

HELCOM LAND strongly supported the development of a new HELCOM Recommendation on Environmentally Friendly Practices to reduce and prevent emissions of dioxins from small-scale combustion. The resultant draft Recommendation is due to be adopted at the next annual Helsinki Commission Meeting in March 2006.

"Diffuse sources, such as combustion appliances in households and small enterprises are significant sources of

dioxins, which are difficult to address," said Kaj Forsius, Professional Secretary at the Helsinki Commission. "This is why it is important to raise awareness of good practices in combustion and the importance of not burning waste in domestic combustion appliances, for instance." According to Forsius, the main aim of this Recommendation will be to disseminate information in the coastal countries on environmentally friendly practices for small scale combustion.



## Baltic Sea Regional Project running at full steam ahead

### Monitoring agricultural runoff

Agriculture has been identified as the biggest source of nutrient inputs to marine waters in the eastern part of the Baltic Sea. To address this issue, one of the primary aims of the Land and Coast Component of the Baltic Sea Regional Project (BSRP) is to estimate and reduce the flows of nutrients from farmland into the sea. In addition to the direct farm management activities discussed in issue 1/2005 of HELCOM News, the BSRP also incorporates monitoring activities designed to identify complex cause-effect relationships.

The BSRP brings much-needed additional funding for efforts to improve the quality of monitoring in the whole Baltic Sea region. It helps to upgrade existing monitoring stations as well as to build completely new structures to form a network covering selected rivers in the Baltic Sea catchment area. Project investments will thus increase the number of well-equipped reference sites able to provide accurate data on nutrient runoff from agriculture in the Baltic Sea basin.

One of the new stations is the Graispis stream monitoring post in Lithuania. This site will soon provide monitoring data about nutrient losses using a continuous water flow monitoring method. Assessment of this data will take into account geographical, geological and meteorological conditions.

### Assessing the state of the marine ecosystem

The Large Marine Ecosystem Component of the BSRP aims to introduce ecosystem-based practices for the management of marine resources. To improve our understanding of the interlinkages in the Baltic marine ecosystem, essential concepts and products are being developed within the framework of the BSRP:

- A new assessment report on the state of the coastal fish communities has been produced by a joint BSRP/ HELCOM Coastal Fish Expert Group
- As part of the HELCOM EUTRO Project, the BSRP has tested the draft HELCOM Eutrophication Assessment Tool (HEAT)
- The BSRP is developing Ecological Objectives and related indicators together with the HELCOM EcoOO Project
- The BSRP Coordination Centre for GIS, located at Vilnius University's Institute of Ecology, has created a Baltic GIS portal (<http://server.eko.lt/gis/>), which will be further developed along with other GIS products to enhance HELCOM's assessment work



The Graispis stream monitoring post under construction in Lithuania



**Research trawling on board R/V Baltica in May 2005. To demonstrate the ecosystem approach to resource assessment, scientists from the BSRP joined the Sea Fisheries Institute in Gdynia and Latvian Fish Resource Agency on this cruise, which combined fish and zooplankton surveys with nutrient and phytoplankton surveys. This integrated survey provided a snapshot of all the major pelagic food web components in the Eastern Gotland basin. In addition to its scientific value, experience from this successful pilot project is helpful in planning future routine integrated ecosystem surveys.**

Phase I of the Baltic Sea Regional Project has established a network of scientific institutions, known as centres of excellence, and successfully introduced the ecosystem approach in the Eastern Baltic Sea region. Phase I is due to run until June 2006. In view of the sustainability of the project activities, the planning of Phase II has now been initiated. Phase II of the BSRP will continue working towards the goals and objectives outlined for Phase I, with an intensified focus on the policy-making level and on the practical application of sustainable methods on farms, along the coast and in the sea.

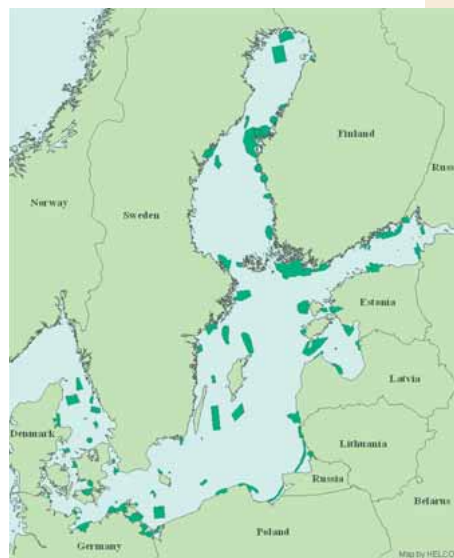
## HELCOM BSPA Project to strengthen and expand the network of marine protected areas

In line with the 2003 HELCOM/OPSPAR Ministerial Declaration, the HELCOM BSPA Project has been working to implement the joint Work Programme on Marine Protected Areas. The Project has made an inventory of marine protected areas in the Baltic Sea to identify gaps, and to build by 2010 a joint network of well-managed marine protected areas that is ecologically coherent.

The Project has created a comprehensive database on the existing network of Baltic Sea Protected Areas (BSPAs) and other protected areas such as Natura 2000 sites. This database can be accessed via the Internet, and currently contains information on 97 sites. The database has been used in analysing the implementation status of the HELCOM Recommendation on BSPAs.

The Project has also started to evaluate the ecological coherence of the BSPA and Natura 2000 networks using information on how areas give particular protection to species, natural habitats and biotopes to conserve biological and genetic diversity; how the areas protect ecological processes and ensure ecological functions; and how the areas are replicated and connected.

The Project has also improved HELCOM's guidelines for the management of the BSPAs, and for the monitoring of the effectiveness of this management. It will also identify gaps and provide basic guidance for establishing a dialogue between stakeholders in the BSPAs.



Marine Protected Areas in the Baltic Sea as of 2005

## HELCOM launches a common Baltic maritime traffic monitoring system

An Automatic Identification System (AIS) for monitoring maritime traffic in the Baltic Sea was officially launched by the Helsinki Commission on 1<sup>st</sup> July 2005. The new automatic VHF radio-based system enables the identification of the name, position, course, speed, draught and cargo of every ship of more than 300 gross tonnes sailing in the Baltic Sea, and displays all available data over a common background map of the region.

“The system is fully operational and covers the whole of the Baltic Sea and Norwegian waters,” said HELCOM Executive Secretary Anne Christine Brusendorff. “It will greatly improve risk management and facilitate deci-

sions on new measures to prevent collisions and improve navigational safety in the Baltic Sea”.

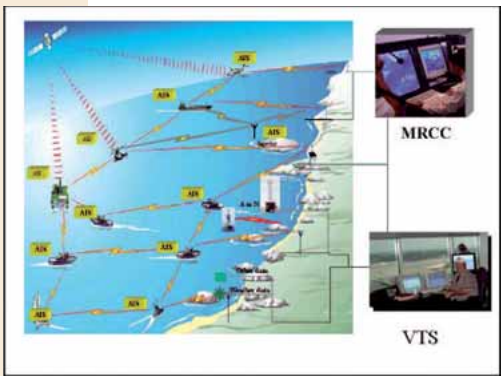
The system includes land-based stations established in all the coastal countries to receive information from all vessels passing through their national waters. All stations are linked to a “HELCOM server”, which combines all the data and provides a comprehensive real-time picture of the overall maritime traffic situation in the Baltic Sea to the competent authorities in each HELCOM member state.

In addition to providing shore stations with information, the AIS also enables



HELCOM AIS stations

Continues on the following page



ships to detect and identify each other at sea. The AIS messages contain information on the identity, position and course of the vessel, as well as various additional data.

The primary task of the shore-based AIS network is to provide the competent authorities with a monitoring tool for supervision, risk analyses, search and rescue (SAR) operations, port state control, security and other safety-related tasks to ensure safe navigation in the crowded waters of the Baltic Sea.

The HELCOM AIS network will also make it possible to elaborate statistics on the nature and extent of shipping, as well as the amounts of cargo being transported in the Baltic Sea area. This will provide an improved basis for future risk assessments and the identification of needs for additional measures.

“Implementing the Automatic Identification System was a challenging and demanding task for all the HELCOM countries, but we met the deadline of 1<sup>st</sup> July 2005, as defined in the Copenhagen Declaration,” said Benny Pettersson, Chairman of the AIS Expert Working Group.

The decision to establish a land-based monitoring system for ships, based on AIS signals, was taken during the HELCOM Extraordinary Ministerial Meeting in Copenhagen in 2001, which followed one of the most serious oil spills in the Baltic in recent years. On 29<sup>th</sup> March 2001, close to the sea border between Germany and

Denmark, the double-hulled oil tanker “Baltic Carrier” collided with the bulk carrier “Tern”, resulting in the spillage of 2,700 tons of heavy fuel oil, much of which eventually washed up along the Danish coast.

The new system builds upon the International Maritime Organisation’s (IMO) requirements for all larger ships to be equipped with AIS. HELCOM’s work will also contribute at European level to the implementation of the EU directive on traffic monitoring and information, under which AIS exchange systems should be operational by the end of 2008.

### Background: Maritime traffic in the Baltic Sea

The issue of maritime safety is given the highest priority in the Baltic Sea region. The Baltic is a relatively small sea, with many rocky shallows, narrow straits and labyrinthine archipelagos, as well as harsh winter ice conditions. The Baltic Sea is criss-crossed by some of the busiest shipping lanes in the world. The intensity of shipping activities in the Baltic has been growing very rapidly during the last decade, and there is no sign of this trend slowing down. There are around 2,000 ships at sea at any time, accounting for 15 % of the world’s cargo transportation. All kinds of cargo are shipped in and out of the Baltic Sea countries, including oil and hazardous substances. Every day 150-200 large tankers are filled with oil in 20 ports around the Baltic.

The sizes of ships have been increasing, as well as their numbers. Some tankers in the Baltic nowadays carry as much as 100,000 tonnes of oil. This increases the risk of a major oil spill. Every year about 70 shipping accidents occur in the Baltic Sea. Fortunately most of them do not cause any notable pollution, but a single large-scale accident could seriously threaten the Baltic marine environment.

Forecasts predict a further 40% increase in oil transportation by 2015 from today’s level of more than 160 million tonnes a year. Cost factors would already favour the use of even larger tankers able to carry 100,000-150,000 tonnes of oil.



## HELCOM fleet rehearses oil spill response off the Swedish coast



A total of 19 ships and smaller vessels from the Baltic Sea countries participated in HELCOM's annual pollution response exercise BALEX DELTA 2005, held off Karlskrona, Sweden, on 31<sup>st</sup> August.

The main aim of the exercise was to test the Baltic Sea countries' readiness to respond to a major oil accident at sea, particularly with regard to response capability and co-operation between response units from different countries.

"The exercise went very smoothly," said Thomas Fagö, Chairman of the HELCOM Response Group. "All objectives were achieved. This exercise is invaluable for maintaining our readiness to effectively respond to a major oil spill in the Baltic Sea. It gives us an opportunity to test common procedures for how to acquire assistance in case of a major oil spill, and how to communicate and work together under one command during a response operation at the scene of an accident."

BALEX DELTA 2005 was organized by the Swedish Coast Guard Headquarters and its Regional South Command. Response vessels from 7 Baltic Sea countries (Denmark, Finland, Germany, Latvia, Lithuania, Poland and Sweden) participated in this year's exercise.

The exercise involved a scenario where a ferry collided with an oil tanker carrying a cargo of around 70,000 tonnes of heavy fuel oil south of Karlskrona. In addition to its cargo, the oil tanker was also carrying 6,000 tonnes of heavy diesel oil and 150 tonnes of marine diesel oil as bunker. After the collision the oil tanker had supposedly leaked around 10,000 tonnes of its oil cargo, which was assumed to be drifting towards Sweden's coastline. Units from Sweden and other HELCOM countries were tasked to jointly prevent the oil slick reaching the shore. The oil spill was simulated using popcorn.

BALEX DELTA operational response exercises have been held annually since 1990. Over this period HELCOM has steadily improved the readiness of the

countries around the Baltic to jointly respond to an oil spill at sea. The HELCOM countries have more than 30 response vessels on standby located around the Baltic Sea so that they are able to reach any place in the Baltic Sea within 6 to 48 hours.



## Illegal oil discharges in the Baltic Sea continue to decrease

Illegal oil discharges from ships in the Baltic Sea are continuing to become less frequent, according to the latest data compiled by the Helsinki Commission's Response Group.

Last year, 293 oil spills were detected during 5,534 hours of surveillance flights conducted by the coastal countries over the Baltic Sea. Although the number of observed illegal oil discharges is slightly higher than it was in 2003 (292), surveillance planes flew 600 hours more last year, which means that the number of illegal oil discharges detected per flight hour has continued to decrease.

"We see a continuation of a positive trend," said HELCOM Professional Secretary Tadas Navickas. "The decrease in the number of observed illegal discharges, despite the rapidly growing density of shipping, the increased frequency of the surveillance flights and improved usage of remote sensing

equipment, illustrates the positive results of the complex set of measures known as the Baltic Strategy, which has been implemented by the Contracting Parties to the Helsinki Convention."

Most of the illegal oil discharges were detected along main shipping routes. The ten most significant spills, each containing more than 10 cubic metres of oil, were detected in the south-western Baltic, the Kattegat, and the Gulf of Finland. The largest spills of all were observed west of Bornholm (253.1 cubic metres) and east of Rügen (111.5 cubic metres).

Deliberate illegal oil discharges from ships have been regularly observed during surveillance flights over the Baltic Sea since 1988. The number of observed illegal oil discharges has gradually been decreasing every year, since the peak year of 1989, when 763 spills were detected during 3,491 flight hours.

"Regular aerial surveillance flights contribute significantly to the decrease in discharges as ships are aware that their illicit activities will not remain unseen," said Thomas Fagö, Chairman of the HELCOM Response Group. "The HELCOM aerial surveillance fleet today consists of more than 20 airplanes and helicopters, many of them equipped with remote sensing equipment such as side looking airborne radar (SLAR), infrared (IR) and ultraviolet (UV) cameras, photo and video equipment."

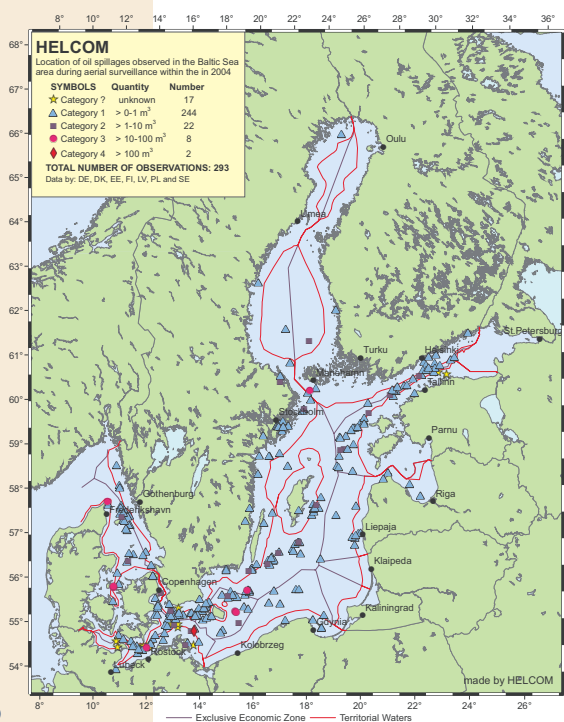
Today, any discharge into the Baltic Sea of oil, or diluted mixtures containing oil in any form including crude oil, fuel oil, oil sludge, or refined products, is prohibited. This applies to oily water from the machinery spaces of any ship, as well as from ballast or cargo tanks



of oil tankers. The prohibition stems from the international designation of the Baltic Sea as a "special area" under the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78).

To uphold this prohibition, the 1992 Helsinki Convention requires all ships, with a few exceptions, to deliver oil to reception facilities before leaving port. To further encourage delivery, the countries bordering the Baltic Sea have agreed that ships should not be charged for using such reception facilities, under the "no-special-fee" system. Costs are instead recovered from general harbour fees or general environmental fees, for instance.

"The increased amounts of wastes now being delivered to the Baltic Sea ports illustrate that more and more ships are delivering their oil wastes to port reception facilities rather than illegally discharging them into the Baltic Sea," said Tadas Navickas.





## Swedish Coast Guard team wins HELCOM Trophy again

For the third year in a row, the Swedish Coast Guard team has won the HELCOM Trophy rowing competition. The race was held on 1<sup>st</sup> September in Karlskrona, Sweden, following the Helsinki Commission's annual pollution response exercise BALEX DELTA 2005.

Seven teams, representing response vessels from Denmark, Finland, Germany, Latvia, Lithuania, Poland and Sweden, took part in this year's competition.



### Winners of the HELCOM Trophy rowing competition:

- 2005 (Karlskrona) – Sweden
- 2004 (Warnemünde) – Sweden
- 2003 (Helsinki) – Sweden
- 2002 (Liepaja) – Lithuania
- 2001 (Rönne) – Lithuania
- 2000 (St. Petersburg) – Sweden
- 1998 (Gdynia) – Finland
- 1996 (Karlskrona) – Poland
- 1991 (Rönne) – Sweden
- 1990 (Gdynia) – Sweden

The teams were divided into two groups. The Swedish and Polish teams were the first to finish in their groups, followed by the Finnish and Danish teams. The two best teams from each group qualified for the final. In a dramatic final race the Swedish boat finished first and the Finnish boat crossed the finish line only seconds later. This was the tenth HELCOM rowing competition held since 1990. The race has been won six times by the Swedish team, twice by the Lithuanian team, and once each by the Polish and Finnish teams.



## HELCOM Youth Forum charts an environmentally friendly course for the Baltic Sea region

Policy formulation and the setting of priorities for actions designed to protect the Baltic Sea marine environment and ensure its sustainable use were the focus of the Second HELCOM Youth Forum, which was held under the motto "My Baltic Sea of tomorrow" on 9<sup>th</sup> – 11<sup>th</sup> of August in Rostock, Germany.

More than 40 students representing all nine Baltic Sea coastal countries took part in this three-day event, considering ways to safeguard a vibrant, healthy marine environment, improve maritime safety and promote further dynamic economic and positive political developments in the region. The students' visions and concrete demands directed at politicians and key players in the Baltic Sea region will serve as valuable input to the work of HELCOM.

"The general idea of the Forum is to proactively involve a major stakeholder group – university students – in the work of the Helsinki Commission," said Prof. Dr. Peter Ehlers, Chair of the HELCOM Youth Forum,

who has twice served as the Chair of the Helsinki Commission. "This Forum brings together young people from various parts of the Baltic Sea area to discuss regional environmental concerns and to plan how they might participate in resolving environmental problems".

"We regard the HELCOM Youth Forum as a very important event. The future of the Baltic Sea depends on how the next generation will continue with the work so far done by our organisation," said Anne Christine Brusendorff, Executive Secretary of the Helsinki Commission. "We also regard this year's Forum as an important input to the strategic Baltic Sea Action Plan, which is now being elaborated by HELCOM to further reduce pollution in the Baltic Sea and repair the damage done to the marine environment. The development of this Plan calls for wide stakeholder participation at many levels – from international organisations and governments, right down to the individual citizens, whose choices can help to reduce pollution," she added.

This year's HELCOM Youth Forum was organised by the German Federal Ministry for Environment, Nature Conservation and Nuclear Safety, in cooperation with the Baltic Sea Research Institute in Warnemünde, the German Federal Maritime and Hydrographic Agency, the Landtag of Mecklenburg-Vorpommern and the Baltic Sea Forum.

The First Youth Forum was held on 1 March 2004 in Helsinki, Finland, in connection with the 30<sup>th</sup> Anniversary Jubilee Session of the Helsinki Commission. The Forum adopted a Youth Declaration, which was handed over to the President of the Republic of Finland, Tarja Halonen.



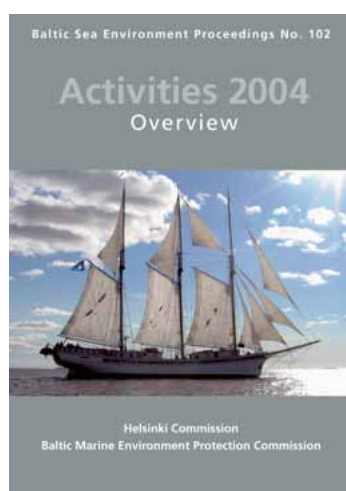
Prof. Dr. Peter Ehlers, Chair of the HELCOM Youth Forum, President of the German Federal Maritime and Hydrographic Agency



## Latest HELCOM publications

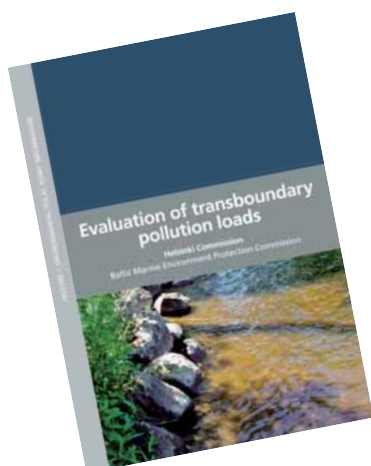
### HELCOM Activities 2004 Overview

This report summarises the activities of the Helsinki Commission related to the protection of the Baltic Sea marine environment over the period from March 2004 to March 2005, also reviewing these activities together with current trends related to the main environmental issues.



### Evaluation of transboundary pollution loads

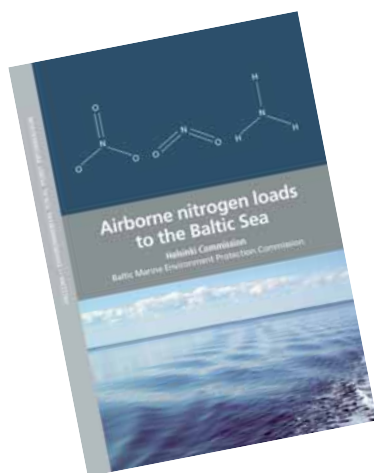
This publication contains compiled information on the waterborne pollution loads that enter the Baltic having originated from Belarus, the Czech Republic and Ukraine. The report shows that the inputs into the Baltic from these countries are significant



for nutrients and selected heavy metals. For this reason HELCOM has decided to strengthen its cooperation with Belarus, the Czech Republic and Ukraine.

### Airborne nitrogen loads to the Baltic Sea

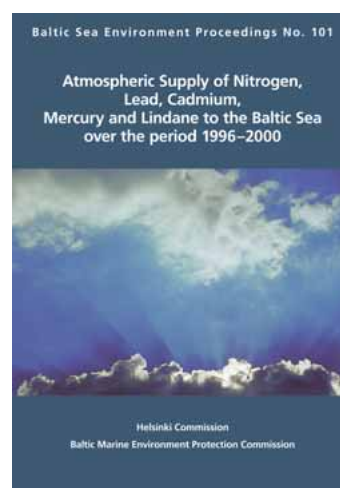
This report presents an overview of the different sources contributing to the deposition of airborne nitrogen to the Baltic Sea. It also reviews existing pollution reduction measures and their status of implementation, and sets out proposals for further developments for the most significant emission sources such as agriculture and shipping.



### Atmospheric supply of nitrogen, lead, cadmium, mercury and lindane to the Baltic Sea over the period 1996 – 2000

This report presents the emission levels of nitrogen, lead, cadmium, mercury and lindane in the HELCOM countries and the deposition to the Baltic Sea during the five-year period 1996-2000. The information is based on monitoring results and modelling estimates. The figures for emissions of nitrogen, heavy metals and lindane decreased during this period. Deposi-

tions into the Baltic Sea, however, do not always correlate with reductions in emissions, due to factors including meteorological conditions and the impact of distant sources.



These reports can all be viewed on HELCOM's website at [www.helcom.fi](http://www.helcom.fi). To order print copies, please call the HELCOM Secretariat: + 358 (0)9 6220 220 or send an e-mail to [info@helcom.fi](mailto:info@helcom.fi).

# Upcoming HELCOM Meetings



## **4 November 2005**

Extraordinary Meeting of the Heads of Delegation (HELCOM HOD EXTRA 2005), Bonn, Germany

## **9 – 11 November 2005**

3rd Meeting of ICES/BSRP Ecosystem Health Study Group, Kaliningrad, Russia

## **9 – 11 November 2005**

BSRP C2 Network Meeting, Kaliningrad, Russia

## **15 – 16 November 2005**

Sixth Meeting of the Expert Working Group on Transit Routeing (TRANSIT ROUTE EWG 6/2005), Bonn, Germany

## **21 – 25 November 2005**

Eighth Meeting of the Monitoring and Assessment Group (HELCOM MONAS 8/2005), Riga, Latvia

## **23 November 2005**

Informal Meeting of Ministers for the Environment from the Baltic Sea States, Stockholm, Sweden

## **23 November 2005**

12<sup>th</sup> Meeting of the Expert Working Group for Mutual Exchange and Deliveries of AIS data (AIS EWG 12/2005), Copenhagen, Denmark

## **30 November – 2 December 2005**

Sixth Meeting of the Response Group (HELCOM RESPONSE 6/2005), Klaipeda, Lithuania

## **12 – 13 December 2005**

18<sup>th</sup> Meeting of the Heads of Delegation (HELCOM HOD 18/2005), Helsinki, Finland

## **February 2006**

Third HELCOM/BSRP Coastal Fish Monitoring Workshop, Helsinki, Finland

## **21 – 23 February 2006**

Expert Workshop on the Development of an Initial List of Threatened and/or Declining Marine Species and Biotopes/Habitats, Helsinki, Finland

## **7 March 2006**

HELCOM Conference, Helsinki, Finland

## **8 – 9 March 2006**

27<sup>th</sup> Meeting of the Helsinki Commission (HELCOM 27/2006), Helsinki, Finland

## **8 – 12 May 2006**

Eighth Meeting of the Nature Conservation and Biodiversity Group (HELCOM HABITAT 8/2006), [Lithuania]

## **30 May – 2 June 2006**

11<sup>th</sup> Meeting of the Project Group for Monitoring of Radioactive Substances in the Baltic Sea (HELCOM MORS-PRO 11/2006), Monaco

---

## New staff at the HELCOM Secretariat

Ms. Hanna Paulomäki took up the position of the new Scientific Assistant at the Secretariat of the Helsinki Commission

on 20<sup>th</sup> June 2005. Also Mr. Hermann Backer, Ecological Objectives Project Assistant has prolonged his contract.



[www.helcom.fi](http://www.helcom.fi)