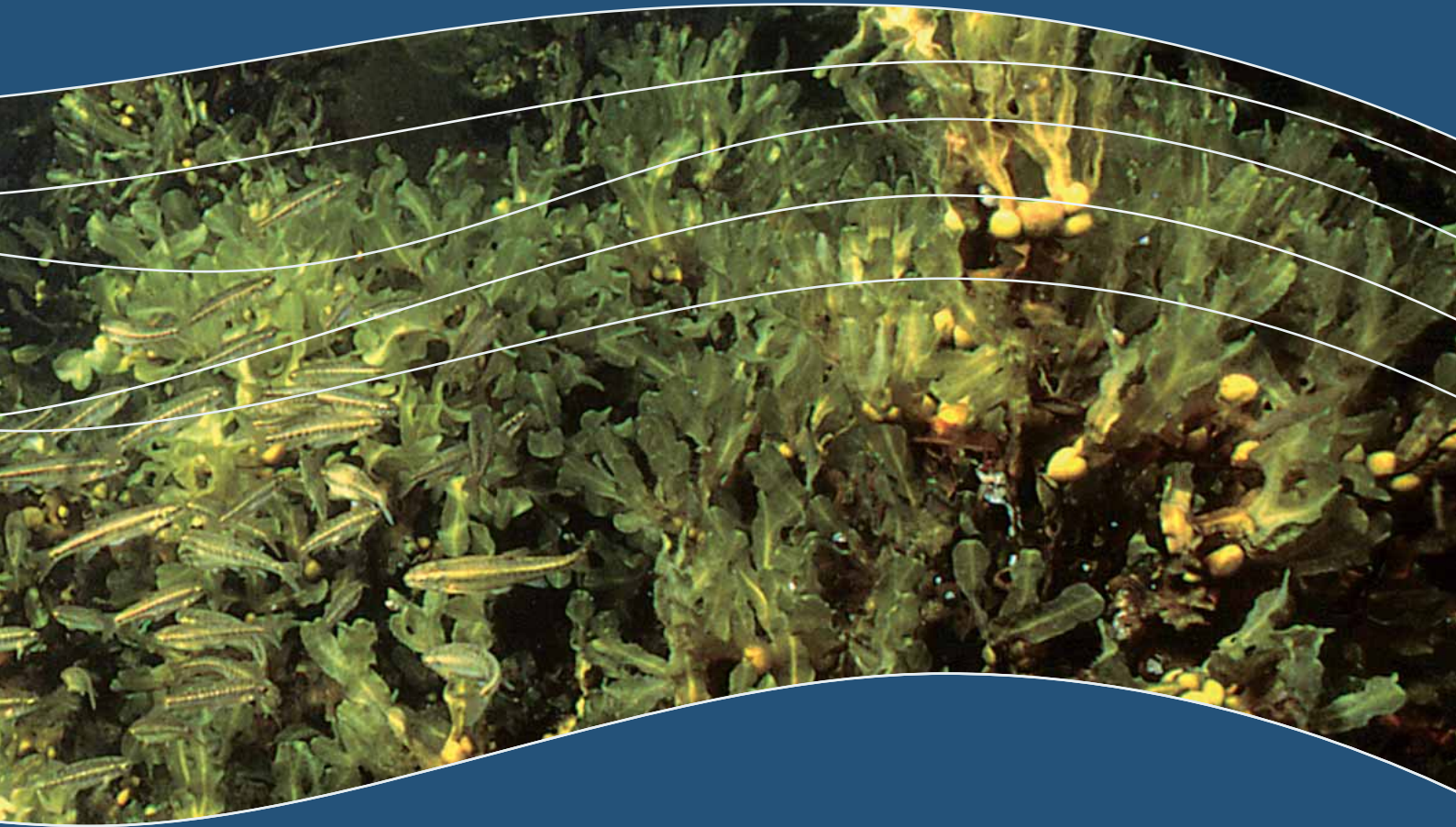


Baltic Sea Environment Proceedings No. 107

# Activities 2005

## Overview



Helsinki Commission

Baltic Marine Environment Protection Commission

# Activities 2005 Overview

## Introduction

This report summarises the activities of the Helsinki Commission (HELCOM) related to the protection of the Baltic marine environment over the period March 2005 to March 2006.

It provides the latest HELCOM assessment of current trends in the Baltic marine environment, as well as an update on HELCOM's recent activities. HELCOM's work aims to curb the eutrophication caused by the excessive nutrient loads entering the sea, prevent pollution involving hazardous substances, improve maritime safety and accident response capacity, and halt habitat destruction and the decline in biodiversity.

More details of HELCOM's activities, projects and publications are available at [www.helcom.fi](http://www.helcom.fi), together with background information about environmental issues related to the Baltic Sea.

## Activities 2005 Overview

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# Contents

Foreword	4
<b>1. The working structure of HELCOM</b>	<b>7</b>
• Organisation	7
• The goals of the Helsinki Commission	7
• The 1974 Convention	7
• The 1992 Convention	7
• Priorities	7
<b>2. The HELCOM Baltic Sea Action Plan – a decisive step towards the recovery of the Baltic marine environment</b>	<b>9</b>
• Creating a new environmental strategy	9
• HELCOM's Baltic Sea Action Plan receives strong support at its initial Stakeholder Conference	11
• HELCOM approves core elements of the Baltic Sea Action Plan	14
• The idea behind the new action plan	15
• Defining Ecological Objectives for the action plan	16
• Major political forums back HELCOM's new environmental strategy	17
<b>3. Environmental monitoring and reporting</b>	<b>19</b>
• Eutrophication still a widespread and persistent problem	19
• More action still needed on hazardous substances	23
• HELCOM EUTRO – a pilot project aiming to develop new tools for assessing eutrophication	27
<b>4. Combating eutrophication and hazardous substances</b>	<b>29</b>
• Modelling reduction scenarios	29
• Assessing airborne nitrogen deposition	29
• Cleaning up Hot Spots	30
• Tackling dioxin pollution	30
• Further action on hazardous substances	31
<b>5. Reducing the impacts of shipping on the marine environment</b>	<b>33</b>
• HELCOM launches a common Baltic maritime traffic monitoring system	33
• Devising a new system to identify suspects of illegal discharges	34
• Reducing air pollution from ships	34
• Preventing the introduction of non-native species	35
• HELCOM study reveals 100% increase in shipping accidents in the Baltic	35
<b>6. Boosting oil spill response capacity</b>	<b>37</b>
• Illegal oil discharges in the Baltic Sea continue to decrease	37
• Testing readiness to respond to oil spills	38
• Looking at dispersants	39
• Co-operating with EMSA	39
<b>7. Promoting nature conservation</b>	<b>41</b>
• Habitats and biodiversity at risk	41
• HELCOM BSPA Project to strengthen and expand the network of marine protected areas	42
<b>8. Baltic Sea Regional Project running at full steam ahead</b>	<b>45</b>
• Assessing the state of marine ecosystems	45
• Monitoring agricultural runoff	45
• Investing in capacity to target nutrient flows from farms	46
<b>9. HELCOM Youth Forum charts an environmentally friendly course</b>	<b>49</b>
<b>10. New HELCOM book explores the variety of marine life in the Baltic Sea</b>	<b>51</b>
<b>11. HELCOM provides teaching materials on Ecological Objectives</b>	<b>52</b>
<b>12. Appendices</b>	<b>53</b>
• Recommendations adopted by HELCOM 27	53
• Press releases	53
• Newsletters	54
• Baltic Sea Environment Proceedings (BSEP) and other publications	55

# Foreword

For the Helsinki Commission, 2005 was a year marked by decisive, strategic steps forward. In the future it may well be considered as one of the defining moments in our efforts to make the Baltic Sea a more environmentally sound and healthier place.



At the 17<sup>th</sup> Meeting of the Heads of Delegation of the Contracting Parties, held on 13-15 June 2005 in Helsinki, Finland, the Helsinki Commission resolved to create a new Baltic Sea Action Plan, which would include a wide-ranging strategy to reduce pollution and reverse the degradation of the marine environment. This ambitious plan of action is completely different from any other plan or programme previously undertaken by HELCOM.

The basis for the decision to draw up this plan was, of course, the present state of the Baltic Sea, and the fact that in spite of environmental protection successes over the last three decades, the measures currently in place will not be enough to cope with mounting pollution and other environmental problems. It was also driven by the growing awareness that if we lose any more time by failing to base policy decisions firmly on environmental considerations, we will undermine both the prospects for the future recovery of the marine environment, and a vital resource base for the future economic prosperity of the whole Baltic region.

The HELCOM Baltic Sea Action Plan will provide a unique opportunity to take wide-ranging and purposeful actions to achieve the ultimate target of having a healthy marine environment with balanced eco-systems for the benefit of present and future generations.

One revolutionary aspect of the new plan is that instead of following the administrative approach of aiming to cut specific pollution loads to certain target levels – which in some cases may not be favourable enough to adequately restore the marine environment – the whole plan will be based on a clear set of Ecological Objectives defined to reflect a common vision of a healthy Baltic Sea. These objectives include easily understandable goals such as clear water, the absence of excessive algal blooms, and a return to the natural distributions of plants and animals. The good ecological status of the marine environment will be based on a holistic view, defining acceptable human impacts, but not compromising the overall ecological health of the sea.

The plan will identify the kind of actions needed to achieve these Ecological Objectives within a given timeframe for the main environmental priorities: combating eutrophication, curbing inputs of hazardous substances, ensuring maritime safety, and halting habitat destruction and the ongoing decline in biodiversity.

A number of indicators will be selected for each objective, so that progress towards achieving good ecological status can be measured. The Ecological Objectives and their associated indicators will be used to evaluate the effectiveness of existing environmental measures, and to show where more measures are needed.

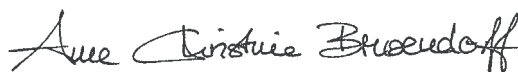
Another major highlight of the HELCOM Baltic Sea Action Plan is that it will be elaborated with the active participation of all major stakeholder groups in the region – from gov-

ernments, through industry and NGOs, right down to individual citizens living on the shores of the Baltic Sea, to ensure that the plan is relevant and can be effectively implemented in practice. The choices we make have to reflect the choices of society as a whole. For this reason it is very important that we define a common vision of the future shared by all stakeholders, including older and younger generations, and organisations in both the private and the public sectors. In this way the plan can promote growth and employment, as well as a healthy environment.

The consultation process behind the drafting of HELCOM's Baltic Sea Action Plan was officially launched at a 'kick-off' Stakeholder Conference held on 7 March 2006 in Helsinki. After a series of meetings and a final Stakeholder Conference in March 2007, which will review a preliminary draft of the plan, the finalised environmental strategy will be

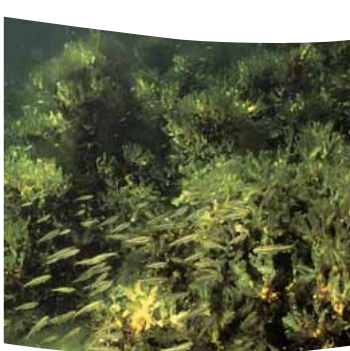
adopted at a HELCOM Ministerial Meeting scheduled to take place on 15 November 2007 in Warsaw, Poland.

I hope that this annual report will provide you with plenty of useful information about the concept of the Baltic Sea Action Plan, as well as an overview of HELCOM's assessments of current trends in the Baltic marine environment and all the other wide-ranging activities carried out by HELCOM during 2005 to protect the Baltic.



*Anne Christine Brusendorff*

Executive Secretary of the Helsinki Commission



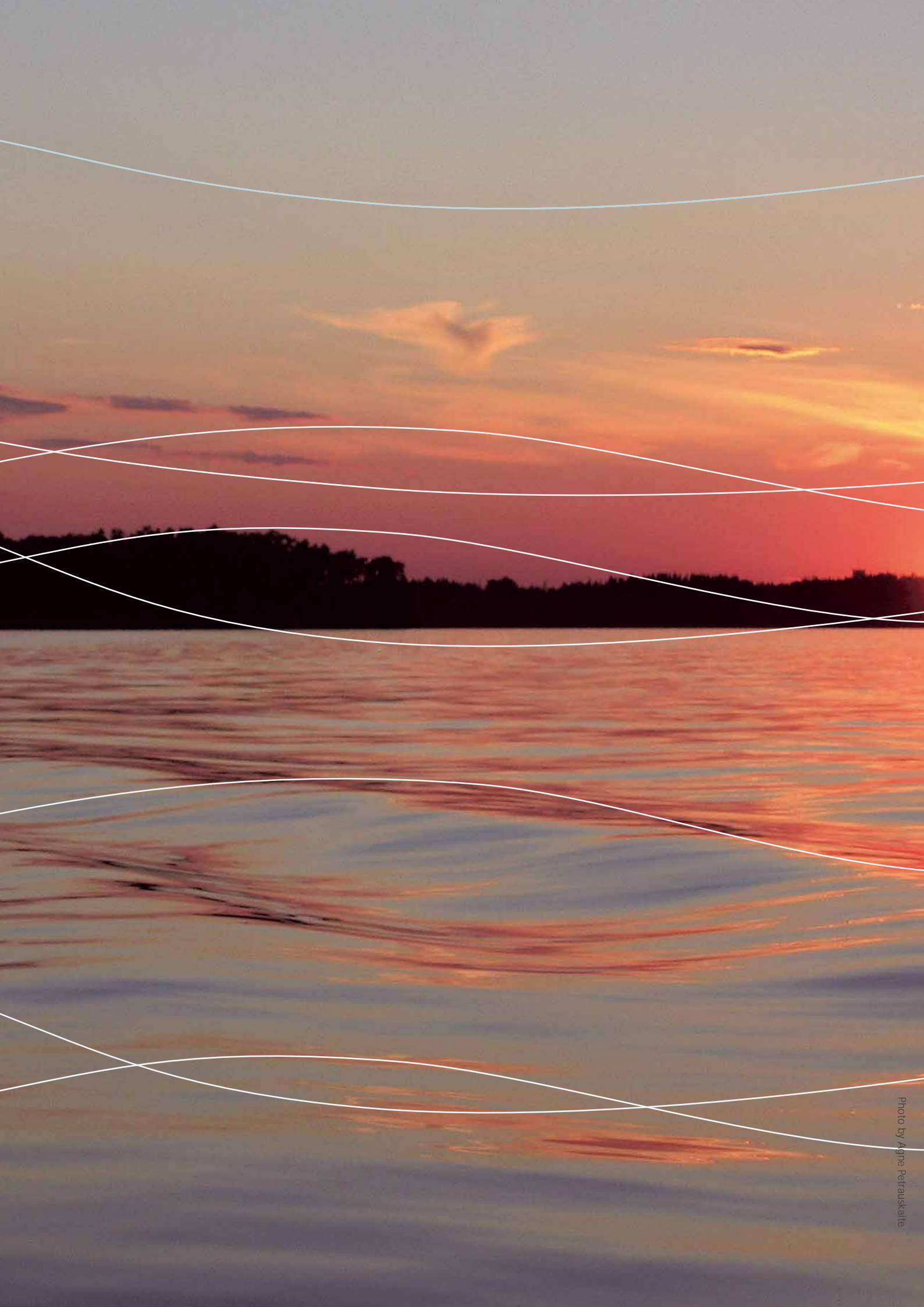


Photo by Agne Petruskaitė

# 1. The working structure of HELCOM

The Helsinki Commission, or HELCOM, works to protect the marine environment of the Baltic Sea from all sources of pollution through intergovernmental co-operation between Denmark, Estonia, the European Community, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden.

HELCOM is the governing body of the "Convention on the Protection of the Marine Environment of the Baltic Sea Area" - more usually known as the Helsinki Convention.

## Organisation

The Helsinki Commission meets annually. Ministerial level meetings are also held occasionally. The Commission unanimously adopts Recommendations for the protection of the marine environment, which the governments of the Contracting Parties must act on in their respective national programmes and legislation.

The chairmanship of the Helsinki Commission rotates between the Contracting Parties every two years, according to their alphabetical order in English.

The working structure of HELCOM, supported by the Secretariat, consists of the meetings of the Helsinki Commission, the Heads of Delegation, and five main groups.

## The goals of the Helsinki Commission

HELCOM's main goal is to protect the marine environment of the Baltic Sea from all sources of

pollution, and to restore and safeguard its ecological balance.

## The 1974 Convention

For the first time ever, all the sources of pollution around an entire sea were made subject to a single convention, signed in 1974 by the then seven Baltic coastal states. The 1974 Convention entered into force on 3 May 1980.

## The 1992 Convention

In the light of political changes, and developments in international environmental and maritime law, a revised Convention was signed in 1992 by all the states bordering on the Baltic Sea, and the European Community. After ratification the Convention entered into force on 17 January 2000. The Convention covers the whole of the Baltic Sea area, including inland waters as well as the waters of the sea itself, and the sea-bed. Measures are also taken in the whole catchment area of the Baltic Sea to reduce land-based pollution.

## Priorities

- Environmental monitoring and assessment
- Combating eutrophication caused by excessive nutrient loads coming from agriculture
- Preventing pollution by hazardous substances
- Improving navigational safety and accident response capacity
- Protecting and conserving marine and coastal biodiversity

## Structure of HELCOM







## 2. The HELCOM Baltic Sea Action Plan – a decisive step towards the recovery of the Baltic marine environment

### Creating a new environmental strategy

On the basis of decisions made at the World Summit on Sustainable Development in Johannesburg in 2002, HELCOM's Bremen Ministerial Meeting in 2003 agreed that implementing the ecosystem approach would be among the priorities for HELCOM's work in the future.

During the 26<sup>th</sup> Meeting of the Helsinki Commission in March 2005 and the 17<sup>th</sup> Meeting of the Heads of Delegation in June 2005, the Coastal States of the Baltic Sea and the European Union recognised the need for a Baltic Sea Action Plan to serve as a major tool in applying the ecosystem approach within the Baltic Sea eco-region – and agreed that HELCOM would play the leading role in this process.

The Baltic Sea Action Plan will be devised jointly by all the Contracting Parties of the Helsinki Convention, taking into account their various obligations with regard to EU regulations. The importance of involving stakeholders in the development of the Baltic Sea Action Plan on both the national and international levels has been greatly emphasised.

It has also been agreed that HELCOM's work selecting Ecological Objectives (EcoOs) and associated indicators for the Baltic should be seen as a first step in developing an action plan for the Baltic. The EcoOs and their associated indicators will then be used to evaluate the efficiency of existing measures, and to help plan future measures.

It has also been agreed in accordance with the HELCOM Bremen Declaration of 2003 that HELCOM will act as a major partner in the development and implementation of the European Marine Strategy in the Baltic region, so as to ensure that this strategy will complement and support efforts towards HELCOM's objectives.

### The basis for the Baltic Sea Action Plan will be:

- the state of the marine environment of the Baltic Sea, and the pressures and threats identified through HELCOM's monitoring and assessment programmes impacting upon the Baltic Sea, particularly the four main environmental issues identified for priority action: eutrophication, hazardous substances, maritime safety, and the ongoing loss of habitats and biodiversity.

tified for priority action: eutrophication, hazardous substances, maritime safety, and the ongoing loss of habitats and biodiversity.

- Ecological Objectives defined for each of these four main environmental issues, and closely linked to HELCOM's monitoring and assessment programmes, which are purposefully designed to support policy-making and check progress towards the agreed objectives.

**The Baltic Sea Action Plan will include** identified measures needed to achieve the environmental objectives within a given timeframe, together with an assessment of the environmental, social and economic costs and benefits of these measures.

The plan will distinguish between actions that can be implemented at regional or national level, and measures that can only be implemented at EU level (e.g. Common Fisheries Policy, Common Agricultural Policy, controls over the marketing and use of chemicals) or globally (e.g. the shipping controls defined by the International Maritime Organisation). Actions that need to be taken at European or global level must be addressed by HELCOM through the related international forums.

### The Baltic Sea Action Plan will thus provide:

- an overall plan stressing Baltic regional viewpoints and specific requirements for a healthy Baltic Sea, as embraced by all the countries in the Baltic Sea catchment area, including the Contracting Parties to the Helsinki Convention and additionally Ukraine and Belarus (as HELCOM observer states), and the Czech Republic (through co-operation with HELCOM and International Financing Institutions)
- an overall plan allowing specific regional requirements to be brought forward in other relevant international forums, including the EU
- an overall plan allowing EU Member States to co-ordinate their work within the EU to reach the objectives defined for the Baltic Sea region
- an overall plan allowing the European Community to work on the basis of the priority objectives and actions defined by HELCOM for the Baltic Sea, and to encourage non-EU member states to participate in the necessary actions.

26<sup>th</sup> annual Meeting of the Helsinki Commission decides that the ongoing work of defining Ecological Objectives for a healthy Baltic Sea will provide the foundation for a strategic environmental Baltic Sea Action Plan

17<sup>th</sup> Meeting of the Heads of Delegation of the Member States, 13-15 June 2005, Helsinki, recognises the need for an environmental Baltic Sea Action Plan, and agrees a tentative timetable for its preparation

HELCOM officially unveils the concept of the Baltic Sea Action Plan, and publishes a popular brochure on the plan in November 2005

Extraordinary Meeting of the Heads of Delegation of the Member States, 4 November 2005, Bonn, decides to organise a kick-off Stakeholder Conference on the Baltic Sea Action Plan in 2006

18<sup>th</sup> Meeting of the Heads of Delegation of the Member States, 12-13 December 2005, Helsinki, discusses further steps in the development of the Baltic Sea Action Plan, and preparations for the kick-off Stakeholder Conference

HELCOM Maritime Group meeting discusses input to the Baltic Sea Action Plan, 11-14 October 2005, Klaipeda, Lithuania

HELCOM Monitoring and Assessment Group (HELCOM MONAS) meeting discusses input to the Baltic Sea Action Plan and outcome of a Project on the development of the Ecological Objectives for the Plan, 21-25 November 2005, Riga, Latvia

HELCOM Response Group meeting discusses input to the plan, 30 November – 2 December 2005, Klaipeda, Lithuania

**Baltic Sea Action Plan development timeline**



Stakeholder Conference on the HELCOM Baltic Sea Action Plan, 7 March 2006, discusses the concept of the plan

27<sup>th</sup> annual Meeting of HELCOM adopts a set of Ecological Objectives to serve as the core of the action plan

HELCOM Task Force begins to prepare proposals for the plan in April 2006

2006 -2007 Consultations and meetings related to the development of the action plan



Final Stakeholder Conference to review the draft Baltic Sea Action Plan, March 2007

HELCOM to adopt the Baltic Sea Action Plan at a Ministerial Meeting, 15 November 2007, Warsaw, Poland

### Timing

The consultations and preparation work for the Baltic Sea Action Plan began in the second half of 2005, and will continue until the autumn of 2007. This process includes the following major events:

- The kick-off Stakeholder Conference for the HELCOM Baltic Sea Action Plan (7 March 2006, Helsinki) initiated the whole process of developing the new environmental strategy, by informing stakeholders about the aims and likely activities, and seeking their inputs and commitments at local, national and regional levels, and from the private sector.
- The 27<sup>th</sup> annual Meeting of the Helsinki Commission (8-9 March 2006) adopted a set of Ecological Objectives to serve as the core of the action plan.
- A HELCOM Task Force with wide stakeholder involvement commenced the drafting of proposals for the Baltic Sea Action Plan in April 2006.
- A final stakeholder conference in March 2007 will look into the first draft Baltic Sea Action Plan.
- A HELCOM Ministerial Meeting to be held on 15 November 2007 in Warsaw, Poland, will adopt the final version of the Baltic Sea Action Plan.

### HELCOM's Baltic Sea Action Plan receives strong support at its initial Stakeholder Conference

The concept of the Baltic Sea Action Plan, now being drafted by the Helsinki Commission to rescue the troubled Baltic marine environment, received overwhelming support at a Stakeholder Conference held on 7 March in Helsinki, where more than 200 participants, representing scientific and business communities, governments of the coastal countries, the EU, and major regional organisations, met to discuss the objectives of the strategy and to provide input for its further development.

One important feature of HELCOM's Baltic Sea Action Plan is that it is being devised with active participation from all major stakeholder groups – from governments, through industry and NGOs, right down to the individuals living on the shores of the Baltic Sea, to ensure that the HELCOM action plan is relevant and can be effectively implemented in practice. The kick-off Stakeholder Conference represented the starting point for this whole process.

The Conference programme included a general presentation of the aims and timing of HELCOM's Baltic Sea Action Plan, a description of the state of marine environment, thematic sessions on the proposed objectives for the four key environmental issues (eutrophication, hazardous substances, biodiversity and shipping), and official statements made by high-level politicians.

Keynote speakers included Stefan Wallin, State Secretary of the Finnish Ministry of the Environment; Peter Gammeltoft, Head of the Water and Marine Unit of the Directorate General for Environment at the European Commission; Bob Dekker, OSPAR Chairman; Kornelius Sigmundsson, Chairman of the Committee of Senior Officials of the Council of the Baltic Sea States; Harro Pitkänen, Senior Vice President of the Nordic Investment Bank; Marjukka Porvari of the John Nurminen Foundation; Esa Härmälä, President of the Baltic Farmers Forum on Environment; Gunnar Norén, General Secretary of Coalition Clean Baltic; Sergej Olenin, Klaipeda University; Lasse Gustavsson, director of the WWF Baltic Ecoregion Program; Carsten Melchior, Secretary General of BIMCO; and Tim Wilkins, Environmental Manager of INTERTANKO.

Commenting on the Helsinki Commission's work to create a strategic plan to rescue the marine environment, the State Secretary from the Finnish Ministry of the Environment Stefan Wallin underlined that " HELCOM is the only intergovernmental organisation within the Baltic Sea region with the mandate to deal comprehensively with the

problems of the Baltic Sea, and to jointly agree on implementation of measures to preserve and protect the Baltic marine environment, to conserve natural habitats and biodiversity, and to ensure the sustainable use of natural resources within the Baltic Sea region". Wallin also noted that the preparation of the HELCOM action plan must be open-ended and transparent. " We must use this opportunity when preparing this new Baltic Sea Action Plan to make it as comprehensive and, at the same time, as realistic and action-oriented as possible."

The European Commission described the plan as " the cornerstone for further action" in the Baltic Sea region, and confirmed its intention to take an active part in its development over the coming months. The Commission thinks that in setting a definition of 'good ecological status' for the Baltic Sea as well as specific environmental targets and necessary measures, the Baltic Sea Action Plan will be instrumental to the successful implementation of the new EU Marine Strategy in the region. In this context the new plan makes HELCOM a forerunner, and a model to be followed by other regional marine conventions around Europe.

The Council of the Baltic Sea States (CBSS) also backed the HELCOM action plan. The Chairman of the CBSS Committee of Senior Officials, Kornelius Sigmundsson, said that " the CBSS Presidency recognises the value of HELCOM's Baltic Sea Action Plan as a very important aspect of our region's joint efforts to achieve a healthy Baltic Sea environment." Sigmundsson also added that as an overall political forum for regional intergovernmental co-operation, the Council of the Baltic Sea States will continue to encourage and support HELCOM activities.



Photo by Nanna Rask, Fyn County



## HELCOM approves core elements of the Baltic Sea Action Plan

Following the outcome of the Stakeholder Conference on the development of the Baltic Sea Action Plan, at its annual Meeting on 8-9 March 2006 HELCOM officially approved the core elements of the new environmental strategy to restore the Baltic Sea - a common vision of a healthy sea, and a set of Ecological Objectives to work towards so as to fulfil this vision.

"The general vision and objectives which we have approved will serve as a foundation for the further development of this innovative environmental strategy, and then during the implementation of the plan dictate the need for specific actions to be taken jointly by the Baltic Sea countries in order to restore the environment," said the Executive Secretary of HELCOM, Anne Christine Brusendorff. "In this way the protection of the marine environment is no longer seen as an event-driven pollution reduction approach to be undertaken sector-by-sector. Instead, the starting point is a common understanding and definition of a sea with a good ecological balance, which will define the needs for further reductions in pollution loads, as well as the extent of human activities. This approach is the best way to ensure a holistic and integrated policy approach," underlined Brusendorff. "This will also mean that we will see changes in HELCOM's approach concerning how to achieve a healthy Baltic Sea. HELCOM will no longer

aim at "one-size-fits-all" solutions, but will seek tailor-made solutions with the responsiveness of the marine environment as the starting point."

The next crucial step in the development of the Baltic Sea Action Plan, which is expected to be finalised and adopted by HELCOM in November 2007, will be to identify and detail the kind of actions needed to achieve the agreed environmental objectives within a given timeframe for each of the four main environmental priority issues: curbing eutrophication, preventing pollution involving hazardous substances, improving safety of navigation and accident response capacity, and halting habitat destruction and the decline in biodiversity.

The annual Meeting of HELCOM also approved the establishment of an Ad Hoc Task Force for the development of the Baltic Sea Action Plan. This team consists of representatives nominated by the HELCOM Member States and other interested stakeholders, including representatives of NGOs and the private sector. One of the main objectives of the Ad Hoc Task Force is to ensure political commitment to the HELCOM Baltic Sea Action Plan, thereby maintaining a link between scientific work and relevant political processes.

HELCOM's annual Meeting also discussed working programmes, intersessional work and ongoing projects, including the GEF/World Bank-funded Baltic



Sea Regional Project, as well as the activities of HELCOM subsidiary Groups. The Meeting additionally adopted an updated HELCOM Recommendation 16/8 on "Limitation of Emissions into Atmosphere and Discharges into Water from Incineration of Waste", which now contains new levels for emissions and discharges, including new limit values for dioxins in wastewater.

## The idea behind the new action plan

### 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 unaffected by eutrophication

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

#### 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

##### Marine life undisturbed by hazardous substances

- Concentrations of hazardous substances close to natural levels
- All fish safe to eat
- Healthy wildlife
- Radioactivity at pre-Chernobyl levels

#### 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 activities in the Baltic Sea carried out in an environmentally friendly way

- No illegal pollution
- Safe maritime traffic without accidental pollution
- Efficient response capacity
- No introductions of alien species from ships
- Minimum air pollution from ships
- Zero discharge from offshore platforms
- Adequate capacity all around the Baltic to prevent or minimise pollution in oil spills and other emergencies

#### 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 status of the Baltic Sea biodiversity

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

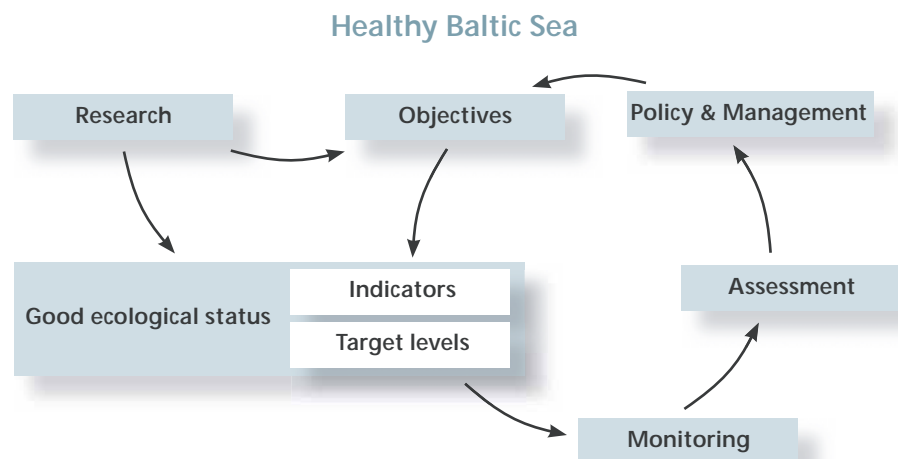
#### Actions

- 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

### Defining Ecological Objectives for the action plan

A set of draft Ecological Objectives (EcoOs) and associated indicators, which will make up the core of the innovative Baltic Sea Action Plan, has been devised from elements of the ecosystem assessment concept developed in 2005 by the HELCOM EcoQO Project (Development of Ecological Quality Objectives for the Baltic Sea).

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 involves 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 programmes. Using a common system of indicators will enable the monitoring results obtained by individual countries, agencies and scientists to be compared more easily, greatly facilitating the evaluation of the present state of the Baltic marine environment.

The final and most crucial step in implementing the ecosystem approach, defining exact targets 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.

## Major political forums back HELCOM's new environmental strategy

The HELCOM initiative to draw up a Baltic Sea Action Plan has already been widely backed by several major forums in the region.

A communiqué from the 13<sup>th</sup> Ministerial Session of the Council of the Baltic Sea States (CBSS), which was held on 9-10 June 2005 in Szczecin, Poland, reiterated the significance of the work of the Helsinki Commission, and welcomed its role in the development of the Action Plan. CBSS underlined that the plan could also be an important contribution to the European 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 in 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 a presentation about 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, making use of established regional co-operation procedures within HELCOM.

The Baltic Sea Informal Meeting for Ministers of the Environment, held on 23 November 2005 in Stockholm, Sweden, stressed that the Helsinki Commission is the best focal point for co-ordinating activities to improve the ecological status of the Baltic Sea, and stated that the forthcoming “HELCOM Baltic Sea Action Plan should be the guiding instrument for further action” in the region. It was proposed that the Baltic Sea Action Plan should be made a “pilot project” under the newly drafted EU Marine Strategy, which in the future foresees a separate action plan for each of Europe's seas.





Photo by Visa Hietalahti

# 3. Environmental monitoring and reporting

As the focal point for the environmental protection of the Baltic Sea, the Helsinki Commission - HELCOM - has been assessing the sources and inputs of nutrients and hazardous substances and their effects on marine ecosystems for almost 30 years. The resulting reports are unique compilations of data and analyses based on wide-ranging scientific research carried out around the Baltic Sea, including special monitoring programmes co-ordinated by HELCOM.

## Eutrophication still a widespread and persistent problem

### Inputs of nutrients

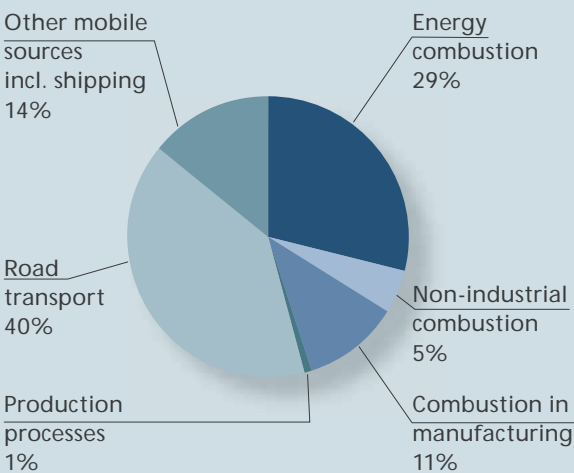
Excessive nitrogen and phosphorus loads coming from land-based sources are the main cause of the eutrophication of the Baltic Sea. Eutrophication is an issue of major concern almost everywhere around the Baltic Sea. Average biomass production has increased by a factor of 2.5, exceptionally intense algal blooms have become more common, and oxygen depletion has considerably worsened, leading to increased internal nutrient loading. Biodiversity and fish stocks have also been seriously affected.

The total annual input of nitrogen entering the Baltic Sea, which is affected by variations in hydrographical and meteorological conditions, varies from about 700 000 to 1 100 000 tonnes (based on data between 1994 and 2003), of which about 25% consists of atmospheric deposition, and about 75% of waterborne inputs. The total annual input of phosphorus entering the Baltic Sea varies from about 20 000 tonnes to about 36 000 tonnes. Phosphorus enters the Baltic Sea mainly as waterborne inputs, and the contribution of atmospheric deposition is only 1-5% of the total. These figures include inputs from natural background sources as well as anthropogenic sources.

### Airborne nitrogen

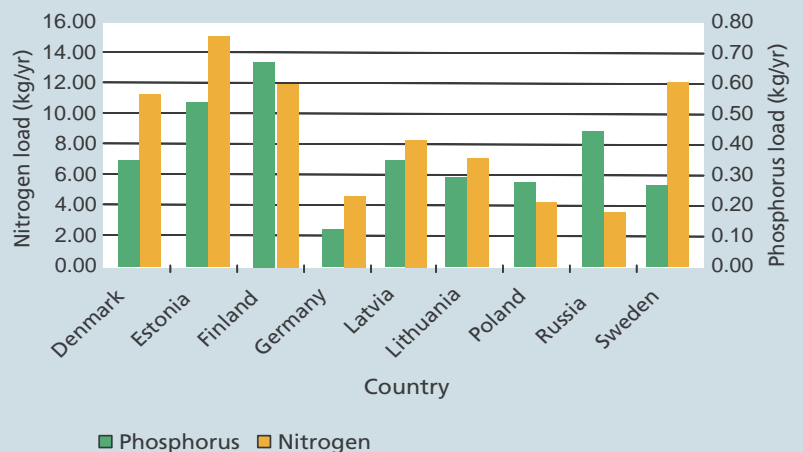
The atmospheric deposition entering the Baltic Sea originates from emission sources both inside and outside the Baltic's own catchment area.

Nitrogen compounds are emitted into the atmosphere as nitrogen oxides and ammonia. Shipping, road transport and combustion for energy are the main sources for emissions of nitrogen oxides (see diagram below). Agriculture accounts for around 90% of all ammonia emissions in the HELCOM



Percentage of total emissions of nitrogen oxides (NO<sub>x</sub>) from different sectors in the HELCOM Contracting Parties (EMEP 2004a)

Per capita anthropogenic nutrient load by country in 2000



■ Phosphorus ■ Nitrogen

countries, and about 40% of total nitrogen emissions.

### Waterborne inputs of nitrogen and phosphorus

Waterborne inputs encompass inputs entering the sea in rivers, as well as emissions from point sources discharging directly into the sea. Riverine inputs include contributions from parts of the Baltic Sea catchment area which lie outside the HELCOM countries.

According to the latest available data, in 2004, the total riverine (including coastal) nitrogen load entering the Baltic Sea amounted to 564 000 tonnes, and the total phosphorus load to 25 000 tonnes. Compared to 2003, the waterborne loads of nitrogen and phosphorus were significantly higher, 100 000 tonnes and 5 000 tonnes respectively. This can be partly explained by the annual variations in nitrogen and phosphorus loads, which largely depend on hydrological conditions. In periods of high runoff, nutrients are abundantly leached from soil, increas-

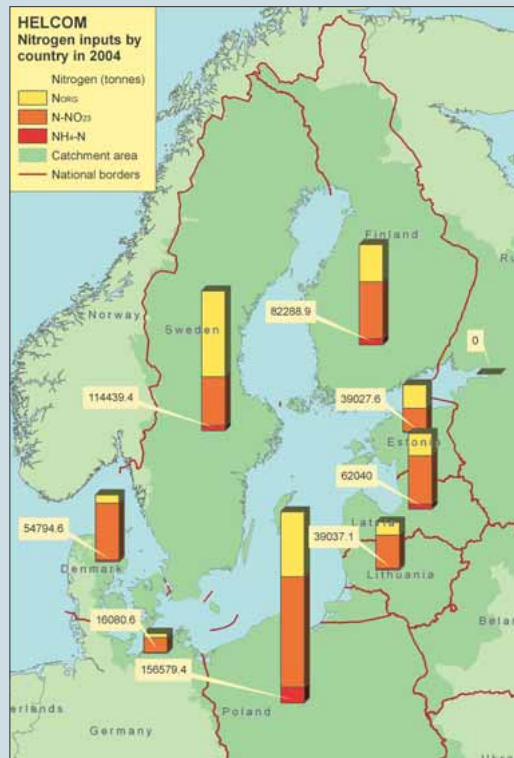
ing the loads originating from diffuse sources and natural leaching.

Riverine nutrient loads consist of discharges and losses from different sources within a river's catchment area, including discharges from industry, municipal wastewater treatment plants, scattered dwellings, losses from agriculture and managed forests, natural background losses, and atmospheric deposition. According to HELCOM's Fourth Baltic Sea Pollution Load Compilation (PLC-4) report, diffuse loads (mainly from agriculture) contributed almost 60% of waterborne nitrogen inputs and 50% of phosphorus inputs.

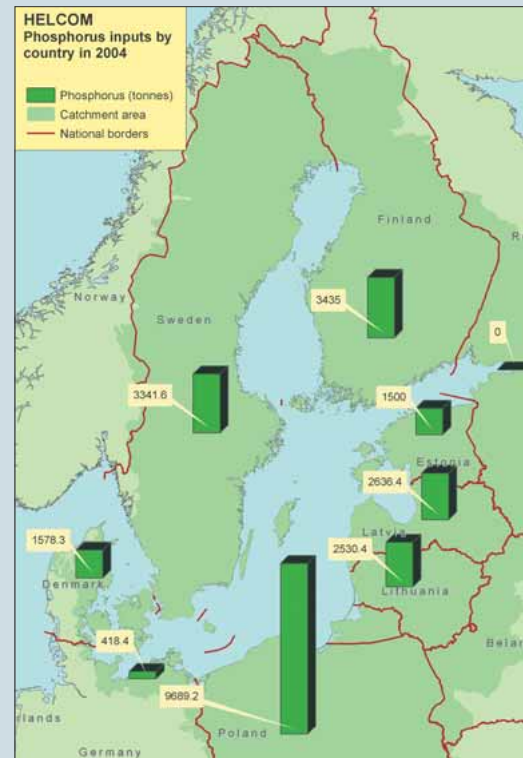
### Transboundary pollution loads

Significant waterborne transboundary pollution loads flow from Belarus, the Czech Republic and Ukraine into the Baltic Sea.

The total riverine loads of nitrogen and phosphorus originating in these countries, measured at the borders, amount to about 8% and 7%



Waterborne loads of Nitrogen ( $N_{total}$ ,  $NH_4-N$ ,  $NO_{2,3}-N$ ) entering the Baltic Sea during 2004 from the 9 HELCOM countries (tonnes)



Waterborne loads of Phosphorus entering the Baltic Sea during 2004 from the 9 HELCOM countries (tonnes)

respectively of the total loads measured at river mouths along the Baltic Sea coast. The significance of these transboundary pollution loads in sub-catchments of certain rivers is naturally higher. Compared to loads at the river mouths, the transboundary pollution loads for nitrogen and phosphorus respectively are 31% and 56% for the River Nemunas; 63% and 60% for the Daugava; 5% and 5% for the Vistula; and 16% and 14% for the Oder, without taking into account riverine retention.

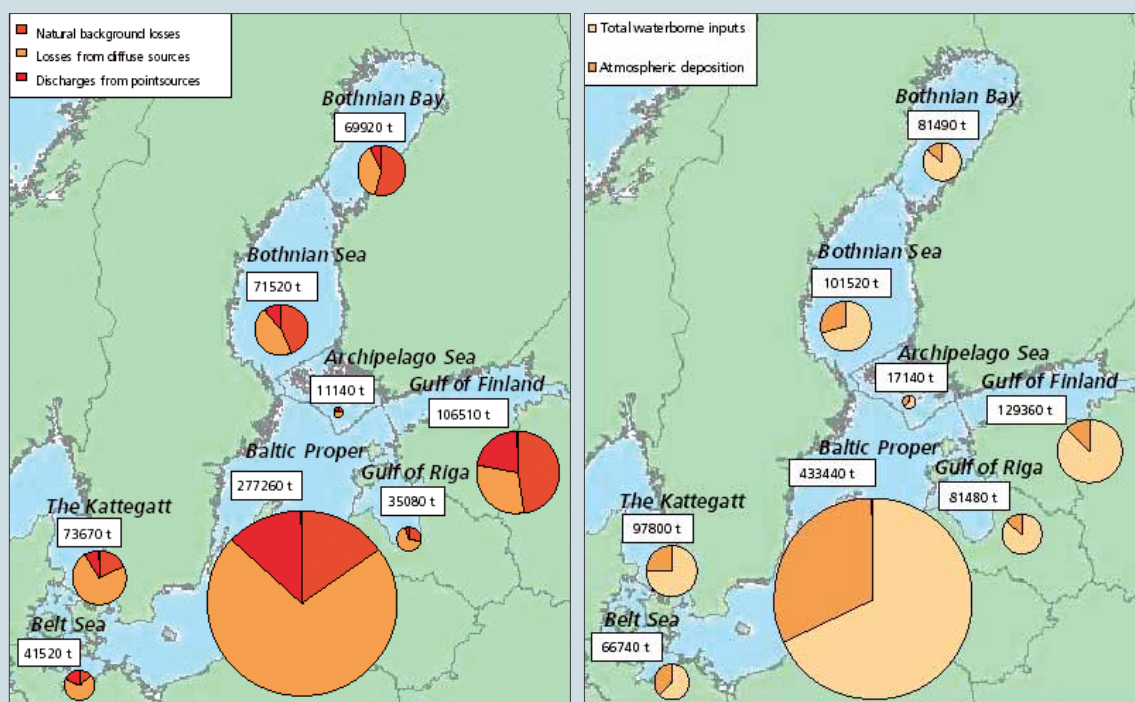
The same countries are also significant sources for airborne nitrogen deposited into the Baltic Sea. The Czech Republic is the 11<sup>th</sup> largest depositor of nitrogen into the Baltic Sea – accounting for higher contributions than Finland or Russia. Ukraine and Belarus rank 15<sup>th</sup> and 16<sup>th</sup> on the list of the most significant contributors, meaning that their inputs exceed the levels of airborne nitrogen coming from Estonia, Latvia or Lithuania into the Baltic Sea.

### Long-term trends in nutrient inputs

Compared to the pristine conditions that prevailed in the Baltic Sea two centuries ago, nitrogen inputs have more than doubled, and phosphorus inputs are on average more than three times higher. According to HELCOM assessments, these inputs are slowly decreasing, however.

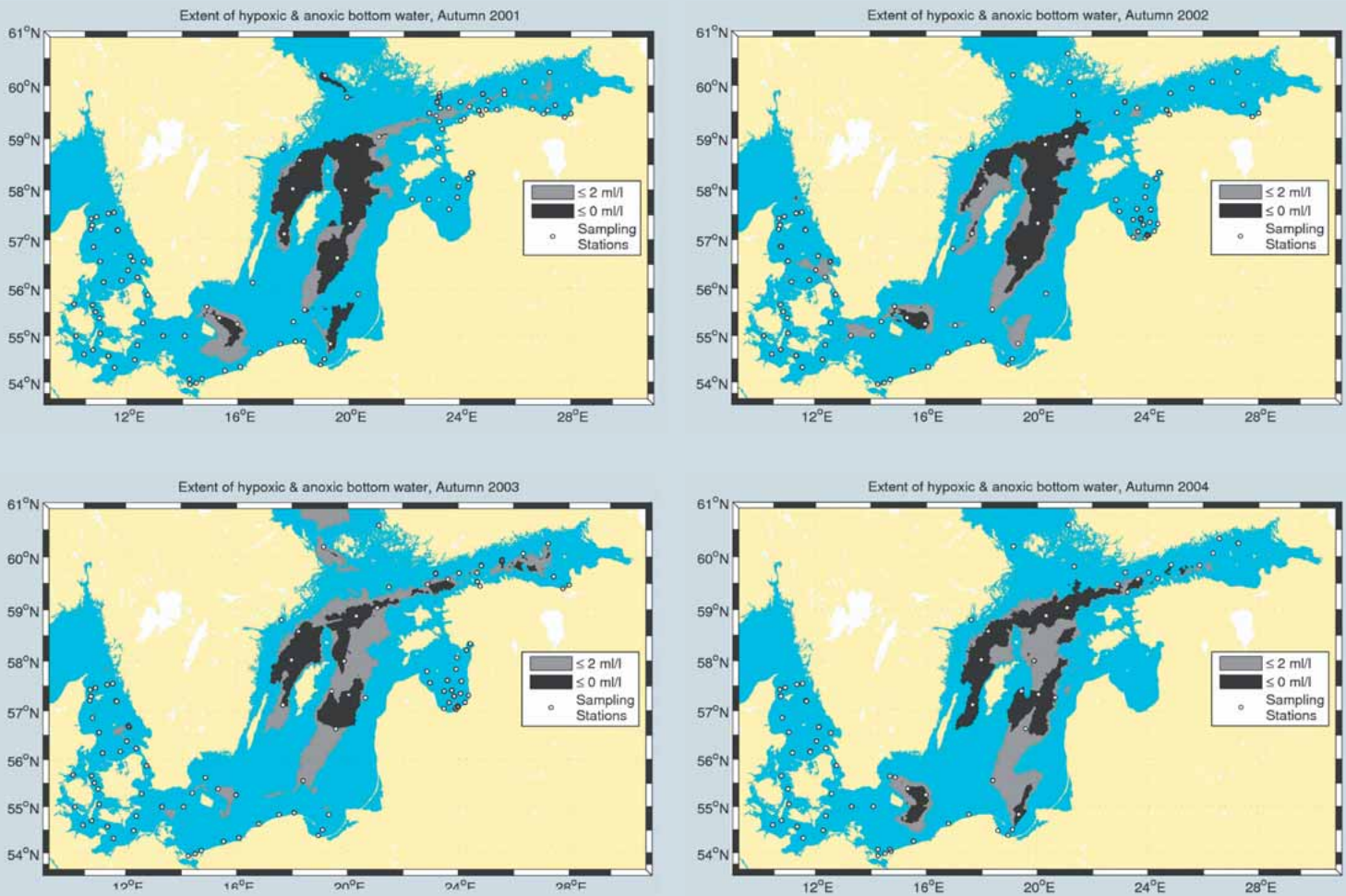
Since 1980 there has been a reduction of approximately 40% in total nitrogen emissions from the HELCOM Contracting Parties. On the other hand, deposition levels have only declined by some 15% during the same time period. This because deposition rates are highly dependent on meteorological conditions, which change from year to year, meaning that reductions in nitrogen emissions do not necessarily lead to corresponding reductions in deposition.

Progress in reducing waterborne nutrient discharges from point sources such as municipal and industrial wastewater treatment plants has been good, with the 50% reduction target for



Proportions of sources contributing to waterborne nitrogen input into the Baltic Sea sub-regions in 2000

Proportions of airborne and waterborne nitrogen inputs into the Baltic Sea sub-regions in 2000



Extents of hypoxic and anoxic bottom water (oxygen content below 2 ml/l and 0 ml respectively) observed annually in Autumn 2000 – 2004

phosphorus achieved by almost all the HELCOM countries.

Measures to reduce nutrient loads from agriculture, contrastingly, have fallen short of their aims, although this is partly due to the fact that it can take decades for such measures to achieve their full effects. Furthermore, climatic conditions should also be taken into account when comparing figures for agriculture from 1985 with data from the year 2000.

The overall reductions in discharges for both phosphorus and nitrogen have been roughly 40% from all sources.

#### Impacts of nutrient inputs

Since the 1800s, the Baltic Sea has changed from an oligotrophic clear-water sea into a eutrophic marine environment.

Nitrogen and phosphorus are important natural nutrients, which as such do not pose any direct hazards to marine organisms. Where eutrophication occurs, however, aquatic ecosystems become burdened by excessively high nutrient inputs, stimulating algal growth, and leading to imbalances in the functioning of ecosystems. Problems caused by eutrophication include:

- intense algal growth: excessive filamentous algae and phytoplankton blooms
- production of excess organic matter
- increase in sedimentation of organic matter
- increase in oxygen consumption in bottom waters and sediments
- oxygen depletion in bottom waters
- death of benthic organisms, including fish

Eutrophication remains an issue of major concern almost everywhere around the Baltic Sea. The

problems described above have been recorded in both coastal waters and the open sea. The maps on the left show the regional distributions of bottom areas with oxygen concentrations below the critical level of 2 ml/l. The large saltwater inflows during 1993 and 1994 oxygenated the bottom waters in the Baltic Proper. However, due to the lack of any further inflow events, and the strong stratification built up by the inflows, oxygen levels decreased again due to the excessive sedimentation of organic material in comparison to the amounts of oxygen transported into deep waters.

The map on the right shows how high winter concentrations of nutrients in coastal waters (shown in red) are mainly located where major rivers enter the Baltic Sea. Nutrient enrichment of these waters stimulates the growth of phytoplankton, leading, in certain circumstances, to algal blooms and subsequent sedimentation and anoxia in the lower part of the water column. This can in turn lead to the widespread death of benthic organisms. The regional distribution of phytoplankton growth shown in the map below reflects the related impacts as observed near the mouths of major rivers during the summer months.

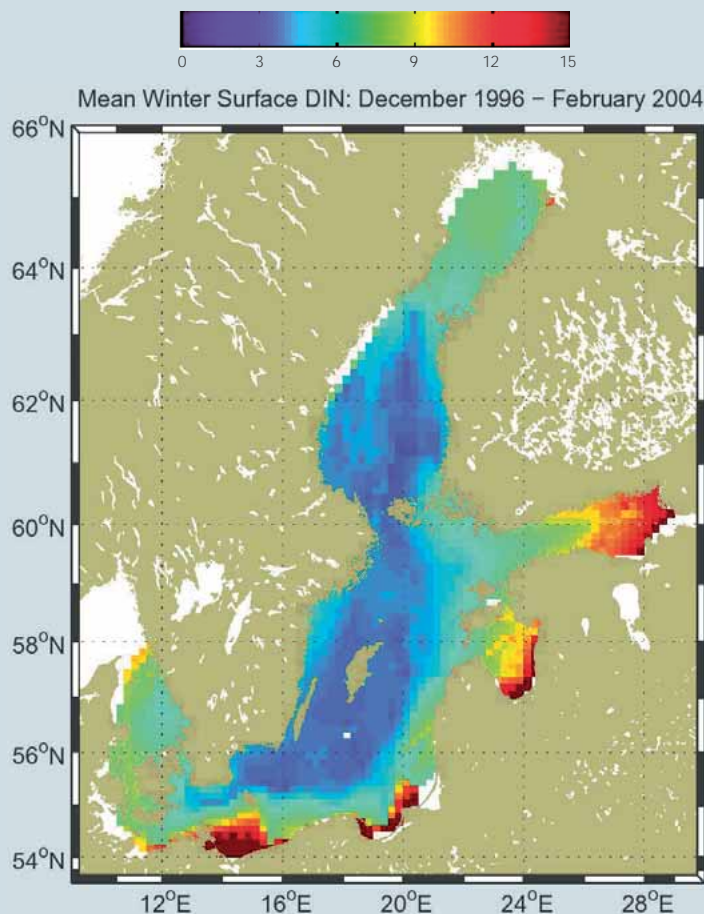
### More action still needed on hazardous substances

#### Inputs of hazardous substances

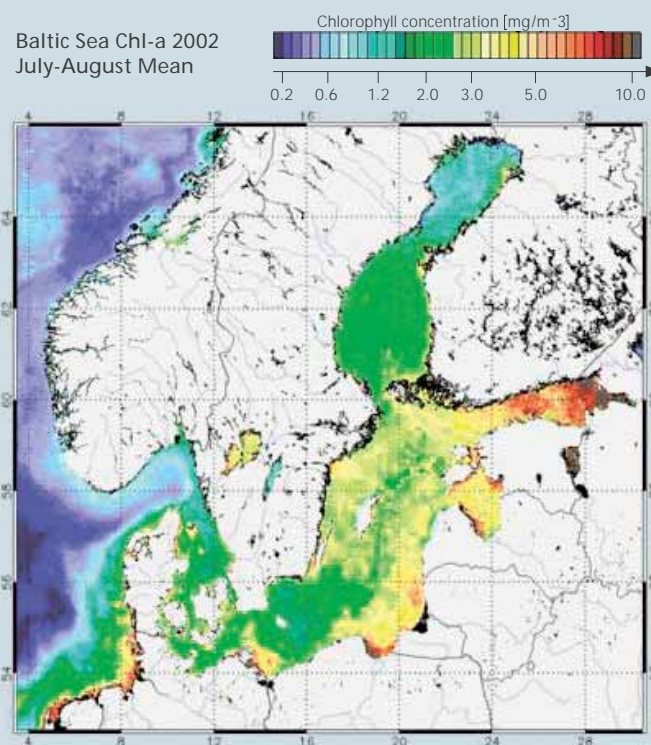
The loads of some hazardous substances entering the Baltic Sea have been reduced considerably over the past 20 to 30 years. Discharges of heavy metals have particularly decreased, although no clear general trends have been observed for the concentrations of certain heavy metals in marine biota since 1990.

Riverine inputs and direct discharges are the main sources of mercury (50%), lead (60-70%) and cadmium (75-85%). The remaining shares are mainly accounted for by atmospheric deposition of these heavy metals.

According to the latest available data, in 2003, total annual emissions by the HELCOM countries amounted to 116 tonnes of cadmium, 61 tonnes of mercury, and 3 271 tonnes of lead.



Mean winter surface concentrations of dissolved inorganic nitrogen (DIN) over the period 1996 – 2004, showing high accumulations in areas affected by major rivers



Chlorophyll-a map of the Baltic Sea compiled from remote sensing satellite data, showing the regional distribution of phytoplankton, reflecting the primary impacts of the excess nutrient inputs illustrated in the preceding map

### Airborne inputs

Deposition rates for cadmium and lead show a decrease from south to north, due to the distance from the main emission sources. The total annual atmospheric deposition rates for heavy metals entering the whole of the Baltic Sea are about 7 tonnes for cadmium, 4.2 tonnes for mercury, and about 134 tonnes for lead. The highest levels of heavy metal deposition are experienced in the Belt Sea sub-basin.

Anthropogenic emission sources of heavy metals, such as industries, energy production and waste incineration in the HELCOM countries accounted for about 40-50% of the total atmospheric deposition into the Baltic Sea. Natural sources and distant sources from outside the Baltic Sea catchment area also contributed significantly.

### Riverine heavy metals load decrease, but still no clear trend in total inputs

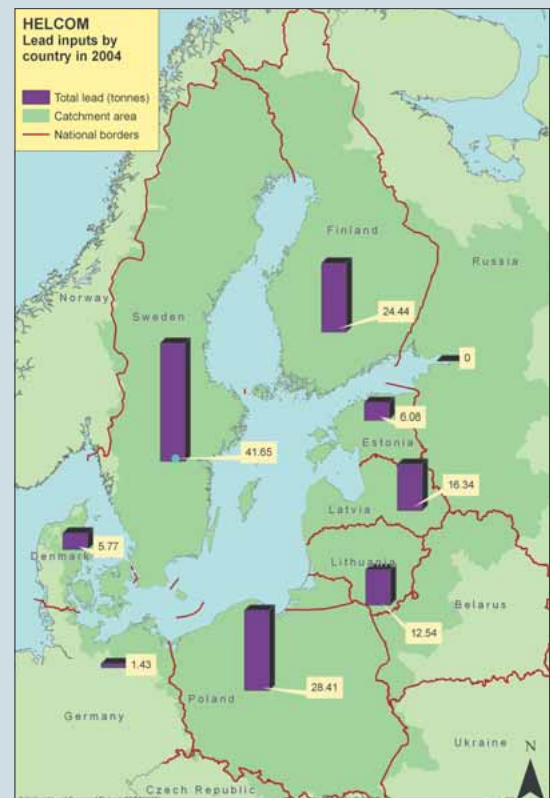
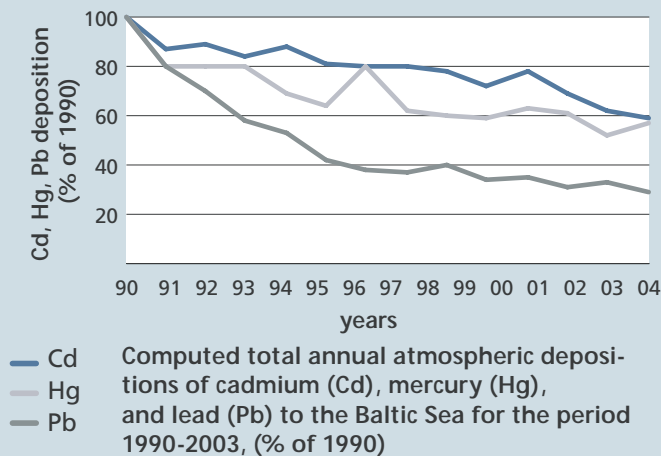
During the period 1994-2004 riverine heavy metal loads (notably cadmium and lead) seem to have

decreased for most of the Baltic Sea countries.

According to the latest available data, in 2004 the reported waterborne (including coastal areas) mercury load entering the Baltic Sea amounted to 2.5 tonnes, the lead load to 120 tonnes, and the cadmium load to 6.2 tonnes, compared to 7.3 tonnes of mercury, 285.8 tonnes of lead and 8.1 tonnes of cadmium in 2003.

The riverine inputs of the heavy metals cadmium, lead and copper are highest in the Gulf of Finland, while mercury inputs are highest in the Baltic Proper. A few large rivers account for very large proportions of the total riverine heavy metal loads.

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



Waterborne loads of Lead entering the Baltic Sea in 2004 from the 9 coastal countries (tonnes)



harmonised. The data sets from small rivers and coastal areas are even more incomplete.

### Transboundary pollution

Significant transboundary pollution loads of heavy metals originate from Belarus, the Czech Republic and Ukraine. The proportions of the total pollution loads entering the Baltic Sea originating from these upstream countries are in the range of 5% to 15% for heavy metals such as mercury, cadmium and lead. The significance of this transboundary pollution is naturally higher in certain sub-catchments than in the Baltic Sea overall.

### Long-term trends in inputs of hazardous substances

Annual deposition rates of heavy metals have halved since 1990 in the Baltic Sea as a whole. Deposition rates for mercury have not decreased since the mid 1990s, however.

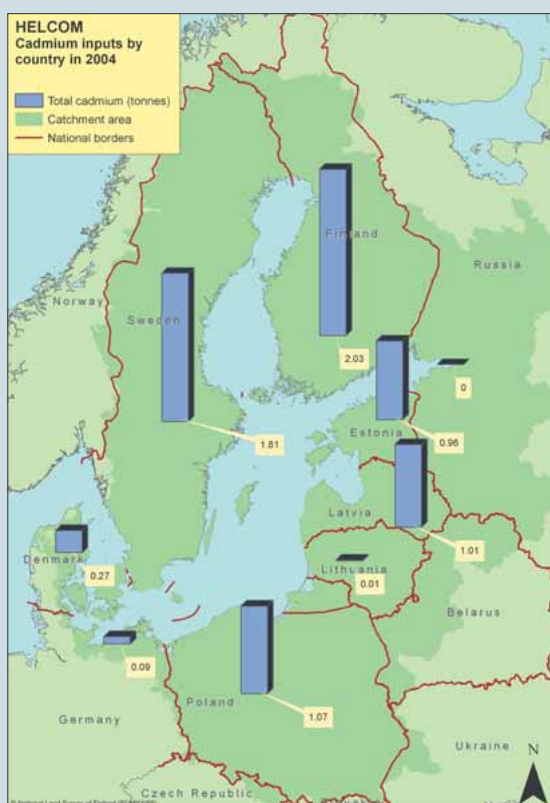
Emissions of heavy metals from the HELCOM countries decreased during the period 1990–

2003 by 47% for cadmium, 65% for mercury, and 62% for lead.

The reductions in heavy metal emissions to the atmosphere are largely due to the increased use of lead-free fuels and the wider use of cleaner production technologies, as well as the economic decline and industrial restructuring that occurred in Poland, Estonia, Latvia, Lithuania, and Russia in the early 1990s.

During the 1990s the use of lindane in HELCOM countries practically ceased, and atmospheric depositions of lindane in the Baltic Sea region have consequently decreased significantly. Due to variations in meteorological conditions the decreases in emissions do not always lead to corresponding reductions in deposition rates.

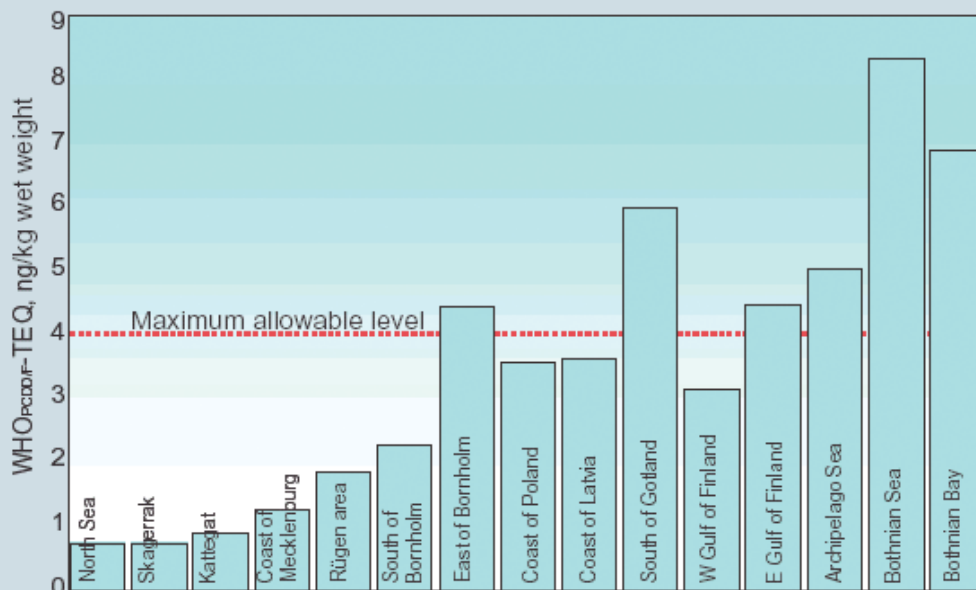
Since the mid 1990s, riverine loads of heavy metals (notably cadmium and lead) have decreased in several countries. Research has indicated that the 50% reduction target has been



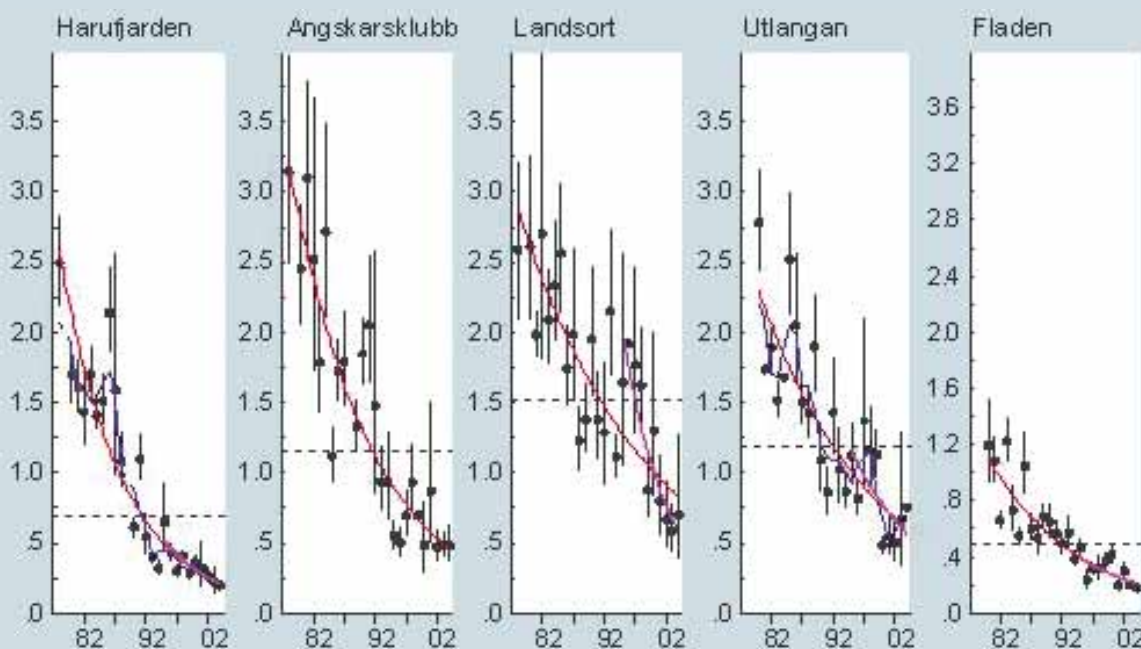
Waterborne loads of Cadmium entering the Baltic Sea in 2004 from the 9 coastal countries (tonnes)



Waterborne loads of Mercury entering the Baltic Sea in 2004 from the 9 coastal countries (tonnes)



Dioxin content in the muscle tissue of herring from different fishing waters



Temporal trends in PCB concentrations ( $\mu\text{g/g}$  lipid) in herring muscle tissue since the 1980s

Heavy metal	North Atlantic	Baltic Sea
Mercury	0.15-0.3	5-6
Cadmium	2-6	12-16
Lead	5-9	12-20
Zinc	10-75	600-1000
Copper	65-85	500-700

Concentrations of dissolved trace metals in the North Atlantic and the Baltic Sea (ng/kg)

largely achieved for the 46 hazardous substances prioritised by HELCOM.

### Impacts of hazardous substances

Despite reductions in inputs, concentrations of heavy metals and organic pollutants in the Baltic Sea are still up to 20 times higher than in the North Atlantic.

The concentrations of some metals, such as cadmium, are declining in marine organisms in some areas (e.g. the Gulf of Bothnia and the Gulf of Finland) but increasing in others (e.g. the western Baltic Proper).

The best news is the clear decrease in lead concentrations in herring observed in most areas.

Concentrations of dioxin and PCBs in marine ecosystems declined in the 1980s, but this decrease levelled off in the 1990s. Dioxin levels in fish still exceed the new EU food safety limits in some areas, particularly further north.

TBT concentration levels are still so high that they have potential biological effects, at least in the Kattegat, the Belt Sea and the Sound. For other endocrine disrupting substances and new contaminants, such as flame retardants, a full assessment of their levels or effects is not possible due to the lack of monitoring data.

The chemical weapons dumped in the deep waters of the Baltic Sea in the 1940s are not currently seen as a serious threat to marine ecosystems. Research also indicates that any attempt to recover these munitions would be more likely to cause harm than good.

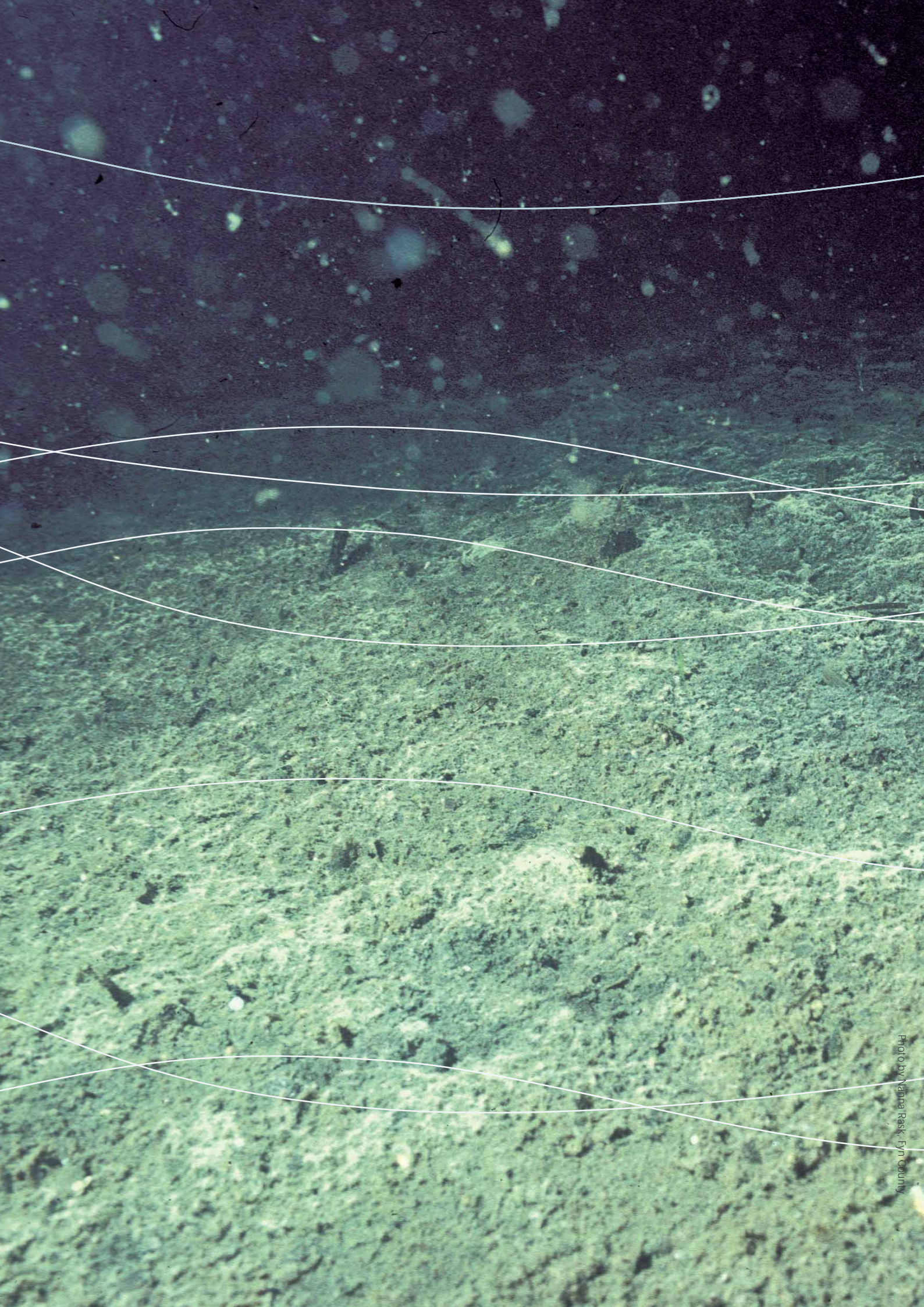
## HELCOM EUTRO – a pilot project aiming to develop new tools for assessing eutrophication

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 co-ordinated 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 (draft HELCOM Eutrophication Assessment Tool) has already been developed within the framework of HELCOM EUTRO. HEAT is to be further developed and tested in the planned project for assessment of the eutrophication status of the Baltic Sea. The new tool also meets the requirements of the EU Water Framework Directive.





# 4. Combating eutrophication and hazardous substances

## Modelling reduction scenarios

Even if substantial reductions of discharges and emissions at sources have been achieved, inputs into the sea are still more than double for nitrogen and on average more than three times higher for phosphorus compared to the pristine conditions that prevailed in the Baltic Sea more than a century ago. Moreover, the reductions achieved so far have not yet led to the desired improvements in the state of the Baltic Sea.

HELCOM assessments clearly show that agriculture is the main source of nutrient pollution in the Baltic Sea, and therefore the future focus should be on the identification of possible measures for agriculture in the different parts of the Baltic Sea catchment area.

At the moment HELCOM is working extensively to assess the environmental impacts of various agricultural policies in the Baltic Coastal States. This is done by combining pollution load models with environmental effect models, to predict the environmental effects of various agricultural policies. However, other nutrient sources, such as municipalities and airborne nitrogen still contribute significantly to the total inputs, and must also be considered in scenarios assessing the impacts of implementation of measures in different fields.

HELCOM is also using models to assess the reductions from current nutrient input levels that will be required in order to reach target levels for eutrophication.

By comparing these figures for the necessary reductions with the scenarios for the consequences of different policies in the Contracting Parties, HELCOM will assess whether planned measures will suffice, or whether further stricter measures will be needed.

HELCOM will also suggest cost-effective solutions designed to reduce nutrient emissions inside and outside the Baltic Sea catchment area.

## Assessing airborne nitrogen deposition

HELCOM assessments also show that total nitrogen deposition in the Baltic Sea will be at about the same level in 2010 as in 2003, even if the targets for nitrogen in the Gothenburg Protocol to the UN/ECE Convention on Long-range Transboundary Air Pollution (CLRTAP) and the EU Directive on National Emission Ceilings for Certain Atmospheric Pollutants (NEC) are reached. The negligible decrease is mostly due to predicted increases in shipping and agricultural activities.



Photo by Nanna Rask, Fyn County

Taking into account that a quarter of the total input of nitrogen to the Baltic Sea is airborne, and almost half of this originates from outside the catchment area, the Gothenburg Protocol to the UN/ECE CLRTAP and the EU NEC Directive are vital regulatory instruments for reducing European emissions of airborne pollutants that can also end up in the Baltic Sea. Therefore it is of utmost importance that HELCOM addresses these issues through the UN/ECE and the EU, and that HELCOM assessments are taken into account in reviews of these instruments.

## Cleaning up Hot Spots

In summer 2005, the Helsinki Commission 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.

HELCOM has welcomed Lithuania's progress in the reduction of pollution from several municipal wastewater treatment plants, and found that wastewater treatment at the former Hot Spots now meets the requirements of the relevant HELCOM Recommendations, and is also in compliance with 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 86 Hot Spots and sub-Hot Spots remain on the list today, following the deletion of 63 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.

## Tackling dioxin pollution

In 2005, the HELCOM Land-based Pollution Group (HELCOM LAND) continued working on new measures to further reduce dioxin pollution in the Baltic Sea. The experts of the LAND Group have drafted



a new Recommendation for the coastal countries to promote further reductions in dioxin pollution.

This draft HELCOM Recommendation on Environmentally Friendly Practices for the Reduction and Prevention of Emissions of Dioxins and other Hazardous Substances from Small-scale Combustion was discussed at the annual Meeting of the Helsinki Commission in March 2006. The Meeting decided to further rework this document to make it even more comprehensive, and introduce stricter requirements and limitations.

Diffuse sources of dioxin pollution, such as combustion appliances in households and small enterprises are very significant, but difficult to address. It is important to raise awareness of good practices in combustion, and the importance of not burning waste in domestic combustion appliances. The main aim of this Recommendation will be to disseminate information around the coastal countries on environmentally friendly practices for small scale combustion. The updated draft of the Recommendation will also include emission limit values for small-scale combustion.

With regard to tackling dioxin pollution, the HELCOM annual Meeting in March 2006 approved an updated version of HELCOM Recommendation 16/8 on "Limitation of Emissions into Atmosphere and Discharges into Water from Incineration of Waste," which now contains new levels for emissions and discharges, including new limit values for dioxins in wastewater.

## Further action on hazardous substances

HELCOM has started an activity to screen the occurrence of selected substances in the Baltic Sea. The available information on these hazardous substances will be evaluated to assess the impacts on the Baltic marine environment, in order to ensure that adequate measures are taken.

The focus is on a limited number of hazardous substances that have already been prioritised by HELCOM and other international fora. Enough information is available to commence this activity and address several "new" hazardous substances, such as brominated flame retardants and perfluorochemicals.

The activity will contribute to the capability of HELCOM to make better assessments concerning hazardous substances, linking the sources of pollutants with their effects, and also contributing to the implementation of HELCOM's Baltic Sea Action Plan. The results will also facilitate decisions on measures to be taken at appropriate levels to influence international activities affecting the Baltic Sea. The results will also complement the HELCOM COMBINE monitoring programme on hazardous substances, as well as HELCOM's work defining indicators and target levels for the Ecological Objectives of the new Baltic Sea Action Plan.





# 5. Reducing the impacts of shipping on the marine environment

Shipping traffic densities in the Baltic Sea are among the highest anywhere in the world. The transportation of oil and other potentially hazardous cargoes is growing steeply and steadily. The major impacts of shipping on the marine environment include pollution related to ship-generated waste, accidents, or ships' airborne emissions, as well as the introduction of non-native species in discharges of ballast water.

## HELCOM launches a common Baltic maritime traffic monitoring system

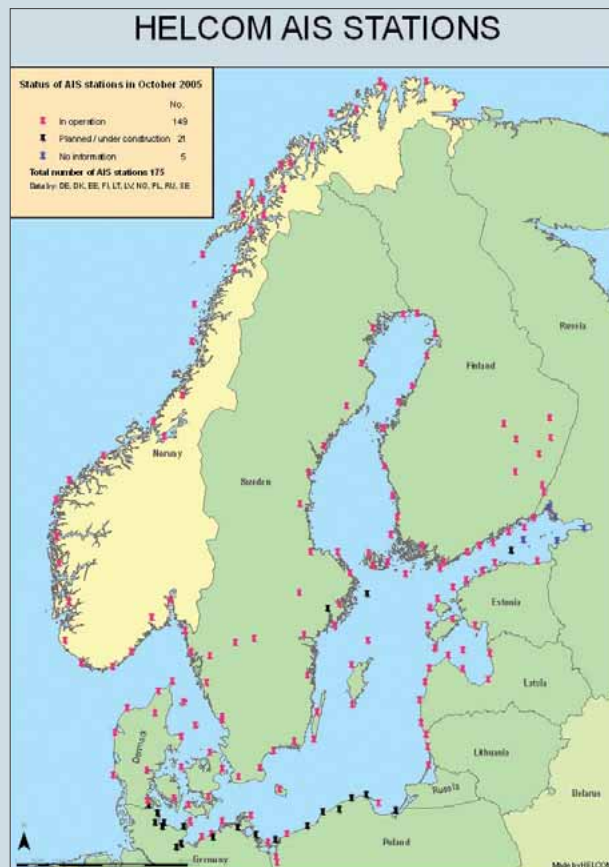
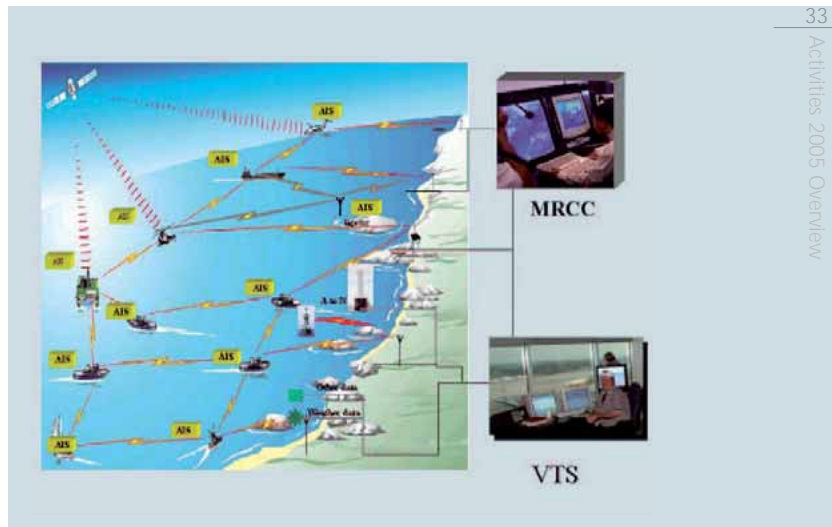
An Automatic Identification System (AIS) for monitoring maritime traffic in the Baltic Sea was officially launched by the Helsinki Commission on 1 July 2005. The new automatic VHF radio-based system enables the identification of the name, position, course, speed, draught and cargo of every ship of more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

The system is now fully operational, covering the whole of the Baltic Sea and Norwegian waters. It will greatly improve risk management and facilitate decisions 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 special "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. The server updates ships' positions every six minutes.

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

The decision to establish a land-based monitoring system for ships, based on AIS signals, was agreed during the HELCOM Extraordinary Ministerial Meeting in Copenhagen in 2001, which closely followed one of the most serious oil spills in the Baltic in recent years. On 29 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 tonnes 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.

### Devising a new system to identify suspects of illegal discharges

The HELCOM STW/AIS Project, which involves the integration of data from the Seatrack Web (STW) oil drift forecasting system and the Automatic Identification System (AIS) for monitoring maritime traffic, was initiated by HELCOM in 2004, aiming to provide additional tools for identifying ships that illegally discharge oil into the Baltic Sea.

At present only a few of the ships that illegally discharge oil into the sea can be identified. But by combining data on ships' routes from the AIS with reversed calculations of the pathways of oil slicks based on the Seatrack Web system, identification procedures would be significantly improved, providing better evidence for the courts. A trial version of the STW/AIS model for the identification of suspected illegal dischargers has been already tested by the HELCOM Contracting Parties, and is now available for wider use.

### Reducing air pollution from ships

In 2005, the HELCOM Maritime Group looked into a number of problems and possible solutions related to air pollution from ships. Two main ways to address these issues are to be explored further at HELCOM level:

1. The promotion of new (stricter) global regulations within the International Maritime Organisation (IMO).
2. The introduction of economic incentives to complement existing international regulations is desirable, since the IMO regulations might not be sufficient enough to address the needs of the Baltic marine environment. For example, Sweden has since 1998 applied cost-neutral economic incentives designed to reduce emissions from shipping. The total annual reductions in SO<sub>x</sub> and NO<sub>x</sub> emissions achieved by

vessels participating in the system amounted to 50 000 tonnes of SO<sub>2</sub> and 41 243 tonnes of NO<sub>2</sub> (2004). The socio-economic value of this reduction was calculated to be of the order of almost 280 million euros.

## Preventing the introduction of non-native species

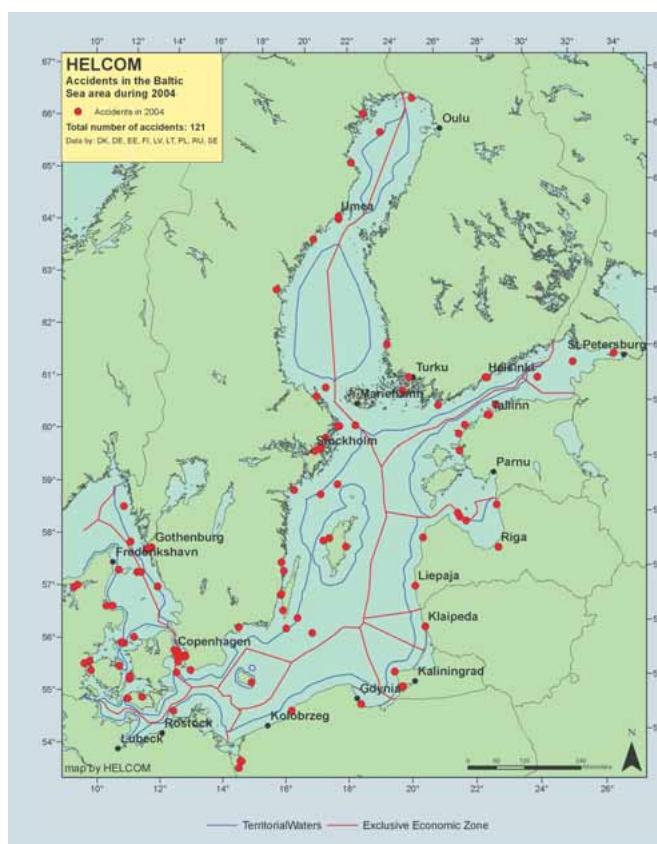
Intensifying shipping increases the risk of new accidental introductions of non-native organisms in the Baltic. The HELCOM Maritime Group focussed considerably on this issue in 2005. Following the Workshop on "Ballast water introductions of alien species into the Baltic Sea", held on 21-25 February 2005 in Palanga, Lithuania, a project was set up to assess the risk of ballast water mediated introductions.

This project will assess Baltic-specific risks related to the inadvertent transportation of non-indigenous organisms in ships' ballast water, and generate proposals for possible further action to reduce these risks. The findings of the project will be discussed at a second workshop in 2006, which will propose actions for the respective HELCOM bodies and the Contracting Parties.

## HELCOM study reveals 100% increase in shipping accidents in the Baltic

The number of ship accidents has almost doubled in the Baltic Sea marine area since 2002, according to the latest study by the Helsinki Commission. Analysis of the data contained in the latest annual reports provided by the Baltic Sea countries to HELCOM reveals that there were 121 accidents in 2004, compared to 71 in 2003, 63 in 2002, 57 in 2001, and 62 in 2000.

The study shows that groundings (41%), collisions (27%) and machinery damage (11%) were the most common types of accidents recorded in 2004. Cargo vessels (38%), passenger ferries (15%), tankers (13%), container ships (10%) and bulk carriers (10%) were the main types of vessels involved in accidents. The main reason for accidents was human error (39%), followed by technical failure (20%).



According to the HELCOM AIS system, during the three-month period July-September 2005 around 13 500 ships passed the Skaw at the northernmost tip of Denmark on their way into or out of the Baltic. Approximately 60-70% of these ships were cargo vessels, and 17-25% were tankers. About 14 000 vessels passed the Swedish island of Gotland, and around 10 000 entered or left the Gulf of Finland. There are about 1 800 ships in the Baltic at any given moment. Although growing traffic is a positive sign of intensified co-operation in the Baltic Sea region and a prospering economy, it also makes shipping accidents causing marine pollution more likely.

Fortunately, most of the accidents in the Baltic do not cause notable pollution, but even one large-scale accident would seriously threaten the marine environment. Over the period 2000-2004, an average of 8-9% of all accidents resulted in some kind of pollution. Two of the five most serious accidents in the Baltic marine area have occurred since 2001 – involving "Baltic Carrier" in 2001 (2 700 tonnes of oil spilled), and "Fu Shan Hai" in 2003 (1 200 tonnes of oil spilled).



# 6. Boosting oil spill response capacity

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

Aerial surveillance is indicating a decreasing trend in the number of illegal discharges, but the total number of illicit spills is still unacceptable. According to the latest data compiled by the Helsinki Commission's Response Group, in 2004, 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.

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 have been implemented by the Contracting Parties to the Helsinki Convention.

Most of the illegal oil discharges were detected along major shipping routes. The ten most significant spills, each consisting of 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).

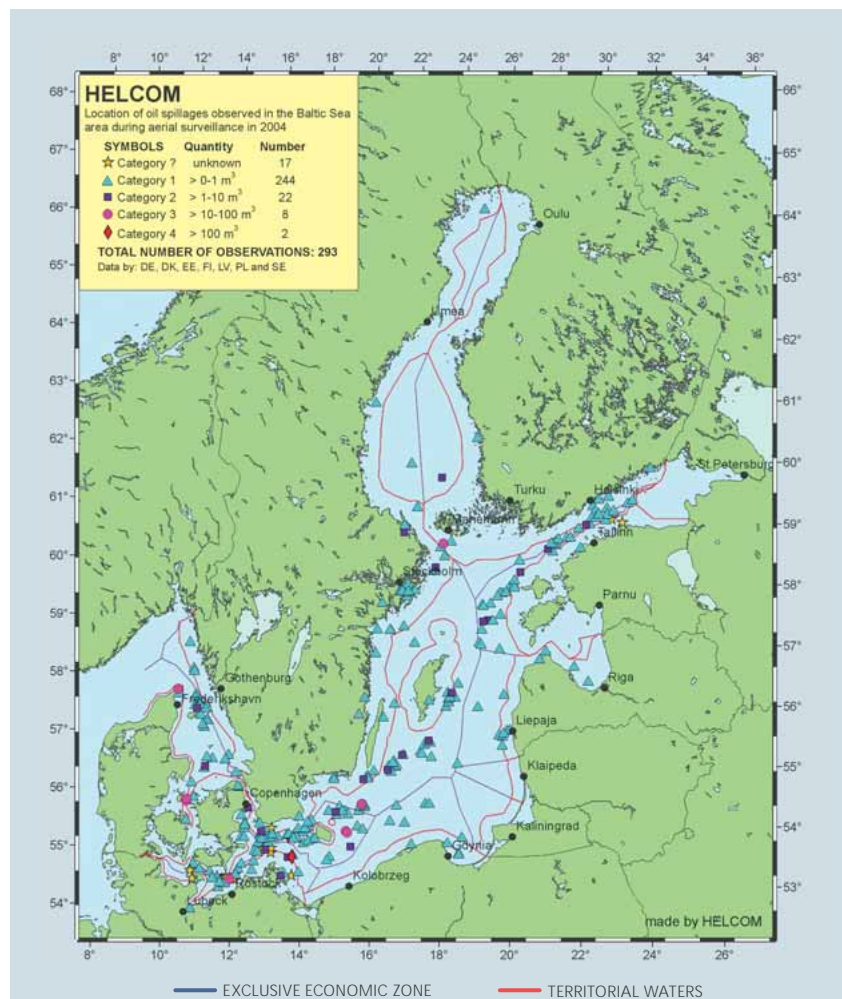
Deliberate illegal oil discharges from ships have been regularly observed during surveillance flights over the Baltic Sea since 1988. The number of observed illegal oil discharges has gradually been decreasing every year, since the peak year of 1989, when 763 spills were detected during 3 491 flight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

Regular aerial surveillance flights contribute significantly to the decrease in discharges, as ships are aware that their illicit polluting activities are likely to be detected. 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 the cargo tanks of oil tankers. This 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.

Following the decisions of the Helsinki Commission, the “no-special-fee” has been extended to cover also garbage and sewage as of 1 January 2006, and this is expected to reduce the pressure on the Baltic environment created by ship-generated waste. Most of the Baltic Sea countries have reported that the coverage of the “no-special-fee” system has already been duly extended in their ports.

### Testing readiness to respond to oil spills

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

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. All the objectives of the exercise were achieved.

This annual exercise is invaluable for maintaining readiness to respond effectively to a major oil spill in the Baltic Sea. It provides an opportunity to test common procedures for acquiring assistance in case of a major oil spill, and communicating and working together under a single 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 fuel 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 assigned 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 hours.



## Looking at dispersants

Following the establishment of the HELCOM Project "Analysis of new opportunities for usage of dispersants in the Baltic Sea" the HELCOM Response Group has been looking further into issues related to the use of dispersants in Baltic conditions. A HELCOM Workshop on the use of dispersants was held on 26-27 April 2005 in Riga, Latvia, looking at past and present practices, as well as specific concerns within the Baltic Sea. The Workshop identified several areas where more research is needed in order to assess whether the usage of dispersants should be recommended in the Baltic Sea.

The Meeting of the Response Group in December 2005 (HELCOM RESPONSE 6/2005) stressed that mechanical recovery is and will continue to be the major response technique for oil spills in the Baltic. HELCOM RESPONSE also agreed that there is a clear need for more information related to the characteristics of oils transported in the Baltic, the types of dispersants effective in Baltic Sea conditions, and environmental sensitivity.

HELCOM is also actively participating in EU-wide discussions concerning the use of dispersants, led by the European Maritime Safety Agency (EMSA). The final report of the HELCOM Project, which will also take into account European developments, is expected soon.

## Co-operating with EMSA

In 2005, HELCOM's co-operation with the European Maritime Safety Agency (EMSA) was further strengthened and a number of important initiatives were launched. Taking into account a specification jointly developed by the HELCOM countries, EMSA has placed additional response capacity in the Baltic. EMSA's oil spill response arrangement involves a "pool" of five vessels dedicated to the Baltic Sea oil trade. Each vessel will be modified to ensure the rapid installation of specialised oil pollution response equipment from either of the two stockpiles located in Porvoo, Finland, and Copenhagen, Denmark.

HELCOM and EMSA have also been actively co-operating on issues related to the use of dispersants, and there are plans that EMSA will provide the Baltic Sea countries with satellite pictures to help identify illegal discharges.





Photo by Hanna Rask, Fin County



# 7. Promoting nature conservation

## Habitats and biodiversity at risk

### Natural sensitivity and human threats

The biodiversity of the Baltic Sea is naturally limited by its unique brackish water conditions, but is now also considerably affected by human activities. Significant factors include pollution by nutrients and hazardous substances, coastal development, fisheries and the introduction of non-native species. As the diagram on the right shows, Baltic biodiversity is very much influenced by salinity levels, and the numbers of species present in ecosystems vary greatly by sub-region. Variations in salinity levels make the Baltic Sea a harsh environment for many species, and external pressures can easily disrupt such delicately balanced ecosystems.

### Impacts

Nearly all of the Baltic's top predators, including marine mammals and several bird species, still suffer from pollution, fisheries' by-catch and habitat destruction. The Baltic harbour porpoise is still endangered, and all of the Baltic's seal species are still to some degree threatened.

About 100 non-native species have been recorded in the Baltic Sea, and almost 70 of them have been able to establish viably reproducing populations.

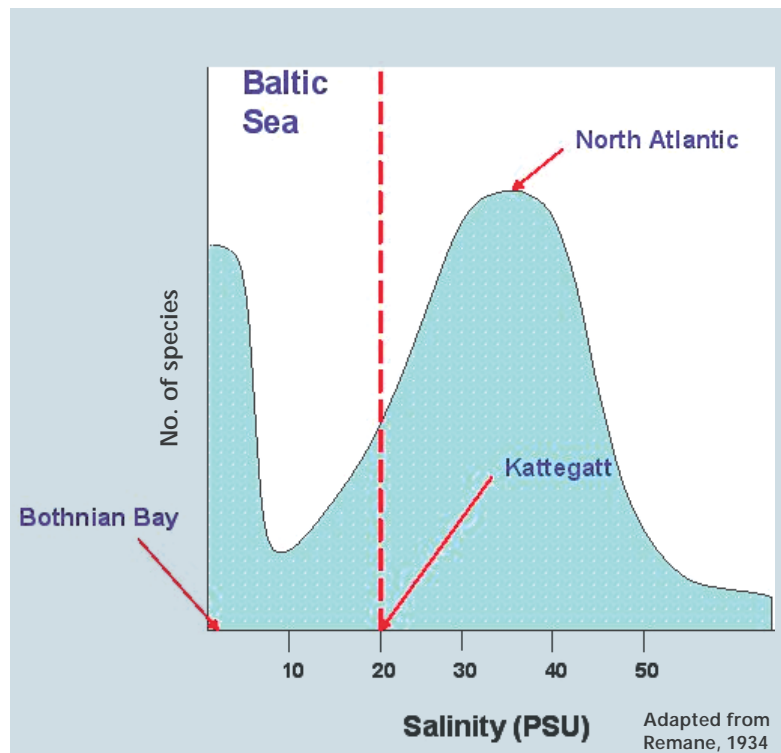
Some of the commercially important fish stocks in the Baltic Sea are currently exploited in excess of "safe biological limits". This overfishing can put entire marine ecosystems under pressure by changing their species composition and predator-prey ratios. Overfishing of Baltic cod is currently a particularly serious problem. Spawning stocks of herring have also decreased steadily since the 1970s, mainly due to changing environmental conditions.

Reproduction failures have been observed among coastal fish stocks since the mid 1990s. While the reason for these problems is not fully understood, increasing eutrophication is widely implicated. The spawning areas of several coastal fish species are situated in the inner archipelago and coastal bays, where their reproduction may be affected

by the pronounced effects of eutrophication, changes in the sea-bed, and oxygen depletion.

The species make-up of fish communities in coastal waters has also changed due to eutrophication.

As much as 90% of the marine and coastal biotopes around the Baltic Sea area are to some degree threatened today, and many of these areas are important habitats for rare or endangered species.



The influence of salinity on species diversity

## Trends

HELCOM's aims are comprehensive, and concern the health and ecological balance of the whole Baltic Sea ecosystem, but trends in the populations of top predators and the status of biotopes can be seen as indicators of the overall health of the Baltic Sea.

One sign of the success of HELCOM's environmental programmes and nature conservation measures is the steady increase over recent decades in the breeding success rates of top predators, such as the white-tailed eagle and the Bal-

tic's three seal species. But seals still face health problems, with sterility levels high among young ringed seals, other pollution-related disorders evidently increasing in grey seals, and harbour seals suffering from an epidemic of seal distemper in 2002. A more positive sign is an increase in the annual productivity of wild salmon of one million young fish a year over the period 1995–2001.

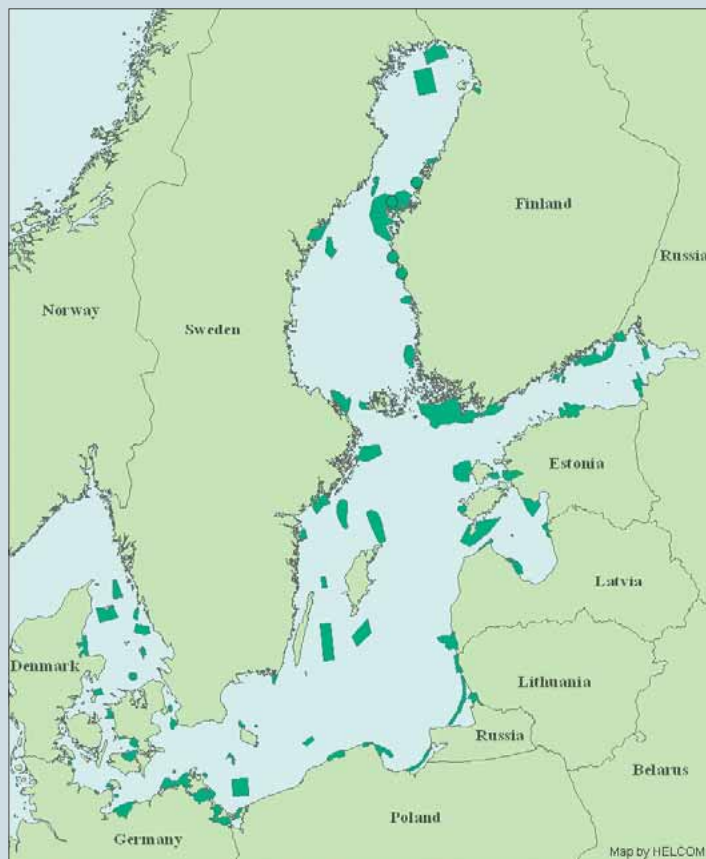
## HELCOM BSPA Project to strengthen and expand the network of marine protected areas

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 an ecologically coherent joint network of well-managed marine protected areas.

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 (<http://bspa.helcom.fi>), 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

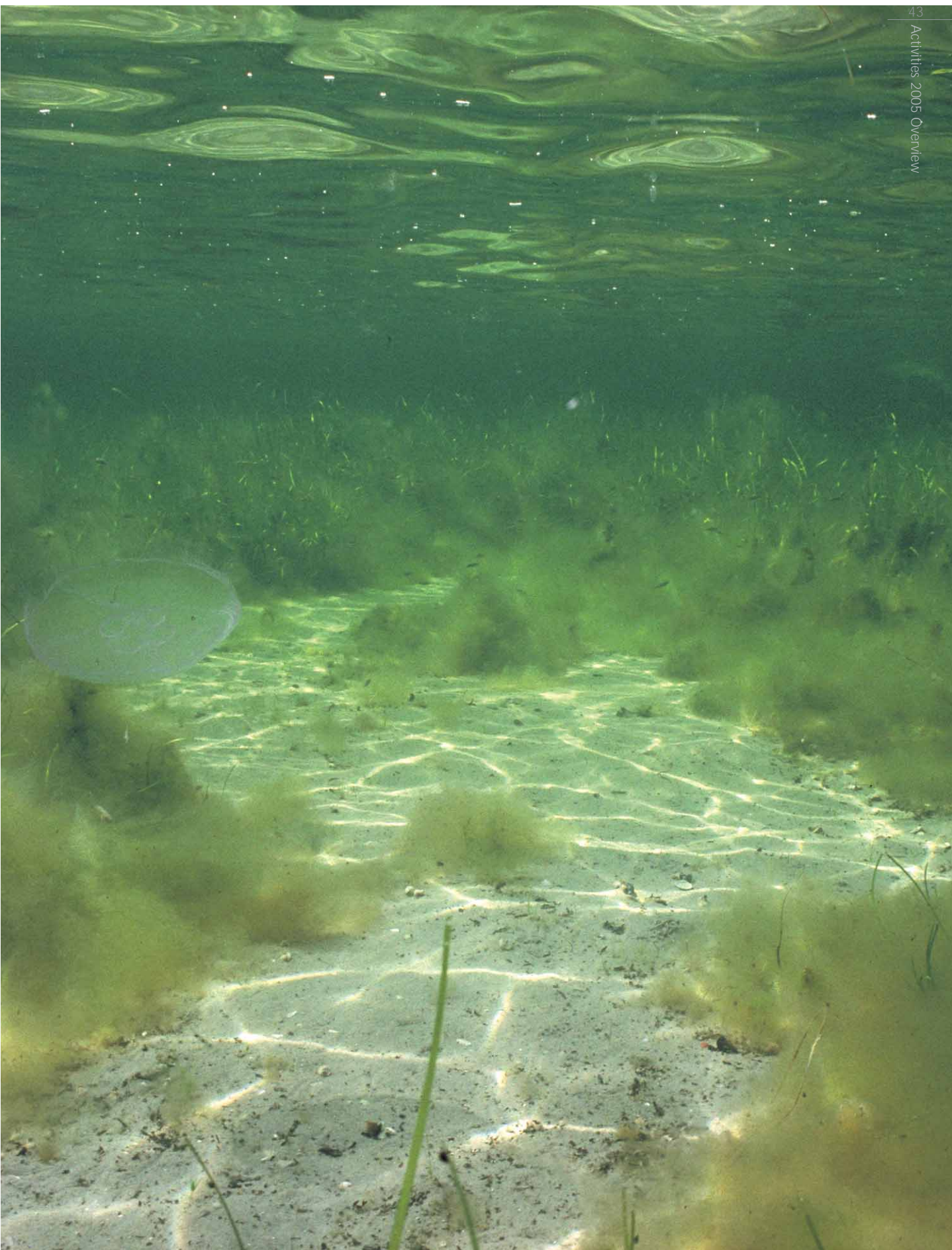


Photo by Nanna Rask, Fyn County



## 8. Baltic Sea Regional Project running at full steam ahead

### Assessing the state of marine ecosystems

The Large Marine Ecosystem Component of the Baltic Sea Regional Project (BSRP) is introducing ecosystem-based practices for the management of marine resources. To improve our understanding of the interlinkages in the Baltic marine ecosystem, various types of work are being carried out within the integrated HELCOM-BSRP framework:

- The BSRP is defining good ecological status indicators of the Baltic Sea together with relevant HELCOM and ICES Working Groups. This will enable updated and comparable assessments about the state of marine ecosystem and their ability to recover from current pressures after the introduction of new measures in the agricultural sector.
- A new assessment report on the state of the coastal fish communities has been produced by a joint BSRP/HELCOM Coastal Fish Monitoring Expert Group on the basis of acoustic surveys conducted by the BSRP.
- As part of the HELCOM EUTRO Project, the BSRP has tested the draft HELCOM Eutrophication Assessment Tool (HEAT) in a demonstration study in the Gulf of Riga.
- New Ships-Of-Opportunity (SOOP) activities have been prepared, and will be launched in spring 2006. These schemes use equipment placed on-board commercial ships for cost-effective monitoring and assessments of changes in the phytoplankton communities, and also enable the wider surveillance of other environmental parameters.

- The BSRP Co-ordination Centre for Geographical Information Systems (GIS), located at Vilnius University's Institute of Ecology, has created a Baltic GIS Portal (<http://gis.ekoi.lt/gis/index.php>), which will be further developed along with other GIS products to enhance HELCOM's assessment work.

### Monitoring agricultural runoff

Agriculture has been identified as the largest 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 direct investments on farms and environmental management activities, 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. Existing monitoring stations are being upgraded, and completely new structures are being built 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.



**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 the 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. This scientifically successful pilot project also provided valuable experience that will facilitate the planning of future routine integrated ecosystem surveys.**



**The Graisupis stream monitoring post under construction in Lithuania**



**Manure pad on a Lithuanian farm**

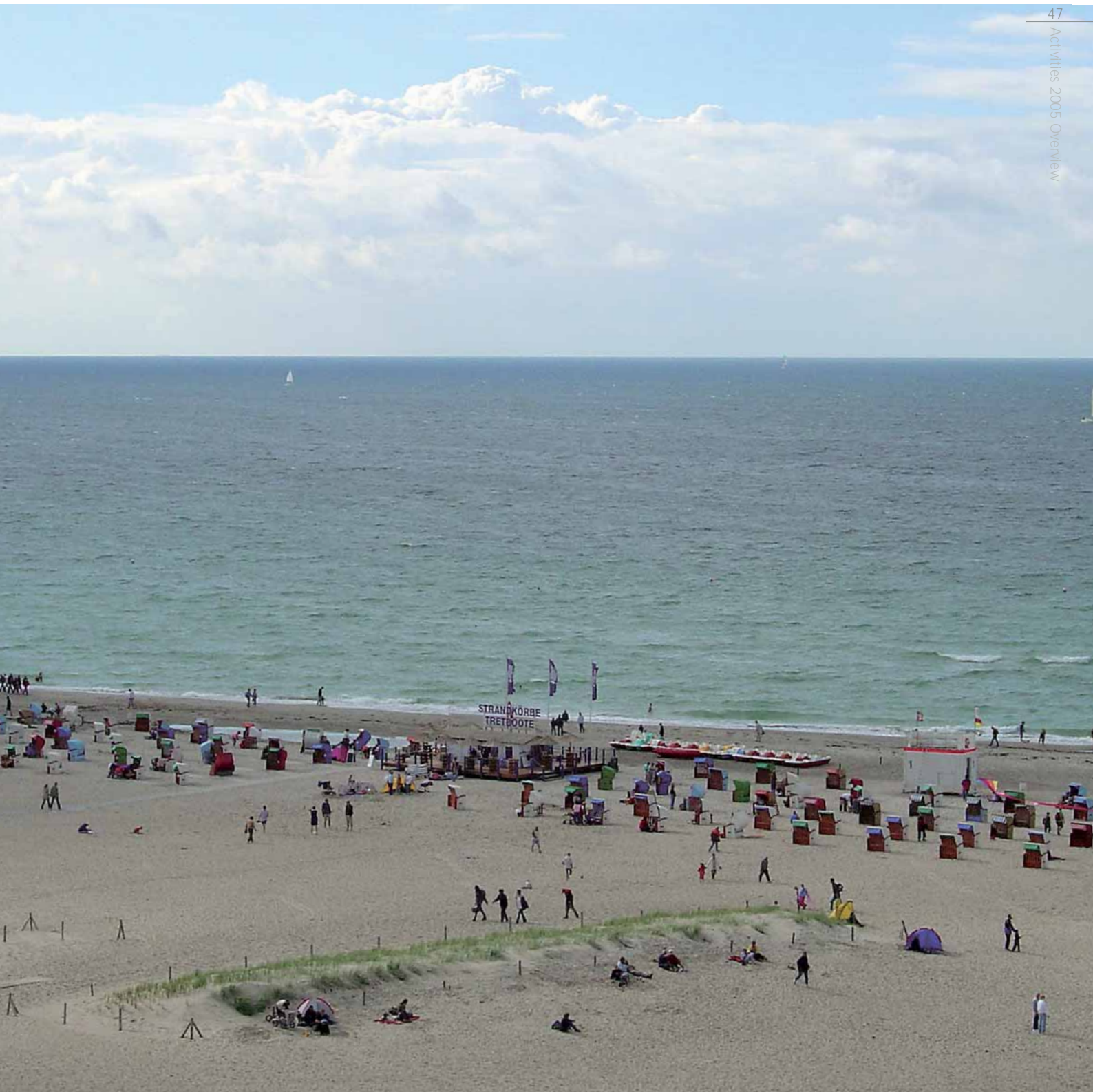


**EMS course participants visiting a liquid manure storage tank in Lithuania**

One of the new stations is the Graisupis stream monitoring post in Lithuania. This station was built using the latest design standards to enable continuous water flow recording and flow proportional sampling. The data logger is connected to the Water Management Institute of the Lithuanian University of Agriculture where the data will be assessed, taking into account also geographical, geological and meteorological conditions.

### **Investing in capacity to target nutrient flows from farms**

Local Agricultural Advisory services lead the agricultural capacity building activities in Estonia, Latvia, Lithuania and also the Kaliningrad Region (Russia). These activities are designed to increase farmers' environmental awareness through Environmental Management System (EMS) programmes, and they also encompass special training for agricultural advisors. In co-operation with NEFCO a comprehensive financial mechanism is maintained to implement farm investment plans. The BSRP agricultural scheme has been very successful, attracting the participation of an unexpectedly high number of farmers, and also leading to the establishment of the first demonstration farms during 2005 in Estonia and Latvia. A total of ten farms have been approved for the scheme by January 2006, with total financing amounting to nearly 2.4 million euros. Investments financed through Global Environment Facility (GEF) grants cover the construction of storage facilities for solid and liquid manure, and the acquisition of equipment for removing and spreading manure. NEFCO loans, commercial credits and national and EU funds are additionally used for investments in production facilities, such as milk coolers and barns.







## 9. HELCOM Youth Forum charts an environmentally friendly course

Policy formulation and the setting of priorities for actions designed to protect the Baltic 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– 11 August 2005 in Rostock, Germany.

More than 40 students representing all nine Baltic Sea coastal countries took part in the three-day event, considering ways to safeguard a vibrant, healthy marine environment, improve maritime safety, and promote favourable economic and political developments in the region. The Conclusions of the Forum, in the shape of a resolution "Our Baltic Sea of tomorrow", which included the students' visions and concrete demands directed at politicians and key players around the Baltic Sea region, will serve as a 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.

The 2005 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 Warnemunde, the German Federal Maritime and Hydrographic Agency, the Landtag of Mecklenburg-Vorpommern and the Baltic Sea Forum.



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

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, Ms Tarja Halonen.





## 10. New HELCOM book explores the variety of marine life in the Baltic Sea

In conjunction with the kick-off Stakeholder Conference on the development of the HELCOM Baltic Sea Action Plan, the Helsinki Commission in March 2006 launched its new book on biodiversity, entitled 'The Baltic Sea – Discovering the sea of life'. It provides the first ever popular overview of the variety of marine life around the Baltic Sea. The main idea of this HELCOM publication is to convey to the general public the message of a unique and beautiful sea full of life, which must be cherished and protected.

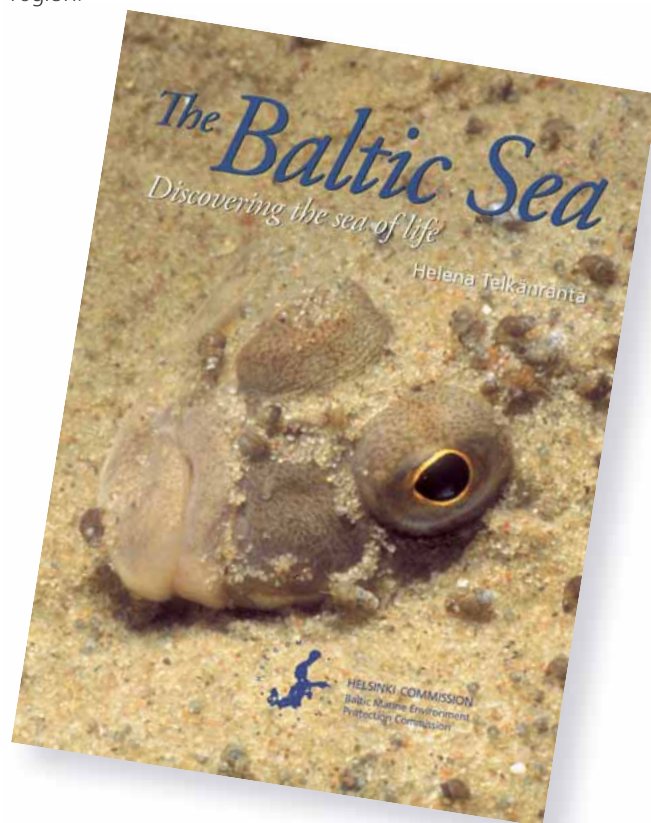
This 105-page hardcover book with its many stunning high-quality photos, including rare underwater images, takes readers on an exciting journey into the Baltic marine world, to discover fascinating life forms that live so close to us, yet are still unknown to many. The book proves that the Baltic Sea is truly more than meets the eye, and is home to a wealth of wildlife, including many underwater creatures that few of us ever have the chance to see, as well as more familiar seals, porpoises, and seabirds.

The storyline of the book follows the journey of a pair of swans around the Baltic Sea – from Denmark, through Germany, Sweden, and Finland in the north and back south through Estonia, Latvia, Lithuania, Russia and Poland. This journey takes the reader soaring over the shores of the Baltic Sea with different seabirds, and plunging deep into its waters to discover exotic fish and beautiful marine gardens.

To reach a wider audience the book incorporates a two-tier approach. The scientifically accurate but immediately accessible story of the swans' journey is accompanied by enlightening information boxes which provide general facts and figures about the Baltic Sea and different species, as well as about HELCOM's efforts to conserve the Baltic Sea biodiversity. This enables the book to serve as a reference guide to marine life in the Baltic, to the environmental problems that face this sensitive sea, and to the solutions that could restore its healthy natural balance. The book also includes good news about successes already accomplished in terms of the protection of the Baltic marine environment.

The book can be considered as a 'must read' for anyone interested in Baltic marine life, and the present state of our sea. It emphasizes the beauty and fragility of the Baltic Sea diverse ecosystems, while also highlighting environmental challenges and the need for protective measures.

The Baltic Sea – Discovering the sea of life has been written by Helena Telkänranta, a Finnish science writer who specialises in nature and conservation, with the help of an editorial board of HELCOM experts. The book's layout is designed by Leena Närhi of Bitdesign, Finland, and includes more than 100 superb photos taken by dozens of photographers from all around the Baltic Sea region.



# 11. HELCOM provides teaching materials on Ecological Objectives

"Lord of the Things. An adventure to discover Ecological Objectives – a healthy and diverse Baltic Sea of the future" consists of an animated film and related teaching materials designed to help teachers deal with questions related to the protection of the Baltic Sea. The innovative and fun material can be used in English, Biology and Geography lessons.

Viewers join Frodovich and Glunkton the Plankton on their exciting journey to deliver the "Thing of Ignorance" back to its origins in the heart of the Baltic Sea – the only place where this evil can be destroyed! Wrapped in a humorous plot – and borrowing a few ideas from certain well-known literary sources – "Lord of the Things" encourages students and other viewers to set themselves objectives to help make the Baltic Sea clean and healthy.

The eight-minute animation and related teaching material is part of the HELCOM Ecological Objectives Project, which aims to make all sectors of society consider their impacts on the marine ecosystems of the Baltic.



# 12. Appendices

## Recommendations adopted by HELCOM 27

The 27<sup>th</sup> Meeting of HELCOM in March 2006 adopted an updated **HELCOM Recommendation 16/8 on "Limitation of Emissions into Atmosphere and Discharges into Water from Incineration of Waste"**. This revised Recommendation now contains new levels for emissions and discharges, including new limit values for dioxins in wastewater.

## Press releases

- 09.03.2006 Statement by the Executive Secretary of HELCOM at the 27<sup>th</sup> Meeting of the Helsinki Commission
- 09.03.2006 HELCOM approves core elements of the Baltic Sea Action Plan
- 08.03.2006 HELCOM Baltic Sea Action Plan receives strong support at Stakeholder Conference
- 03.03.2006 Baltic Sea Action Plan to take centre stage at HELCOM annual meeting
- 03.03.2006 Media Advisory
- 01.03.2006 Conference to discuss HELCOM plan to rescue Baltic marine environment
- 01.03.2006 Media Advisory
- 09.02.2006 Number of ship accidents in the Baltic doubles
- 17.01.2006 Level of water transparency stabilised in parts of the Baltic Sea
- 16.12.2005 Vacancy announcement - Professional Secretary at the Secretariat of HELCOM
- 15.12.2005 Special issue of HELCOM News with an overview of the Baltic Sea health released
- 14.12.2005 HELCOM to hold the Baltic Sea Action Plan Stakeholder Conference in March 2006
- 08.12.2005 HELCOM Heads of Delegation Meeting to discuss further steps in the development of the Baltic Sea Action Plan
- 25.11.2005 HELCOM Response Group to discuss input to the Baltic Sea Action Plan
- 23.11.2005 Presentation by HELCOM Executive Secretary at Stockholm Ministerial
- 18.11.2005 HELCOM releases input documents to Stockholm Ministerial
- 17.11.2005 Development of Baltic Ecological Objectives to top agenda of HELCOM MONAS Meeting
- 10.11.2005 Popular brochure on HELCOM Baltic Action Plan released
- 03.11.2005 HELCOM releases latest issue of its Newsletter featuring Baltic Action Plan concept
- 01.11.2005 HELCOM to convene Extraordinary Meeting ahead of Stockholm Ministerial
- 17.10.2005 HELCOM to host the 7<sup>th</sup> Global Meeting of the Regional Seas Conventions and Action Plans
- 10.10.2005 HELCOM MARITIME to discuss the Baltic Sea Action Plan
- 06.10.2005 Endangered species and marine protected areas focus of HELCOM HABITAT Meeting
- 16.09.2005 HELCOM delegation to attend commissioning of St. Petersburg Southwest Wastewater Treatment Plant
- 15.09.2005 HELCOM delegation to visit Lukoil terminal in Vysotsk
- 08.09.2005 Asian fish caught in Estonian waters
- 02.09.2005 Swedish Coast Guard team wins HELCOM Trophy again
- 01.09.2005 HELCOM fleet rehearses oil spill response off the Swedish coast
- 29.08.2005 Swedish Coast Guard to host a media tour of the HELCOM BALEX DELTA exercise area
- 23.08.2005 HELCOM to conduct its annual pollution response exercise BALEX DELTA 2005
- 12.08.2005 HELCOM deletes another Lithuanian Hot Spot from the Baltic Sea major polluters list
- 08.08.2005 HELCOM Youth Forum to chart environmentally-friendly course for the Baltic Sea region
- 01.07.2005 HELCOM launches a common Baltic maritime traffic monitoring system
- 23.06.2005 Illegal oil discharges in the Baltic Sea continue to decrease
- 15.06.2005 HELCOM to develop a strategic Baltic Sea Action Plan by 2007
- 15.06.2005 HELCOM deletes two Lithuanian Hot Spots from the Baltic Sea major polluters list
- 08.06.2005 HELCOM to hold 17<sup>th</sup> Meeting of the Heads of Delegations of the Member States 14-15 June
- 03.06.2005 HELCOM to develop new measures to reduce dioxin pollution

- 27.05.2005 HELCOM to consider deletion of four Lithuanian cities from the list of the major Baltic Sea polluters
- 25.05.2005 HELCOM releases Annual Report on 2004 activities
- 25.05.2005 HELCOM releases three new reports, newsletter
- 20.05.2005 Four illegal discharges of oil detected during the CEPSCO North aerial surveillance flights over the Baltic Sea
- 09.05.2005 HELCOM Executive Secretary interview with Deutsche Welle Radio on WWII chemical munitions dumped in the Baltic Sea
- 02.05.2005 Statistics shows significant drop in the number of incidents of chemical munitions caught by fishermen in the Baltic Sea
- 22.04.2005 HELCOM Response Group to hold its regular meeting on 27-29 April 2005 in Riga
- 20.04.2005 HELCOM delegation pays a visit to Ukraine
- 12.04.2005 Report on atmospheric supply of nitrogen, lead, cadmium, mercury and lindane to the Baltic Sea in 2002, now available on HELCOM website
- 08.04.2005 Call for participants: HELCOM Youth Forum 2005
- 31.03.2005 Report on nutrient pollution to the Baltic Sea in 2000, now available as a PDF
- 16.03.2005 Caspian fish caught near Finnish shores
- 15.03.2005 HELCOM Secretariat delegation to attend the Baltic Sea Day in St. Petersburg

## Newsletters

**HELCOM NEWS 1/2005**

**HELCOM NEWS 2/2005**

**(electronic version only)**

(Special issue: HELCOM Conference on maritime safety)

**HELCOM NEWS 3/2005**

**HELCOM NEWS 4/2005**

(Special issue: The health of the Baltic Sea)



## Baltic Sea Environment Proceedings (BSEP) and other publications

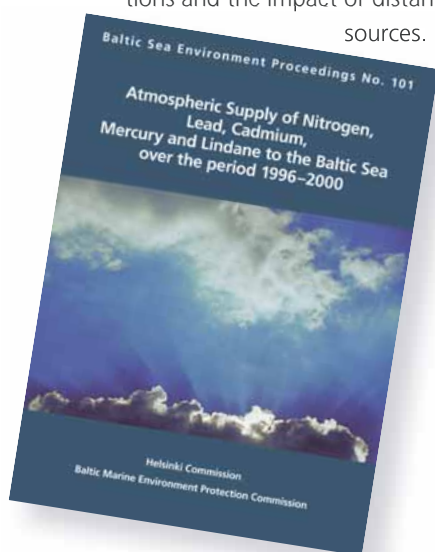
The following lists include HELCOM publications released since the 26<sup>th</sup> annual Meeting of the Helsinki Commission in March 2005.

A complete list of HELCOM publications is available at: <http://www.helcom.fi/publications>, where these publications can also be viewed. To order printed copies, please call the HELCOM Secretariat: + 358 (0)207 412 649 or send an e-mail to [info@helcom.fi](mailto:info@helcom.fi).

### Baltic Sea Environment Proceedings

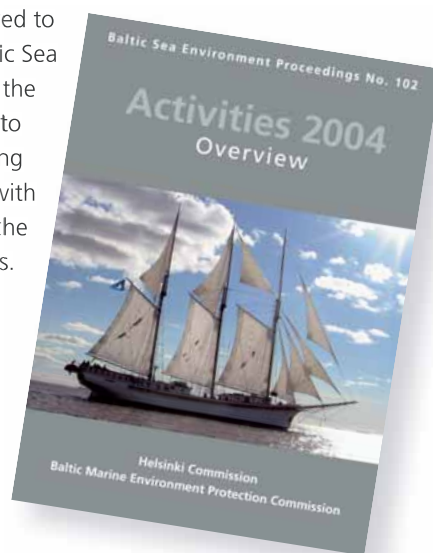
#### No. 101 Atmospheric supply of nitrogen, lead, cadmium, mercury and lindane to the Baltic Sea over the period 1996 – 2000 (2005)

This report presents the emission levels of nitrogen, lead, cadmium, mercury and lindane in the HELCOM countries and their deposition rates into 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. Depositions 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.



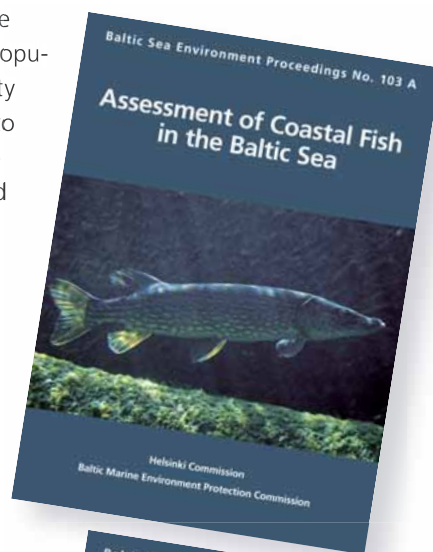
#### No. 102 HELCOM Activities 2004 Overview (2005)

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.



#### No. 103 A Assessment of Coastal Fish in the Baltic Sea (2006)

This report presents results of coastal fish monitoring using multi-mesh gillnet and gillnet series, which have been carried out in fifteen areas in the Baltic Sea. The objectives of this monitoring are to describe long-term trends in fish populations and fish community development, and to try to explain the results in relation to natural factors and anthropogenic pressures. The report covers current time series of varying length up to 22 years of annual monitoring. This report also proposes some potential Ecological Objectives for the Baltic Sea Action Plan as well as a set of indicators for assessing status and trends in the coastal fish of the Baltic Sea.



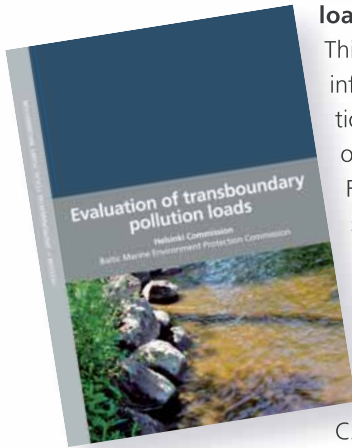
#### No. 103 B Changing Communities of Baltic Coastal Fish (2006)

Executive summary of BSEP No. 103 A: Assessment of coastal fish in the Baltic Sea



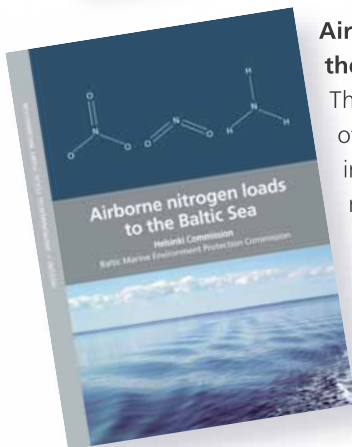
## Other publications

### Evaluation of transboundary pollution



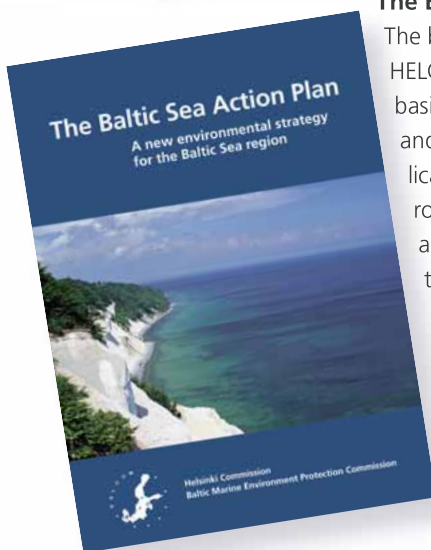
**loads** (2005)

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 co-operation with Belarus, the Czech Republic and Ukraine.



**Airborne nitrogen loads to the Baltic Sea** (2005)

This report presents an overview of the different sources contributing to the deposition of airborne nitrogen into 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.



**The Baltic Sea Action Plan** (2005)

The brochure explains the aims of the HELCOM Baltic Sea Action Plan, the basis on which it will be developed, and the role of HELCOM. The publication also describes the key environmental issues that need to be addressed, outlines the plan's objectives, and describes some of the concrete actions to be undertaken. The aim of this brochure is to raise public awareness and promote wide stakeholder participation in the process of drawing up and adopting the plan.

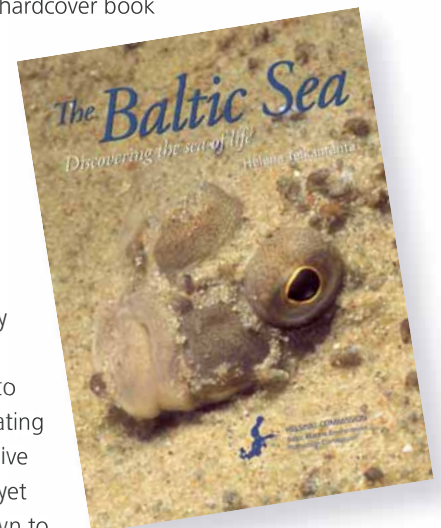
### HELCOM background information to the Baltic Sea Informal Meeting for Ministers of the Environment (2005)

The Helsinki Commission's input to the Stockholm Ministerial Meeting contains up-to-date background information on the status of the Baltic Sea marine environment and current trends in the key areas of concern: eutrophication, hazardous substances, maritime activities and biodiversity. It also describes HELCOM's multi-national activities in the protection of the Baltic Sea marine environment during the last 30 years, and reports on progress with the development of an innovative strategic Baltic Sea Action Plan.



### 'The Baltic Sea – Discovering the sea of life' (2006)

A new HELCOM book on biodiversity provides the first ever popular overview of the variety of marine life around the Baltic Sea. The main idea of this HELCOM publication is to convey to the general public the message of a unique and beautiful sea full of life, which must be cherished and protected. This 105-page hardcover book with its huge selection of stunning high-quality photos, including rare underwater images, takes readers on an exciting journey into the Baltic marine world, to discover fascinating life forms that live so close to us, yet are still unknown to many.





**Lord of the Things. An adventure to discover Ecological Objectives – a healthy and diverse Baltic Sea of the Future (2006)**

This publication package contains an animated film and related teaching material designed to help teachers deal with questions related to the protection of the Baltic Sea. The innovative and fun material can be used in English, Biology and Geography lessons.









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