

How we work

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

The Helsinki Convention obliges the countries to follow HELCOM Recommendations and the Baltic Sea Action Plan, crafted to guard the actions and developments of the member countries and the EU to consider the vulnerable marine environment of the Baltic Sea.

Working structure

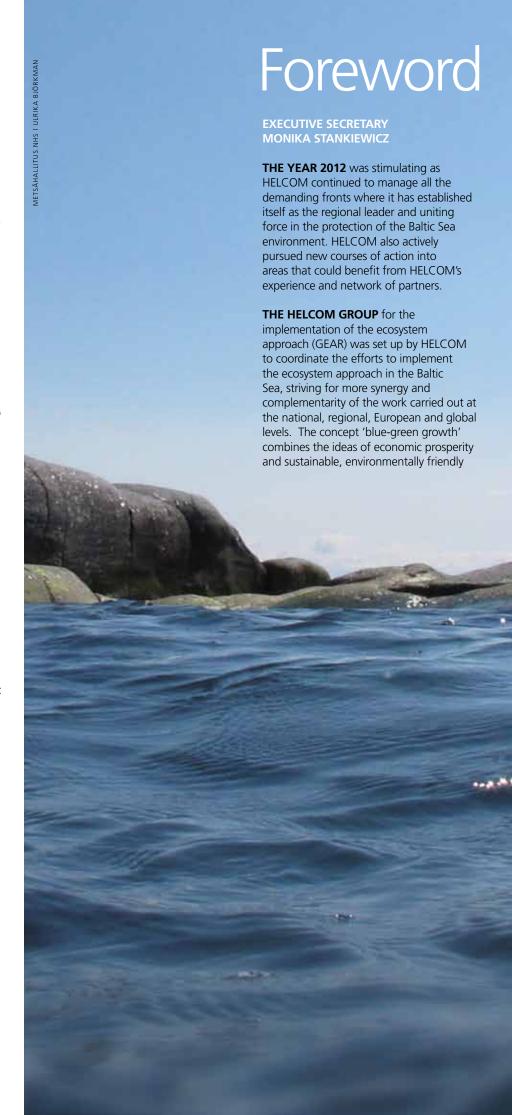
The chairmanship of HELCOM rotates between the Contracting Parties every two years, according to their alphabetical order in English. Denmark currently holds the chair until 30 June 2014.

The working structure of HELCOM, supported by the Secretariat, comprises the Helsinki Commission, the Heads of Delegation, six main groups and three platforms, together with tens of other working and expert groups and projects.

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

Our vision

HELCOM's vision for the future is a healthy Baltic Sea environment with diverse biological components functioning in balance, resulting in a good ecological status and supporting a wide range of sustainable economic and social activities.



development. HELCOM has taken action in this area in many ways, for example in two projects completed in 2012: the EU-financed BALTHAZAR and Baltic COMPASS that explored recycling in a farming context by turning waste into an energy source. The new EU-funded BASE project will follow up these initial stages in selected areas of Russia.

ON ANOTHER FRONT, HELCOM, regional co-leader with VASAB in the field of maritime spatial planning, has invested in studying harmonised planning to smooth out the sometimes conflicting interests of industries and other users at sea. In June 2012, the EU-financed Plan Bothnia project was finalised. The project was successful not only in its innovative and cooperative approach to spatial planning, but also in producing a wonderful end product: the final report of the Project, Planning the Bothnian Sea, has won several design awards, including the best book in the Design and Print Awards 2012 competition in Finland, the Antalis Design Awards, and the D&AD professional awards 2013 in London.

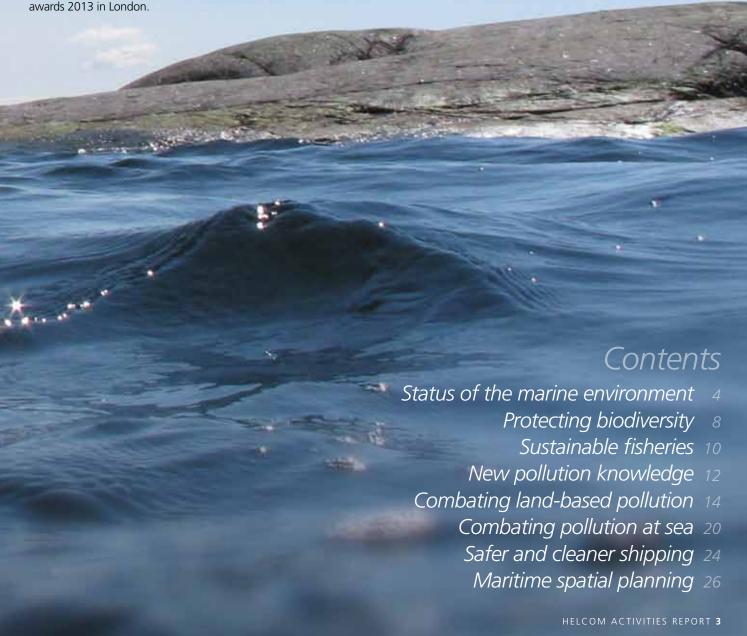
THIS RELATES TO another interesting undertaking being prepared: BALTFIMPA, a Project that addresses the management issues of Baltic fisheries in marine protected areas. In addition, the first checklist of Baltic macro-species was completed within the HELCOM Red List activity. This will feed into further work and even more holistic spatial planning through a common classification of the Baltic Sea habitats and biotopes.

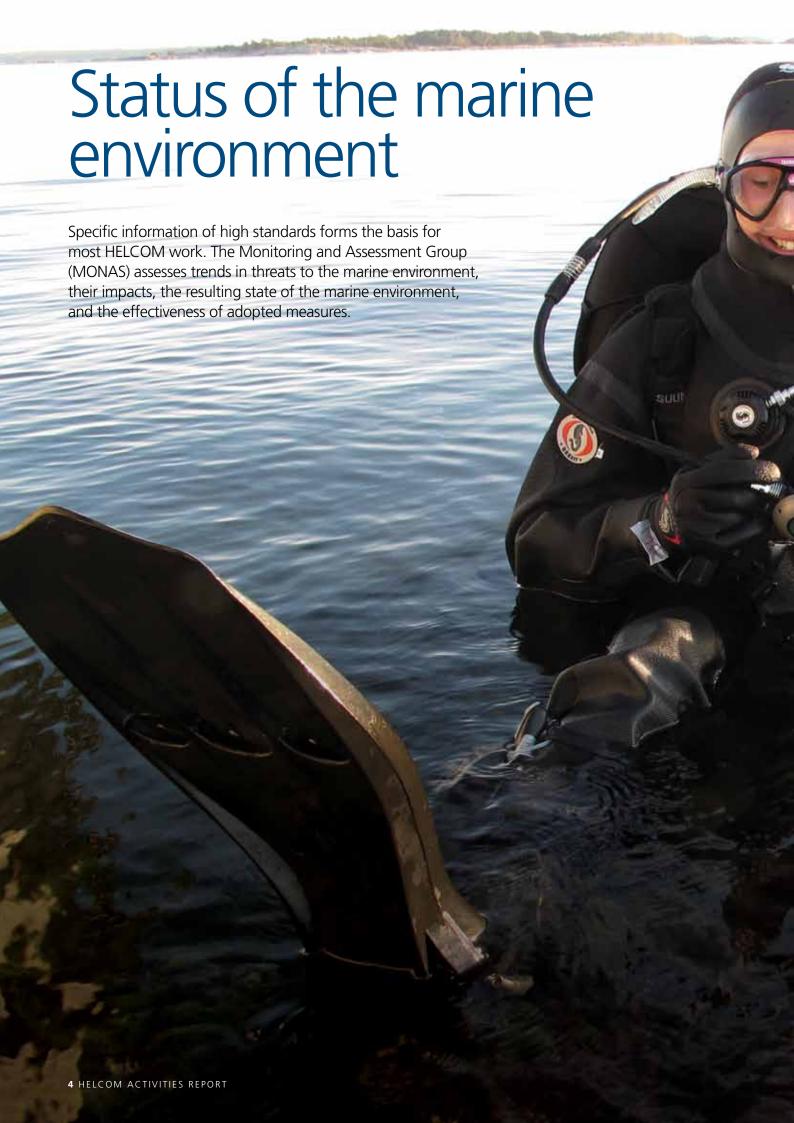
MOREOVER, a few processes were gaining speed in 2012, such as the revision of the nutrient load reduction targets of the Baltic Sea Action Plan. The first step of the review process, laying the scientific foundation for re-evaluating the countrywise burden sharing, is now close to completion. On another note, to follow the effectiveness of the implementation of the Baltic Sea Action Plan and to assess the state of the marine environment, the CORESET project has developed a set of core indicators that will soon be launched online. In 2012, access to the regional

system for real-time traffic surveillance and statistics, HELCOM Automatic Information System (AIS), was granted to an even larger number of user groups. AIS plays a key role in improving the safety of maritime traffic. AIS along with the HELCOM map and data service have established the firm reputation of HELCOM as a reliable, regional information provider.

THE MANAGING OF ships' ballast water made progress by the ratification of the Ballast Water Management Convention by two more countries, Russia and Denmark, and by key activities to establish a common approach to the regional implementation of the Convention.

THESE ARE just a few highlights of last year's activities, which were strongly supported by our networks of stakeholders from a variety of sectors and regions. I would like to thank them all, especially the experts in the Contracting Parties as well as the dedicated HELCOM Secretariat.







Setting targets for eutrophication status

TARGREV PROJECT

The jointly agreed eutrophication targets close the first chapter of the review of the HELCOM Baltic Sea Action Plan (BSAP) nutrient load reduction scheme. The agreed targets will be used as a basis for the ecological modelling of nutrient loads the sea can tolerate yet still be in the target eutrophication status. The review of the BSAP load reduction scheme will be finalised in the summer of 2013; the HELCOM Ministerial Meeting in October 2013 is expected to endorse the agreement.

HELCOM aims at strengthening the reversal towards a less eutrophied Baltic Sea and reaching a status where eutrophication

does not cause adverse effects to the ecosystem or humans. The targets were crafted so as to allow for human impacts but nevertheless to set clear and ambitious goals for the Baltic Sea countries to reach. When the targets have been reached, the Baltic Sea will have clearer water with less algae, lower quantities of nutrients, nitrogen and phosphorus, and a reduction in hypoxia.

For the first time, clear targets have been set for oxygen levels of the deep Baltic Sea basins: the Baltic Proper, the Gulf of Finland and the Bornholm Basin. Targets have been set for 'oxygen debt', a measure of oxygen deficiency caused by eutrophication through oxygen consuming decomposition of excess biomass. The aim is to reach a

level of oxygen debt that was prevalent in the early 20th century. Currently, hypoxic area and volume are the highest in record and the total dead zone is as large as Latvia, i.e. about 65,000 km².

The set of targets, built on a thorough scientific analysis, is the result of the HELCOM TARGREV project (2010-2012) carried out by major marine ecology institutes of the Baltic Sea countries. Those HELCOM Contracting Parties that are also EU member states will be able to make use of the targets in the implementation of the EU Marine Strategy Framework Directive in the Baltic Sea, especially in setting targets for Good Environmental Status related to eutrophication.



New name for fact sheets

BALTIC SEA ENVIRONMENT FACT SHEETS

The well-established HELCOM Indicator Fact Sheets were renamed in September 2012 and are now the Baltic Sea Environment Fact Sheets (BSEFSs). This will avoid confusion with the core indicators currently being developed. Only the fact sheets updated after 2009 have been renamed - the older ones retain their old name.

The year brought five new Baltic Sea Environment Fact Sheets related to non-indig-

enous species. Two are on the amounts of non-indigenous species and their impacts in different areas of the Baltic Sea, and three are species-specific reports on the Round Goby (fish species), the Zebra mussel and Marenzelleria (a polychaete worm).

New gear for the ecosystem approach

HELCOM GEAR

The HELCOM Group for the implementation of the ecosystem approach (GEAR) was launched in the spring of 2012 to initiate and strengthen actions to implement the ecosystem approach to the management of human activities in our region and according to the Baltic Sea Action Plan. The

globally adopted ecosystem approach is a key element of the Baltic Sea Action Plan as well as a driving principle in the EU Marine Strategy Framework Directive. The approach, which also considers humans as part of the ecosystem, uses scientific knowledge as the basis of protection and the sustainable use of the marine environ-

ment, as well as prioritising and applying management actions. It also incorporates the principle of adaptive management. The GEAR Group relies on strong, regional coordination and steers HELCOM's efforts to restore the Good Environmental Status of the sea. The Group complements HELCOM's scientific-technical activities.

HELCOM and climate change

HELCOM plays an active role in the assessment of the regional impact of climate change. In recent decades, the Baltic region has warmed up faster than the global average. Dedicated work continues to increase the understanding of the effects of these changes on the Baltic Sea ecosystem and to make proposals for the reduction of human-induced pressures.

HELCOM has closely followed the scientific community's path towards the second BALTEX Assessment of Climate Change for the Baltic Sea Basin (BACC II),

due to be released in late 2013. HELCOM is preparing a thematic assessment on climate change and its effects on the Baltic Sea based on the results of the BACC II report, thus providing the most relevant up-to-date information for the Baltic decision makers. The assessment will also provide insight to the review of the HELCOM Baltic Sea Action Plan nutrient load reduction scheme.

Assessing the knowledge on climate change and its effects on the Baltic Sea should be carried out at regular intervals within HELCOM. This was a key outcome from a specialised HELCOM workshop in February 2013. Any changes in this knowledge should be communicated to the decision makers so that they can adapt the policies in order to strengthen the Baltic Sea ecosystem and to make it more resilient against the projected changes.

Exchanging knowledge

BALTIC2BLACK PROJECT

The Project Baltic2Black - Environmental monitoring of the Black Sea with focus on nutrient pollution – has continued to organize interactive workshops, to contribute to its focus of knowledge transfer between the Baltic and Black Sea regions. The EU-funded Project helps the exchange of knowledge on eutrophication assessment and monitoring of nutrient loads, as well as on working practices. The majority of specialists involved represent two inter-governmental sister organizations, HELCOM (partner) and the Black Sea Commission (lead partner), both working

to protect their respective regional marine environments.

By bringing experts from the two semi-enclosed sea areas around the same table helps to concretely grasp both the specific and common features as well as the challenges that the Black Sea and Baltic Sea share. The Project, running from 2011 until 2013, has recommended to make use of the increasing prominence of such semi-enclosed brackish water seas in other fora, including the EU and global arenas that often place a high emphasis mainly on oceanic environment protection.





Identifying species and biotopes under threat

HELCOM RED LIST

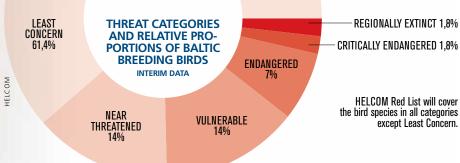
No basic lists of species that live in the Baltic Sea or their habitats have existed and little is known about those species and habitats that are under threat of extinction due to human activities or natural environmental variability. Reliable knowledge of the Baltic Sea's ecosystem structure and function is essential when planning sustainable use of the sea space and protecting the marine environment. In response to this urgent need, the HELCOM RED LIST project is working to produce a comprehensive Red List of Baltic Sea species as well as updating the Red Lists of Baltic Sea biotopes and biotope complexes. The work will be carried out for the HELCOM area by the end of 2013. The Project will identify the species and biotopes that are under the most severe threat of extinction. In order to present reliable assessments based on the data, the Project has prepared a checklist of Baltic Sea macrospecies and a classification system for biotopes and habitats in the Baltic Sea. The interim report, Red List of Baltic Breeding Birds provides information on the distribution and threat status which will be integrated in the final report.

The aim of the current RED LIST project is to utilise widely accepted threat assessment methods established by the International

Union for Conservation of Nature (IUCN) and to utilise as much data as possible in the assessments. Over 2,700 species have been considered in the Red List assessment process by more than 70 experts. Approximately 170 draft Species Information Sheets have been produced to summarize the knowledge on the status of the species under the greatest threat of extinction. Currently, nearly all Red List assessments have been completed for macrophytes, benthic invertebrates, fish and lamprey, as well as marine mammals. The Red List expert team for habitats and biotopes is working to update the underwater part of the previous Red List of marine and coastal biotopes and biotope complexes with support from the Nordic Council of Ministers.

Who will benefit from the Red Lists?

Red Lists are valuable tools for those working in all sectors related to the Baltic Sea, such as infrastructure planners, politicians, decision makers, lawyers and conservationists. They are also easily accessible sources of information for the general public. Ascribing a Red List threat category to a species or a biotope highlights which of the thousands of species and biotopes are in most urgent need of special attention and conservation efforts.



First ever checklist of Baltic Sea macro-species

HELCOM CHECKLIST OF BALTIC SEA MACRO-SPECIES RELEASED

For the first time ever, all animal and plant species visible to the human eye found in the Baltic Sea have been collected into one checklist (BSEP No.130). Typically, checklists concentrate on a particular group of species found in a defined region, mostly within national borders. However, the HELCOM checklist is unique in that it aims to cover all visible species simultaneously across the entire Baltic Sea. The checklist contains more than 2,700 species with the majority - altogether 1,898 - belonging to the benthic invertebrate group. The list covers most major macro-species groups found in the Baltic Sea area and it supplies valu-

able information on taxonomies, scientific names, authors, synonyms, information on their distribution in the different sub-basins of the Baltic, and references confirming the occurrence of the species in the Baltic Sea. The list contains both species that have occurred in the Baltic in the past as well as those that are currently present.

A clear trend can be seen for all groups where the amount of species located in an area decreases on a south to north gradient. An exception to this rule is the Gulf of Finland where the steep salinity gradient and shallow waters provide a varied living environment as well as near major rivers where there is also an influx of freshwater species and insect larvae.



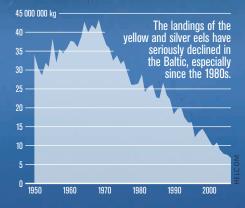
Stimulating dialogue for common solutions

FISHERIES AND ENVIRONMENT (FISH/ENV) FORUM

For over four years, the key focus of the FISH/ENV Forum has been to nurture a forum for information exchange and dialogue on current fisheries and environment issues, and to facilitate the implementation of the HELCOM Baltic Sea Action Plan. The representatives of the fisheries and environmental protection authorities from the HELCOM Contracting Parties and Observer organisations have gathered on a regular basis. The main focus in 2012 was on the conservation and management of migra-

tory fish species, such as salmon, sea trout and eel, the activities within the BALTFIMPA Project and on nature conservation matters related to the revision of the EU Common Fisheries Policy. The Forum also suggested several issues for the 2013 HELCOM Ministerial Meeting, such as marine litter, including setting specific targets on microscopic plastic particles, underwater noise, promoting the discard ban in the Baltic Sea commercial fisheries, and the development of sustainable aquaculture in the Baltic Sea Region.

EEL POPULATIONS IN THE BALTIC



Assessing coastal fish in the Baltic

COASTAL FISH COMMUNITY STATUS IN THE BALTIC SEA 2005-2009 RELEASED

Dramatic changes have taken place in the region's coastal fish communities during the end of the 20th century, drawing increased focus on this important part of Baltic Sea ecosystems. Coastal fish communities are of great importance to human society from both socio-economic and cultural points of view.

A key result of the Coastal Fish assessment, released in 2012 (BSEP No.

131), is a strategy for selecting indicators objectively, which allows the assessment of the status of coastal fish communities independent of monitoring areas and methods. This provides a sound basis for assessing the communities' status for international commitments such as the Baltic Sea Action Plan. The monitoring work of the coastal fish communities has also served as the basis for assessing these communities' status within the HELCOM CORESET project during 2011 and 2012.

The estimation is that 40% of salmon and 60% of sea trout populations in the Baltic region are in urgent need of recovery.

Balanced fisheries management

BALTFIMPA PROJECT

The inception phase of the BALTFIMPA project, supported by the EU under the Strategy for the Baltic Sea Region, consisted of preparing a Generic Tool for the assessment of fisheries' impacts on the conservation objectives of Marine Protected Areas (MPAs) as well as preparing a larger-scale project proposal for future work. The main objective of the BALTFIMPA project is to assist, at the regional level, the HELCOM Contracting States to comply with their obligations to fulfil the conservation objectives of Marine Protected Areas in the Baltic Sea. BALTFIMPA will analyse any possible

conflicts between fisheries and conservation objectives in MPAs (including Baltic Sea Protected Areas and areas of NATURA 2000) taking into account protected species, and will identify fisheries' management measures accordingly. This will be accomplished by studying the impacts of fisheries and then finding new solutions to mitigate them. Solutions can range from improving the management of fisheries regulations to developing new types of fishing gear that are more sustainable for the environment. These solutions then need to be promoted and disseminated to all relevant stakeholders.

New pollution knowledge

Pollution load compilations are crucial for the core activities of HELCOM and the protection of the Baltic Sea. Coordinated monitoring by HELCOM has continued since the 1980s.

Each country reports pollution data

PLC-5

The HELCOM member states have been reporting their pollution loads to the Baltic Sea on an annual basis since 1994. By assessing trends in nutrient inputs to the Baltic Sea, it is possible to evaluate the effects of the main measures to reduce the pollution loads. Moreover, this helps to determine whether HELCOM countries are achieving the provisional nutrient reduction targets agreed upon in the HELCOM Baltic Sea Action Plan in 2007.

The most recent HELCOM Baltic Sea Pollution Load Compilation (PLC-5) report is from 2011. The report covers waterborne and airborne pollution load data from

1994 to 2008, as well as an assessment of contributions of waterborne nutrient loads apportionment performed for 2006. The Executive Summary of the report was issued in 2012 (BSEP No. 128A).

According to the PLC-5 report, agriculture continues to be the main diffuse source of waterborne nitrogen and phosphorus inputs into the Baltic Sea. Nutrient losses from anthropogenic diffuse sources accounted for about 45% of the total reported waterborne phosphorus and nitrogen loads into the Baltic Sea; of this, the share emanated from agriculture was about 70–90% for nitrogen and 60–80% for phosphorus.

Aiming at more complete datasets

PLC-5.5

As the country-wise allocation of nutrient reduction targets is based on the 'polluter pays' principle, a complete pollution load dataset is necessary for the fair division of the pollution reduction burden. The ongoing PLC-5.5 project is preparing for

such a complete dataset, filling in data gaps in a harmonised way. In addition to being crucial for the fair sharing of nutrient reduction requirements, a complete dataset is needed to assess both the trends in pollution loads over time and the effectiveness of the pollution reduction measures.

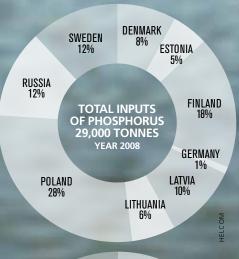
Future prospects: better access to more data

PLC-6

To continue monitoring the pollution loads to the Baltic Sea, HELCOM agreed to establish the 6th Baltic Sea Pollution Load Compilation project (PLC-6). The overall task of the Project is to grant better access to more comprehensive and reliable data. The Project will prepare a comprehensive assessment of the water and airborne inputs and their sources to the Baltic Sea during the period 1994–2014 with a more detailed assessment for 2014. The Project

also involves updating the PLC Guidelines and extending them with new standardised methods.

To facilitate the reporting of data by the Contracting States and to improve the access and quality of waterborne pollution load data, activities began in 2012 to modernise the PLC database through the HELCOM PLUS project. This will result in a new PLC-water database, with a webbased application for reporting, quality checking, viewing and downloading data.





Total inputs of phosphorus and nitrogen (including waterborne and airborne loads) to the Baltic Sea in 2008. Note that the waterborne inputs include transboundary loads. Baltic shipping and distant sources include only airborne inputs.

When interpreting the nutrient input figures for the year 2008, it should be noted that, compared to the long term average, precipitation was rather high that year over the Baltic Sea catchment area and was especially high in the northern parts of the Baltic Sea, which resulted in increased atmospheric deposition for the whole Baltic Sea and an unusually high proportion of nutrient inputs from Finland.



Polluter pays – but precaution comes first

REVIEW OF THE NUTRIENT REDUCTION SCHEME • HELCOM LOAD • HELCOM TARGREV

A new set of maximum allowable inputs of pollution together with the countrywise allocation of nutrient reduction target figures will be presented for adoption at the upcoming 2013 HELCOM Ministerial Meeting. Since 2008 (starting 2011 under LOAD Expert Group), HELCOM has been working on revising these maximum inputs and country-wise allocation targets.

The agreement on the provisional nutrient load reduction targets was signed in Krakow in 2007. These were calculated with the very first version of the Baltic Nest

Institute's (BNI) decision support system. Since then, tremendous work has been invested in improving both the tools and data sets – as well as the scientific justification for these – in order to provide the best possible advice on targets per each country to the HELCOM Ministers in October 2013.

Moreover, the process builds on the work by the HELCOM TARGREV project for strengthening the scientific basis of HELCOM's eutrophication targets. The new maximum allowable inputs are calculated using the latest model developments at the BNI, and the nutrient load reductions are allocated to the Baltic Sea countries with a transparent and efficient tool from the BNI

that uses the latest data from the HELCOM Pollution Load Compilation. Atmospheric nitrogen loads will be included in the allocation, so that countries can utilise measures on nitrogen emissions to reach their reduction targets, in addition to making reductions in loads to the Baltic Sea and rivers in the catchment.

Bo Gustafsson, one of the coordinators of the review process and the Managing Director of BNI in Sweden, says: "Primarily, what is new in the revised approach is that each piece of the puzzle is redone with greatly improved methods and data".

Combating landbased pollution

The work to prevent harmful nutrients ending up in the Baltic Sea targets two major sources of eutrophication: insufficient municipal wastewater treatment and excessive runoff from agriculture.



1989

1990

1997

1998

Liberalisation in Eastern Europe led to closer contacts between all the countries around the Baltic Sea and increased commitment to environmental cooperation. The Baltic Sea Declaration was signed in Ronneby, Sweden, by Heads of Governments and High Political Representatives. The Declaration defined the JCP as a tool for the implementation of the 1974 Helsinki Convention.

The new Helsinki Convention approved the JCP's 20-year programme of action, anticipating phased strategic investment throughout the region with a total estimated cost of some ECU 18 billion.

The programme was reviewed and updated. Most of the JCP components were transferred to HELCOM's ordinary working bodies except for investment activities.

Cooling down Hot Spots – eliminating significant polluters

JOINT COMPREHENSIVE ENVIRONMEN-TAL ACTION PROGRAMME (JCP)

Over two-thirds of the 162 serious pollution areas - or 'hot spots' - identified around the Baltic Sea since 1992 have been cleaned up as a result of the Joint Comprehensive Environmental Action Programme (JCP). The JCP was established as an international environmental management framework for the long-term restoration of the Baltic's ecological balance. A report assessing the efficiency of the programme is under preparation and due to be finalised in 2013, just prior to the HELCOM Ministerial Meeting.

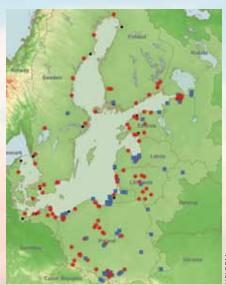
In 2012 alone, six agricultural areas, eight municipal/industrial wastewater treatment plants and one coastal management programme were removed from the list

in Denmark, Estonia, Poland, Russia and Sweden. Overall, the hot spots concern municipal and industrial wastewater treatment areas, as well as industrial and agricultural areas. Agricultural sites are among the most challenging to mitigate.

A follow-up procedure to monitor the environmental performance of deleted hot spots is under preparation, as are measures to address the remaining 52 hot spots, most of which demand special attention. Another listing - 'Green Spots' - is also under development. The HELCOM countries have considered establishing an award for outstanding actions towards a healthier common sea.

HOT SPOTS DECEMBER 2012

Total 162 Deleted 109 Active 52





2003

Programme Implementation Task Force (PITF) closed. The Land-Based Pollution Group, HELCOM LAND, became the responsible body for implementing the JCP.

2007

The Baltic Sea Action Plan calls for establishing the list of new agricultural point-source hot spots not in compliance with part II, Annex III of the Helsinki Convention (1992).

2010

The review of efficiency of the JCP with regard to hot spot remediation was launched.

2013

The HELCOM Ministerial Meeting is expected to decide on the completion of the programme, based on the efficiency report.

Focus on waste deposits

BALTHAZAR PROJECT

One component of the three-year HELCOM BALTHAZAR project in Russia, financed by the EU, was to improve the monitoring and reporting of potential loads for the **HELCOM Pollution Load Compilations.** Within the Project's framework, a significant source of phosphorus was identified and investigated in the Luga River near Kingisepp in North-West Russia. In general, it is highly cost-effective to reduce pollution at a point source, in this case a EuroChem fertiliser plant, in comparison to other, more diffuse sources. To obtain a more complete picture of the nutrient inputs, the BALTHAZAR Project continued its investigation throughout the first half of 2012, together with responsible authorities, the representatives of EuroChem and other project stakeholders. Thanks to actions taken by the company, the phosphorus concentrations dropped and remained at lower levels.

HELCOM LAND has followed the updates from the Kingisepp fertiliser plant. Further evaluations of the situation continued at similar fertiliser producing facilities and related waste deposits in the region through information exchange on their environmental performances.

THE PHOSPHORUS REMOVAL POTENTIALS TO REACH THE OVERALL TARGET (15,000 TONS) SET IN THE BALTIC SEA ACTION PLAN





PURE PROJECT

The PURE project (Project on Urban Reduction of Eutrophication) focuses on one of the most cost-effective and quickest ways to tackle eutrophication: phosphorus removal at selected municipal wastewater treatment plants in the Baltic Sea region. The major activities of the EU-funded PURE project were successfully completed in 2012. The Project has published the Book of Good Practices in Sludge Management, the first of its kind in the Baltic Sea Region. Better handling of sludge plays a key role in reducing the potentially harmful environmental impacts within urban wastewater treatment. Further, a new online tool 'PURE BenchMark' improves sharing and visualising information on municipal wastewater treatment and loads to the Baltic Sea.

PURE has brought together stakeholders across the sector to showcase how cooperation and the exchange of information help to develop their professional capacity. Three PURE partner water companies have implemented investments in the actual treatment plants to improve phosphorus removal. PURE partner water utilities aim to achieve an average annual concentration of 0.5 mg phosphorus per litre in outgoing wastewaters. The project has been extended by an additional six months to complete the investments planned for the Brest wastewater treatment plant in Belarus.

Addressing transboundary loads

PRESTO PROJECT

HELCOM is an associate partner of the PRESTO project. PRESTO combats eutrophication by improving wastewater treatment in Belarus through technical studies, concrete investments and by advancing human competence.

In 2012, the EU-supported Project organised several training sessions on modern wastewater treatment, showing practical examples of reconstruction projects at their different stages. In addition, PRESTO provided opportunities to exchange information between wastewater treatment specialists from Belarus and EU member countries. Activities within the Project also include raising awareness of eutrophication and strengthening the commitment to implement efficient ways to reduce nutrient loads. PRESTO contributed to the Book 'Good Practices in Sludge Management' and its translation into Russian.

Further synergies within regional projects

BALTIC IMPULSE CLUSTER

Baltic Impulse is an environmental cluster revolving around the two themes that most urgently need resolving in the region: reduction of nutrient pollution and environmentally sound management of hazardous substances. By bringing together the environmental experts of on the Baltic Sea, the Cluster will intensify the exchange of experiences and ideas and further develop cooperation. A synthesis report is planned to be provided as an input to

preparations for the HELCOM Ministerial Meeting in October 2013.

The Cluster consists of 15 partners represented mainly through their involvement in the projects Baltic COMPASS, Baltic Deal, Baltic Manure, BERAS Implementation, COHIBA, PURE, PRESTO, SMOCS or Waterpraxis. The initiative is financed by the Baltic Sea Region Programme 2007-2013 and it is operational between September 2012 and September 2013.

TACKLING THE CHALLENGE OF DIFFUSE SOURCES IN AGRICULTURE

Dialogue across environmental, agricultural and research sectors

BALTIC COMPASS

Baltic COMPASS has, over the past three years, initiated and enabled dialogue across the environmental, agricultural and research sectors. Baltic COMPASS engaged governments, authorities, farmers' organisations, researchers, and the business and technology sectors in the region in order to increase transparency when implementing the prioritised agri-environment measures to illustrate the efficiency of such meas-

ures. The Project promoted the sustainable application of investments and innovation, and developed management support tools for agri-environmental planning. A better cross-sector management of ecosystem services from agriculture was explored and applied in this Project led by the Swedish University of Agricultural Sciences (SLU)

Baltic COMPASS strongly supported the operational side of the HELCOM Agriculture and Environment Forum through 2012

by specific thematic papers covering buffer zones, wetlands and manure management. Since 2010, Baltic COMPASS, part-financed by the EU Baltic Sea Regional Programme, has annually arranged a Baltic Sea Region agri-environmental stakeholder conference 'A Greener Agriculture for a Bluer Baltic Sea' in cooperation with two other agri-environment projects, Baltic Deal and Baltic Manure. This event by 2012 grew into one of the main stakeholder fora on the topic.

Cost-effective solutions for less pollution in North-West Russia

BASE PROJECT

The BASE project began in June 2012 with support from EU funds. It addresses three priority areas of the HELCOM Baltic Sea Action Plan in Leningrad and Kaliningrad Oblasts: eutrophication, hazardous substances, and biodiversity and nature protection.

Monitoring activities to support and measure the implementation progress are also being carried out. BASE takes the cooperation achieved within its predecessor BALTHAZAR project further by promoting and implementing cost-effective solutions to reduce nutrient pollution to the Baltic Sea from different sources, including municipal wastewaters and intensive

agricultural activities. BASE promotes biodiversity in the Baltic water area through, for example, the development of protected area management and by measures for natural salmon population conservation. The Project is also enhancing Russian preparedness to provide pollution load data to HELCOM.



UNSAFE CHEMICALS AND SUBSTANCES

How to control chemicals: flow patterns, sources and management

COHIBA PROJECT

The Project Control of Hazardous Substances in the Baltic Sea Region (COHIBA) delivered a large amount of valuable information on the identification of the sources and flows of hazardous substances, and on the development of cost-efficient measures to minimise pollution by them.

The outcome is ready for application at the national level, e.g. for the revision of the National Implementation Programmes under the Baltic Sea Action Plan. The Palette of Measures on cost effective management options to reduce discharges, emissions and losses of hazardous substances will be prepared as an input from the COHIBA

Project for the 2013 HELCOM Ministerial Meeting.

The COHIBA Project was co-financed by the EU and it is one of the environmental projects participating in the cluster initiative 'Baltic Impulse - saving the Baltic Sea waters' in 2012–2013.

Brown gold – chicken manure turned into fertiliser products

BALTHAZAR PROJECT

The BALTHAZAR pilot initiatives in the Leningrad region, Russia, have had encouraging results in transforming chicken manure into fresh field fertiliser. Animal farms pose serious risks to the health of the Baltic Sea if the manure is not properly stored or processed. Nutrient leaching from the livestock farms in North-West Russia was a main focus of the Project, which assessed the risks and

sought solutions in the most critical sites in the Kaliningrad and Leningrad regions. The BALTHAZAR project (2009–2012) listed 26 farms, of which 12 were poultry farms in the Leningrad region where environmental measures should be taken as a first priority in order to reduce the eutrophying substances leaching into the Baltic Sea. The proposed measures included both single farm manure management measures with manure recirculation investments

(biogas, manure burning) and municipal and district-level collaboration for more efficient manure utilisation. BALTHAZAR also conducted a pilot project to convert chicken manure into fertiliser products. One technique is tunnel composting, which is a fairly simple and cost-effective method where the composted material can be used as a fertiliser by small gardens as well as larger fields.

Harmonised methods to the challenges of agriculture

AGRICULTURE AND ENVIRONMENT (AGRI/ENV) FORUM

In 2012, the AGRI/ENV Forum continued as a platform for a broad stakeholder dialogue in developing sustainable agrienvironmental measures. The Forum addressed the application of harmonised methods for the assessment of point-source and diffuse pollution loads from agriculture. National experiences

concerning best practices and case studies in agriculture were exchanged, including agro-innovative techniques. The Forum provided regional contribution to the development of 'Guidance on making Water Framework Directive agricultural measures clear and transparent at farm level'. The Forum also considered suggesting a revised palette of agrienvironmental measures under the

HELCOM Baltic Sea Action Plan as input to the 2013 HELCOM Ministerial Meeting.

The designing of wetlands and buffer zones as well as effective nutrient management, developed for the Forum purposes in 2012, will serve as a background for the revision of the Palette of Measures along with further inputs by the Baltic COMPASS project.



Safe ending - handling mercury lamps

BALTHAZAR PROJECT

One main aim of the EU-funded BALTHAZAR project (2009-2012) was to enhance the protection of the Baltic Sea from hazardous wastes. A pilot project was carried out in Kaliningrad region. Loading mercury compounds to the Baltic Sea was reduced by creating an effective

system of collecting mercury-containing waste from households and by deactivating the waste in the Gusevsky district. Until the start of BALTHAZAR, there was no official system for collecting hazardous waste from households in the Russian Federation. Key methods included raising awareness of hazardous waste management and

involving communities in brainstorming ways to deal with it. A safe treatment plant for mercury-containing waste was set up, accompanied by a safe collection and transportation system.











FLIGHT HOURS AND OBSERVED OIL SPILLS IN THE HELCOM AREA 700 Numbers of observations Numbers of flight hours 7000 600 ennu 500 5000 400 4000 3000 2000 99 00 01 02 03

Better predictions of oil slick movements

HELCOM SEATRACK WEB 2.0

The official HELCOM oil drift forecasting system, Seatrack Web, is a fast and effective service for forecasts and backtracking of drift and spreading of oil, chemicals, algae and substances in water. It is a powerful tool for authorities in HELCOM countries for oil spill prediction, combating and identification of illegal polluters – used operationally throughout the Baltic region by Coast Guards, Border Guards, Rescue Services and Environmental Institutes. During 2012 the whole system was upgraded

to the Silverlight platform, to keep up with the rapidly progressing internet technology and develop new and important functionality for the benefit of all pollution response authorities in the HELCOM Contracting Parties. The user-friendly web application covers all of the Baltic Sea as well as the eastern part of the North Sea (out to 3° E).

Seatrack Web uses the latest technology, three-dimensional modelling, updated atmospheric and ocean forecasts and observations, satellite information and HELCOM's AIS system. It has been devel-

oped and administrated by the Swedish Meteorological and Hydrological Institute (SMHI), the Defence Center for Operational Oceanography in Denmark (DCOO) and the German Federal Maritime and Hydrographic Agency (BSH).

The system, including oil spreading model PADM (PArticle Dispersion Model) and graphical user interface, is continually being improved and optimized by a team of experts at SMHI, DCOO, BSH and soon to include FMI (Finnish Meteorological Institute).

INFORMAL WORKING GROUP ON AERIAL SURVEILLANCE (IWGAS)

Cooperation on aerial surveillance within the Baltic Sea area has been established in the 1980s within the framework of the Helsinki Convention and coordinated by the Informal Working Group on Aerial Surveillance (IWGAS). This requires the Contracting Parties to conduct regular surveillance outside their coastlines and to develop and apply, individually or in cooperation, surveillance activities covering the Baltic Sea area in order to spot and monitor oil and other substances released

into the sea. The Contracting Parties are also supposed to coordinate surveillance activities which take place outside territorial waters.

In May 2012, the Swedish
Coast Guard organised a Coordinated
Extended Pollution Control Operation in
the north eastern part of the Baltic Sea
(CEPCO North). Four aircrafts from Estonia,
Finland, Poland and Sweden surveyed for
35 hours the agreed area for signs of oil

pollution with the base airport in Visby. A Swedish patrol boat was prepared to make on-board investigations of any ships found to be illegally discharging oil. Also satellite images of the flight area provided by the European Maritime Safety Agency's (EMSA) CleanSeaNet service were used to support the operation. Only four illegal discharges of oil from ships were detected during the operation.

CEPCOs enable a realistic estimation of the total number of oil spills discharged into the Baltic Sea during a randomly selected period. Typically, two CEPCOs are arranged annually by HELCOM in the Baltic Sea: one in the south and one in the north. During CEPCO flights several HELCOM countries jointly carry out continuous aerial surveillance activities along the predetermined routes in areas where operational spills are likely for 24 hours or more. Every second year, SuperCEPCO operation is conducted during which the selected area is surveyed for a longer period of time.

Response to pollution on the shoreline

HELCOM RESPONSE

During 2012 the HELCOM Response Group started drafting a HELCOM shoreline oil response manual, which would complement the existing HELCOM manual on operations at sea. The Group has also developed a proposal to amend the Helsinki Convention in relation to cooperation on shoreline response according to HELCOM Recommendation 33/2.

Managing risks caused by oil and chemicals in the Baltic Sea

BRISK/BRISK-RU PROJECTS

The projects on "Sub-regional risk of spill of oil and hazardous substances in the Baltic Sea" (HELCOM BRISK and BRISK-RU) were completed during 2012. On the basis of the existing data on maritime traffic for the entire Baltic Sea, and with estimated risks of different accident and spill scenarios, the projects calculated risks for different types of accidents and spill sizes. The projects, co-financed by the EU and the Nordic Council of Ministers, translated these scenarios into maps that define high risk areas in the region.

The projects have modelled the risk reducing effect of different measures. As a key outcome, the projects have recommended new, cost-efficient measures to strengthen the preparedness and response both for the whole Baltic region and in specific sub-areas.

One of the recommendations is to enhance sub-regional preparedeness and response, including transboundary agreements to complement the HELCOM framework.

The projects recommend the use of night vision equipment as a highly efficient measure in all areas and increasing response and recovery capacity in ice conditions, especially in the Gulf of Bothnia, and in shallow waters

The projects also promote Traffic Separation Schemes (TSS) as a cost-efficient means to enhance safety of navigation and double-hulls in small tankers and bunker tanks in new vessels to decrease spills outside the main tanker route, including the Gulf of Bothnia and the South-Eastern Baltic Proper as well as a Vessel Traffic System (VTS) for the entire tanker route between Skaw and Primorsk/Ust Luga, building on the existing systems in the Great Belt and the Gulf of Finland.

Safer and cleaner shipping

Growing maritime transportation threatens fragile ecosystems and the livelihoods of the many people who depend on the sea. HELCOM follows up that the regulations adopted by IMO are effectively and uniformly enforced in the region.

Less ship groundings in the Baltic

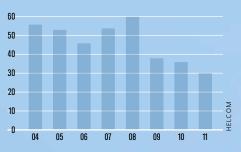
ANNUAL REPORTS ON SHIPPING ACCIDENTS IN THE BALTIC SEA

While the Baltic continues to be one of the busiest seas in the world, the number of accidents has not increased proportionately. In particular, the decrease in the number of groundings has continued for several years. Compared to 2008, the number of groundings in the Baltic Sea has decreased by 50%.

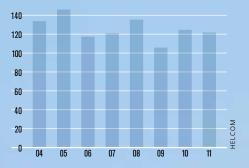
Annual reports on shipping accidents in the Baltic Sea have been compiled by HELCOM since 2000. An analysis of the accident data provided by the HELCOM Contracting Parties in 2011 (the latest data currently available) revealed that there were in total 121 ship accidents in the Baltic marine area in 2011, indicating a slight

decrease compared to 2010. Collisions were the most frequent type of shipping accidents in 2011, accounting for one third of all reported cases. Groundings were the second most common type of accidents, with 30 reported cases (25%), showing a clear drop of 17% compared to 2010. The main cause of accidents, accounting for 50% of all accidents in 2011, was, as in many previous years, a human factor. The number of accidents resulting in pollution was slightly higher (9%) than the average for the ten-year period 2002-2011 (7%). Tankers were involved in over 50% of the pollution accidents. However, the pollution accidents in 2011 occurred mainly during fuel transfer.

GROUNDINGS IN THE BALTIC SEA 2004–2011 (TOTAL 373)



REPORTED ACCIDENTS IN THE BALTIC SEA 2004–2011 (TOTAL 1001)





Better access to traffic data

HELCOM AIS SYSTEM

Since July 2005, the Baltic Sea has been benefitting from the regional HELCOM Automatic Identification System (AIS) network, allowing the national contact points to make use of real-time surveillance and for the collection of statistics on shipping traffic in the whole Baltic Sea area. The HELCOM Expert Working Group for Mutual Exchange and Delivery of AIS Data (AIS EWG) is responsible for the management and updating of the regional AIS system. The group consists of experts from

national Maritime administrations around the Baltic Sea. During recent years, interest in the regional AIS information has been growing. To ease access to the HELCOM AIS datasets, the annual HELCOM meeting 2012 adopted a Recommendation (33/1) that specifies a large number of user groups who are automatically granted access to the available information. For some user groups, mainly commercial initiatives, the access to the HELCOM AIS data is still subject to consultation by all HELCOM Contracting Parties.

HELCOM develops regional management of ships' ballast water

HELCOM BALLAST WATER ROAD MAP • HELCOM ALIENS 2 PROJECT • HELCOM-OSPAR TASK GROUP FOR BWM CONVENTION EXEMPTIONS

Transport and the introduction of nonnative species has been perceived as one of the primary threats to coastal ecosystems worldwide, and ships' ballast water has been identified as one of the main vectors. In 2012, HELCOM concentrated on developing frameworks for the equal and harmonised implementation of the Ballast Water Management Convention (BWMC) in the Baltic Sea. The BWM Convention will play a crucial part in reducing the transport of non-native species. To facilitate the ratification process - in 2012 Russia and Denmark followed Sweden in ratifying the Convention - the HELCOM Ballast Water Road Map was adopted as a part of the HELCOM Baltic Sea Action Plan. The HELCOM countries have agreed to ratify the 2004 BWM Convention by 2013 at the

latest. According to the BWM Convention, ships will be required to implement ballast water management unless an exemption has been granted following a risk assessment. Previous HELCOM projects on ballast water-related issues, such as the pilot risk assessments of the transfer of alien species on intra-Baltic ship voyages, concluded that there is a lack of reliable data on non-native species in ports and the conditions in the ports. These data are crucial for conducting reliable risk assessments between the ports. For the purposes of a risk assessment, harmonised criteria for target species selection were needed. The HELCOM ALIENS 2 project developed and tested a sampling protocol for detecting non-native species in port environments to ensure appropriately collected data. The Project also created a data reporting and storage system as well as a risk analysis and decision-making tool to assist the Contracting Parties in the exemption process.

The HELCOM Maritime Group has highlighted the need to cooperate with the North Sea countries to put in place a consistent exemption regime. In September 2012, the Joint HELCOM-OSPAR Task Group for BWM Convention Exemptions was initiated and plans for adapting the outcome of the HELCOM ALIENS 2 project to apply to the OSPAR region by March 2013 were made. In addition to these projects focusing on exemptions, the joint HELCOM/OSPAR/ Barcelona Convention ballast water exchange guidance forms an important part in better protection from invasive species to the Baltic. Since 1 October 2012, the guidance requires vessels in traffic between the sea areas of the Mediterranean and the North Atlantic/ Baltic to have a ballast water treatment plan in place, collect information, and exchange all their ballast water tanks in specific offshore areas prior to port entry.

Stringent measures on sewage from ships

COOPERATION PLATFORM ON PORT RECEPTION FACILITIES (PRF) ON SEWAGE

The IMO agreement for less sewage discharge to the Baltic Sea was finalised in 2011. During 2012, the HELCOM Contracting Parties together with the Observer

organisations representing a wide range of shipping and port industry developed a draft for a guidance document on port reception facilities (PRF) on sewage. The document will help the Baltic Sea coastal countries in meeting the requirement of adequate PRF facilities for passenger ships by 2015. This would enable the entry into force of the MARPOL Annex IV special area status for the Baltic Sea agreed by IMO in 2011 pending the provision of such facilities. The draft will be developed further during 2013.



HUTTERSTOCK

A future with less airborne pollution

NECA PROCESS

Eutrophication, which means the effects of nitrogen and phosphorus pollution, is one of the most serious Baltic environmental issues discussed within HELCOM. Over the last decades, actors on land – including municipal wastewater treatment facilities, industrial facilities and agriculture – have made considerable investments in reducing nitrogen and phosphorus oads to the Baltic Sea. During 2012, HELCOM worked in various ways to enable also the maritime traffic sector to contribute to solving the

eutrophication challenge in the Baltic Sea. HELCOM has started to collect information on various economic incentives which are used as tools to reduce shipping emissions on a voluntary basis. This will contribute to implementing HELCOM Recommendation 28E/13 on such economic incentives complementing existing regulations to reduce emissions from ships.

The nine countries of the Baltic Sea area and the European Union have also worked to fulfil commitments taken during the HELCOM Moscow Ministerial Meeting in 2010 to work towards submitting a joint proposal to the International Maritime Organisation (IMO) applying for a Nitrogen Oxide (NOx) Emission Control Area (ECA) status for the Baltic Sea. This work will take into account the results of a study by HELCOM on economic impacts of such a designation.

Maritime spatial planning

HELCOM is the regional leader with VASAB in the joint planning of the common sea area. Maritime spatial planning strives for a delicate balance between the use of the sea's plentiful resources while maintaining its unique nature.

Pioneering offshore planning between two countries

PLAN BOTHNIA PROJECT

In June 2012, the Plan Bothnia project, an EU preparatory action on transboundary Maritime Spatial Planning (MSP) in the Baltic Sea coordinated by the HELCOM Secretariat was finalised. For the first time, planning the future of an offshore sea area – the Bothnian Sea, north of Åland – has been tested in Sweden and Finland with good results. Plan Bothnia considered the future of a wide variety of issues such as maritime traffic, fisheries, wind power, economy, cultural heritage as well as nature protection and marine ecosystems together. A pioneering feature was that

the planning was carried out jointly by both countries through a large number of participants and institutions.

The summary publication of the project, Planning the Bothnian Sea, includes analyses of the different characteristics, uses and future developments in the region. Planning the Bothnian Sea was selected 'Book of the Year' and won first prize as the best publication in the Design and Print Awards 2012 competition in Finland. Moreover, it has received prizes in the Antalis Design Awards 2012 and the Design & Art Direction (D&AD) professional awards 2013.

Deeper regional work on maritime spatial planning

HELCOM-VASAB MARITIME SPATIAL PLANNING WORKING GROUP

In solving issues related to competition for limited marine space between sectorial interests and environmental concerns, HELCOM is in the regional forefront, for instance by acting as the Horizontal Action Leader in 'Spatial Planning' of the EU's Strategy for the Baltic Sea Region (EUSBSR), jointly with Visions and Strategies around the Baltic (VASAB). The Joint Working Group of HELCOM and VASAB on Maritime Spatial Planning (MSP) aims at drawing up and applying ecosystem-based maritime spatial plans, at the same time taking into account

the transboundary context throughout the Baltic Sea region. In 2012, the joint Working Group focused on deliverables for both the HELCOM and VASAB Ministerial Meetings in 2013 and 2014, respectively. These are a regional road map for MSP, a document on the application of the ecosystem approach in MSP, and an overview of the legislative basis for MSP. Further, the deliverables include a proposal for a new HELCOM Recommendation on safeguarding important seabird habitats and migration routes in the Baltic Sea from the negative effects of energy production, in cooperation with HELCOM HABITAT.



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