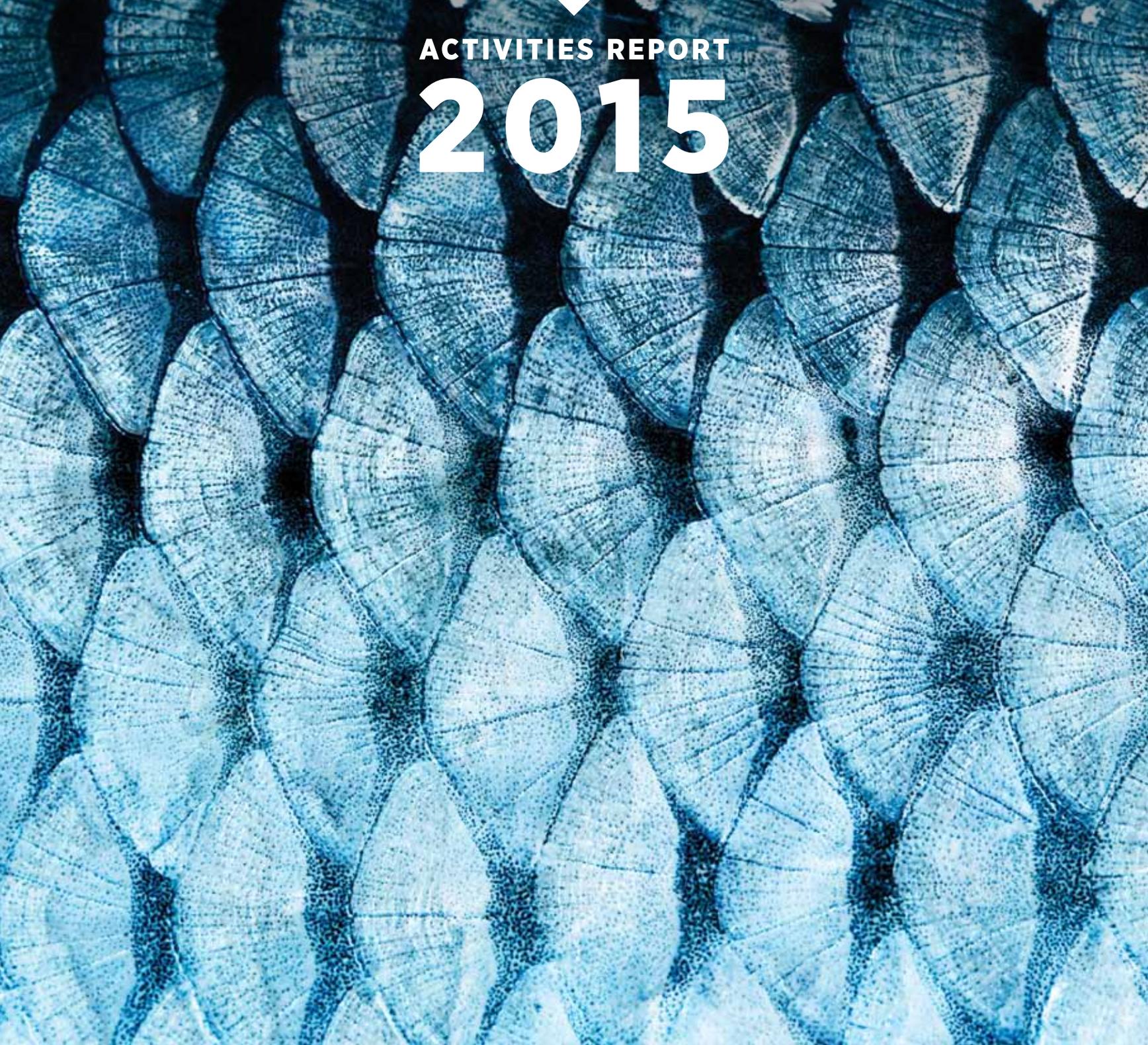




ACTIVITIES REPORT
2015



HELCOM is an intergovernmental organization made up of the nine Baltic Sea coastal countries and the European Union.

Founded in 1974, its primary aims are to protect the marine environment of the Baltic Sea from all sources of pollution, as well as to ensure safe maritime navigation.

The official name of HELCOM is the Baltic Marine Environment Protection Commission; it is the governing body of the Helsinki Convention.

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FOR E A

MONIKA STANKIEWICZ

Executive Secretary, HELCOM

No one would deny how important cooperation is—not just among the countries around the sea but also increasingly with other seas in other regions. However, getting concrete evidence about such cooperation is another story.

While I am all for cooperation, I had my share of doubts when Contracting Parties decided that HELCOM should seek even greater synergies with other Regional Seas Conventions, in particular in the adjacent North Sea. There are already so many activities and meetings in the Baltic Sea which we need to take care of and coordinate and which I would not like to compromise, I thought. To follow what others do and even to try to daily coordinate our doings over sea basins felt somewhat

unreal. Further, I wondered whether there would be an equal interest from countries in other sea regions to cooperate with HELCOM in the Baltic Sea. After all, the Baltic is quite a remote and small sea, not connected to the great ocean, and therefore the challenges sometimes differ.

What I did not think though was that this could be a source of great inspiration.

Last fall, rather unexpectedly, a first-hand opportunity came about to bring cooperation between the sea regions to another level. I was bound for two consecutive meetings in August, both in Germany: joining the annual tour of the German Federal Minister of the Environment, Dr. **Barbara Hendricks**, in Stralsund, preceded by the meeting of the European Water Commissions in Magdeburg.

Dr. **Darius Campbell**, the Executive Secretary of OSPAR, the marine commission

in charge of the North–East Atlantic, was invited to attend the same exact meetings. I already knew Darius quite well from before, so it was easy to connect with him in advance and share travel plans. Splitting the costs even, a car was hired (thank you Darius for the initiative!) and off we went: from Berlin to Magdeburg, then to Stralsund, and back to Berlin in the course of four days.

As there were almost 840 kilometres and eight hours of driving ahead of us, in the confined space of a small car, one might slightly dread for a few awkward silences.

Quite the contrary.

While the particularities of the environment, surrounding countries and their contexts vary significantly between the Baltic and North Seas, the work of the separate Regional Seas Conventions also have many common features—more than one would imagine.



WORLD

HELCOM and OSPAR are neighbours, we share three bordering countries and have many similar processes, so there are some pre-given conditions for cooperation. However, the lengthy talks proved that there really are many more connecting points.

For instance, HELCOM and OSPAR share the need for political support for the work to be effective—no wonder we had both gladly accepted the invitation to meet with such a high level person as the German Federal Minister. Meeting Dr. Hendricks was an opportunity to inform her about HELCOM activities and also national priorities in the region – and not just her but the large media crowd following the tour. Getting to meet this Minister was particularly pleasant as

she already possessed such a high level of knowledge relevant for marine protection and the work of the Regional Seas Conventions.

The German Minister was no stranger to marine litter issues, very topical for HELCOM last year as the Regional Action Plan for Marine Litter was adopted in June. Marine litter is one issue which exemplifies the connection between HELCOM and OSPAR: as the litter mitigation plan for the North Sea area had been ready earlier, OSPAR provided support to us when our region started the work. Recent inter-regional cooperation on sea birds, indicators, underwater noise, and the HELCOM-OSPAR task force on ballast water are other concrete cases of successful mutual cooperation.

When attending the Meeting of the Executive Secretaries of the European Water Commissions, the common points between us were again evident, such as the imminent need to put even more effort in connecting measures at sea with the ones on land and the related monitoring and assessment activities.

One discovery was that when comparing experiences with another region, one can get highly useful reassurance of the chosen direction and draw from the experience elsewhere to help adjust the course of action if needed. Many lessons can be learnt from both sides. The shared issues connect us as counterparts and make us members of the same family.

Thank you colleagues in other Regional Seas Conventions for being such a great source of inspiration!

Stralsund, Germany in August 2015. From left:

*Monika Stankiewicz,
HELCOM Executive Secretary*

*Barbra Hendricks,
German Federal Minister of the Environment*

*Darius Campbell
OSPAR Executive Secretary*





BETTER TRACKING THROUGH NEW CORE INDICATORS

This past year HELCOM made significant strides in evaluating the progress made towards Good Environmental Status (GES) in the Baltic Sea. Almost twenty new core indicators have been developed for elements of the marine ecosystem. These indicators are essentially tools for evaluating the status of the sea in a systematic way and allowing the tracking of changes over time, marking an important step forward from the use of different assessment criteria as well as the lack of a clear definition of GES.

STATE AND CONSERVATION

The new indicators offer firm, jointly agreed criteria which allow HELCOM and any decision-makers to follow changes in the environment. The categories are in line with HELCOM Baltic Sea Action Plan, which defines the objectives and needed actions for reaching GES in the entire Baltic Sea by 2021.

The Second Holistic Assessment of the Ecosystem Health of the Baltic Sea is underway and will make use of the new core indicators. Assessment results are first expected in mid-2017 and will demonstrate how close we are to reaching the goals outlined in the Baltic Sea Action Plan.

Data for the indicators comes from the extensive monitoring conducted by the Baltic coastal states on species, biotopes, hazardous substances, nutrients and various human activities in the Baltic Sea. The core indicators were developed with the cooperation of experts in the field and can be used for a multitude of purposes across the region and beyond. Cooperation with other European Regional Sea Conventions, sharing experiences with United Nations Environmental Programme (UNEP), and synergies with the ongoing processes in the EU are included in the steps taken to making the indicators interregionally relevant.

ALWAYS ROOM FOR IMPROVEMENT: COORDINATED MONITORING

A successful case of ensuring that project results are policy relevant and are in line with the needs identified by HELCOM countries is the large EU-funded project, Testing new concepts for integrated environmental monitoring of the Baltic Sea (BALSAM). The key result of the 2013-2015 project was improving the coordination of environmental monitoring and supporting the long-term, regular monitoring activities of HELCOM. More information on the current monitoring programmes and activities in the Baltic were collected and included in the extensive HELCOM Monitoring Manual. In addition, guidelines were made for seabird and benthic habitat monitoring while databases were created for seals and seabirds. The project also investigated how research vessels could be used in a more harmonized and cost-effective way, for example, through the online exchange of information on such vessels and their planned cruises.

RESEARCH VESSELS TO COORDINATE MORE

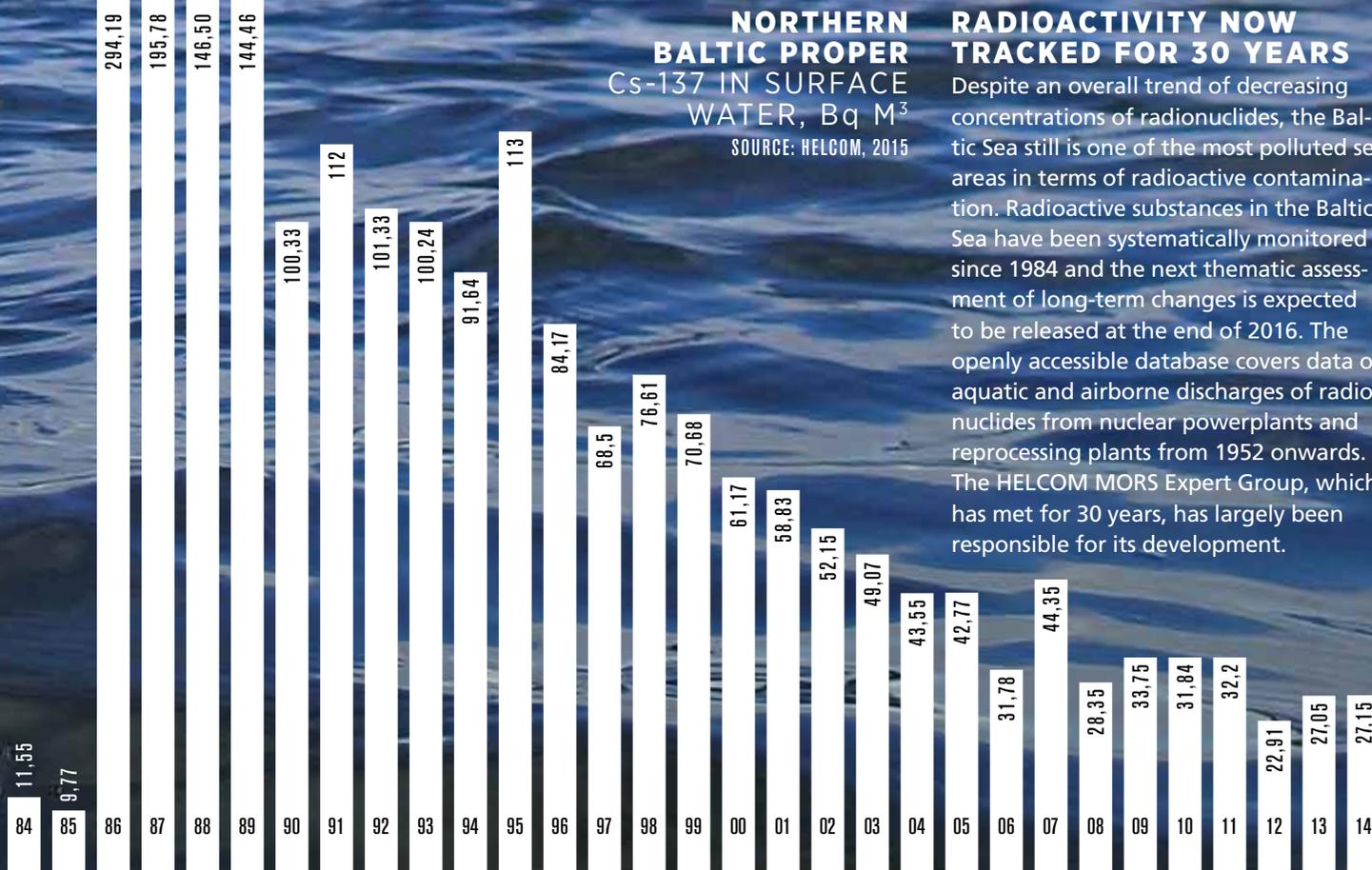
All research cruises, sailing for samples or conducting other marine monitoring activities, will be better coordinated across the Baltic Sea through the updating of a HELCOM Recommendation. Also cooperation between ships and the smoother granting of permits are addressed. Another recently introduced tool facilitating coordination is the HELCOM online platform for sharing information on planned and completed cruises, which shows real-time vessel positions based on HELCOM Automatic Identification System (AIS) for ships.

TAKING CARE OF THREATENED SPECIES

The protection of threatened Baltic Sea species will take a leap forward once the advanced draft of a HELCOM Recommendation is finalized. The new Recommendation follows up on the critical situation of many Baltic Sea species—following the 2013 HELCOM Red List of Baltic Sea Species in Danger of Becoming Extinct (BSEP 140). The preparation of a Recommendation on the conservation of habitats and biotopes is expected to begin shortly.

NORTHERN BALTIC PROPER Cs-137 IN SURFACE WATER, Bq M³

SOURCE: HELCOM, 2015



RADIOACTIVITY NOW TRACKED FOR 30 YEARS

Despite an overall trend of decreasing concentrations of radionuclides, the Baltic Sea still is one of the most polluted sea areas in terms of radioactive contamination. Radioactive substances in the Baltic Sea have been systematically monitored since 1984 and the next thematic assessment of long-term changes is expected to be released at the end of 2016. The openly accessible database covers data on aquatic and airborne discharges of radionuclides from nuclear powerplants and reprocessing plants from 1952 onwards. The HELCOM MORS Expert Group, which has met for 30 years, has largely been responsible for its development.

You lead the development of two hazardous substances core indicators, on PFOS and HBCDD. Can you tell us why these substances were chosen as HELCOM indicators?

Perfluorooctane sulfonate (PFOS) and hexabromocyclododecane (HBCDD) are man-made substances used in a broad variety of products. They are stable and toxic; they also accumulate in the food chain. They have posed concern because concentrations of both substances have increased in the Baltic environment at least since the beginning of contaminant monitoring in Sweden in the 1970s.

What are the benefits of developing indicators for the Baltic Sea regionally?

The core indicators provide comparable results between sub-basins of the Baltic Sea. One challenge in the past has been the large number of countries surrounding the Baltic with different types of monitoring programmes. This has led to diverging types of input data, or in some cases even a lack of data, for the evaluation of the substances.

Why is it important to monitor HBCDD?

High levels of HBCDD have proven to be toxic; effects on the nervous system, hormonal functions and reproductive success have been shown. A robust assessment of

the substance will identify problem areas as well as general development over time. This will give policymakers a good basis for decisions on management.

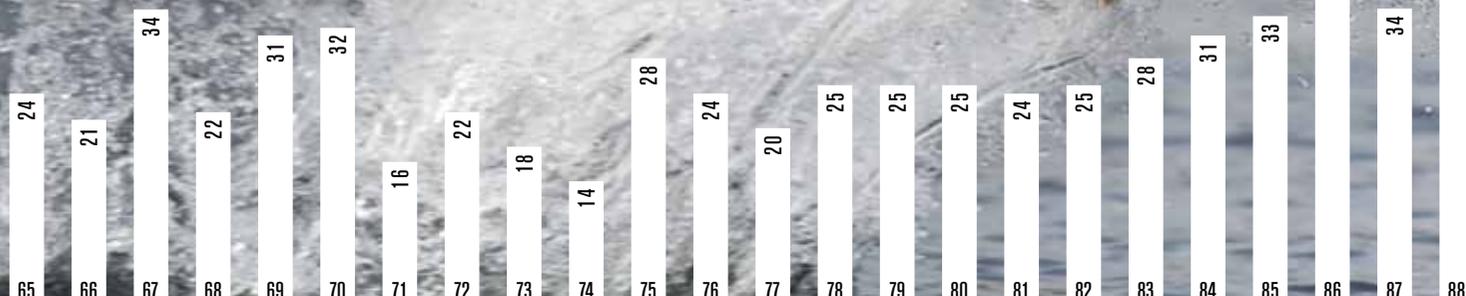
Where does PFOS come from and why does it end up in the Baltic Sea?

PFOS has been phased out of production and use since the beginning of 21st century. PFOS can, however, still be found in, for example, textiles, kitchen appliances and foam fire extinguishers. PFOS can be released into air and water via industrial production as well as through secondary emissions from consumer products and sewage treatment plants.

BREEDING SUCCESS IN THE WHITE-TAIL EAGLE POPULATION ON SWEDISH BALTIC SEA COAST

% REPRODUCING PAIRS

SOURCE: SWEDISH MUSEUM OF NATURAL HISTORY



NEW TRIUMPHS OVER HAZARDOUS SUBSTANCES IN THE BALTIC SEA

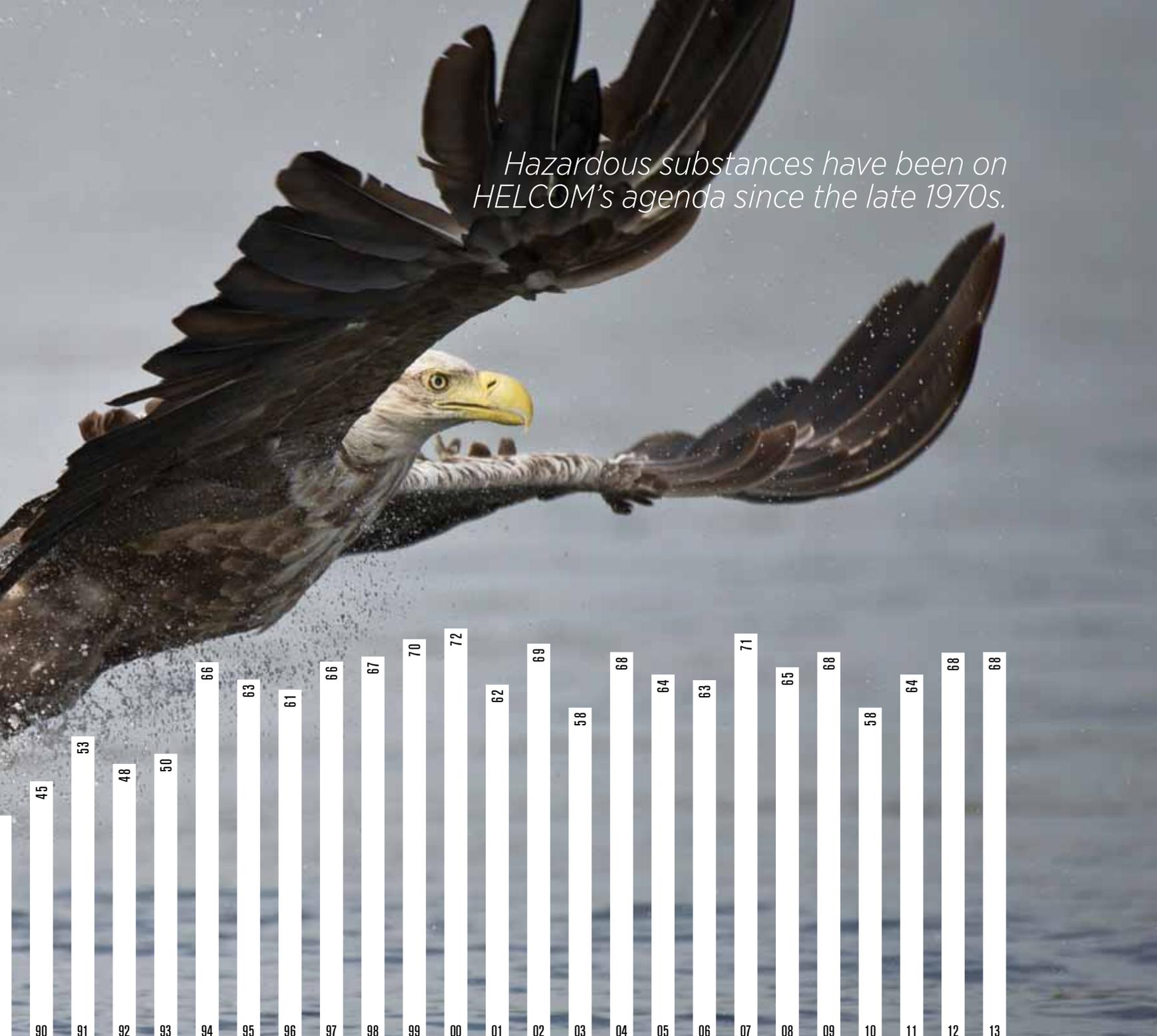
The breeding success of the white-tailed eagles along the coastlines of the Baltic Sea tells an encouraging story. In the 1970s the number of pairs successfully breeding reached an all-time low; since then, regional and global cooperation has successfully enabled bans on PCBs and DDTs, both of which are highly harmful to the environment, especially top predators such as the white-tailed eagle. The initial results

of a new HELCOM core indicator show that these birds' breeding health, which was previously seriously affected by these hazardous substances, as of 2015 reflects good environmental status in most coastal areas.

Hazardous substances have been on HELCOM's agenda since the late 1970s when regional coordinated monitoring began, enabling a joint understanding of which actions need to be taken to protect the marine environment. Significant progress has been made for many of the substances

listed on HELCOM Baltic Sea Action Plan priority substance list, and in 2015 the HELCOM Pressure Working Group agreed to start reviewing the list. The aim is to conclude whether some of the substances can be removed from the list, as well as identify whether any emerging new substances should be given consideration in regional environmental protection. Pharmaceuticals make up one of the more recently tackled concerns.

Hazardous substances have been on HELCOM's agenda since the late 1970s.



EXPERTS COME TOGETHER

Scientific advice from experts in the Baltic Sea region contributes to management decisions made by HELCOM. In 2015 the HELCOM Expert Network on Hazardous Substances was established to provide a platform to discuss issues and indicators used to assess the Baltic Sea. The newly established network filled in gaps in HELCOM's working structure and will ensure that future efforts to improve the chemical status of the Baltic Sea will be targeted by—and regionally coordinated among—all HELCOM members.

NEW INSIGHTS ON PHARMACEUTICALS

Pharmaceuticals constitute a group of emerging hazardous substances. The most comprehensive compilation of data made on the concentrations and sources of pharmaceuticals in the Baltic Sea region was completed in 2015 through cooperation between HELCOM and the Policy Area Hazards of the EU Strategy for the Baltic Sea Region, with support from UNESCO. The compilation identifies concentrations of pharmaceuticals which cause concern, such as hormones and

antibiotics. Based on available information, a new report is being finalized, integrating information on the production and consumption of pharmaceuticals in the region, their pathways to the Baltic Sea environment, as well as concentrations in the environment and effects on marine life.

The information will enable future regional action to safeguard the Baltic Sea environment from the harmful effects of these substances. The report will be based on information compiled at national and regional levels.



Eutrophication is widely known as a threat to water quality and biodiversity.

INTERVIEW VIVI FLEMING-LEHTINEN *EUTRO-OPER, Finnish Environmental Institute (SYKE)*

What, in your opinion, has been the most important outcome of the EUTRO-OPER project that was completed this year? The main outcome of the project is a new online system for producing assessments on Baltic-wide eutrophication—one of the main threats to the environment of the Baltic Sea. The new system is, at the moment, internationally unique in that assessments for an entire regional sea can be produced semi-automatically. This is a significant accomplishment when we consider that the workflow pulls together expert-vetted data from nine Baltic coastal states.

What does the new workflow system

offer? The new process is much more efficient. It combines and calculates monitoring data into resulting indicators and assessments, which are systematically reviewed by country-nominated experts. In the past, this was all done manually. The workflow is also more transparent as experts are involved not just at end stages but along the way to ensure that datasets and analyses are complete and accurate. This enhances the validity of findings, as assessments can be replicated. One further benefit is that data and indicators used in coming assessments will be available for other purposes. These achievements would not have been possible

without the cooperation of our partner organisation, the International Council for the Exploration of the Sea (ICES), in particular Hjalte Parner.

How does the workflow system contribute to the development of the Second Holistic Assessment of the Ecosystem Health of the Baltic Sea (HOLAS II)?

The new system is important to HOLAS II, expected in 2017, since it will be launched with current information on eutrophication thus providing vital information online. It can also be seen as a pilot for other upcoming thematic assessments, such as on hazardous substances.

UNIQUE ASSESSMENT SYSTEM READY

Eutrophication, caused by excessive inputs of nutrients to the marine environment, is widely known to be detrimental to water quality and biodiversity. HELCOM continues to push forward in finding ways to address the issue, with key efforts being made in the last two years through the Making HELCOM Assessments Operational (EUTRO-OPER) project. Focused on making eutrophication assessments operational, the project introduced this year a new online assessment system—the first of its kind.

HEALTH CHECK FOR THE BALTIC SEA

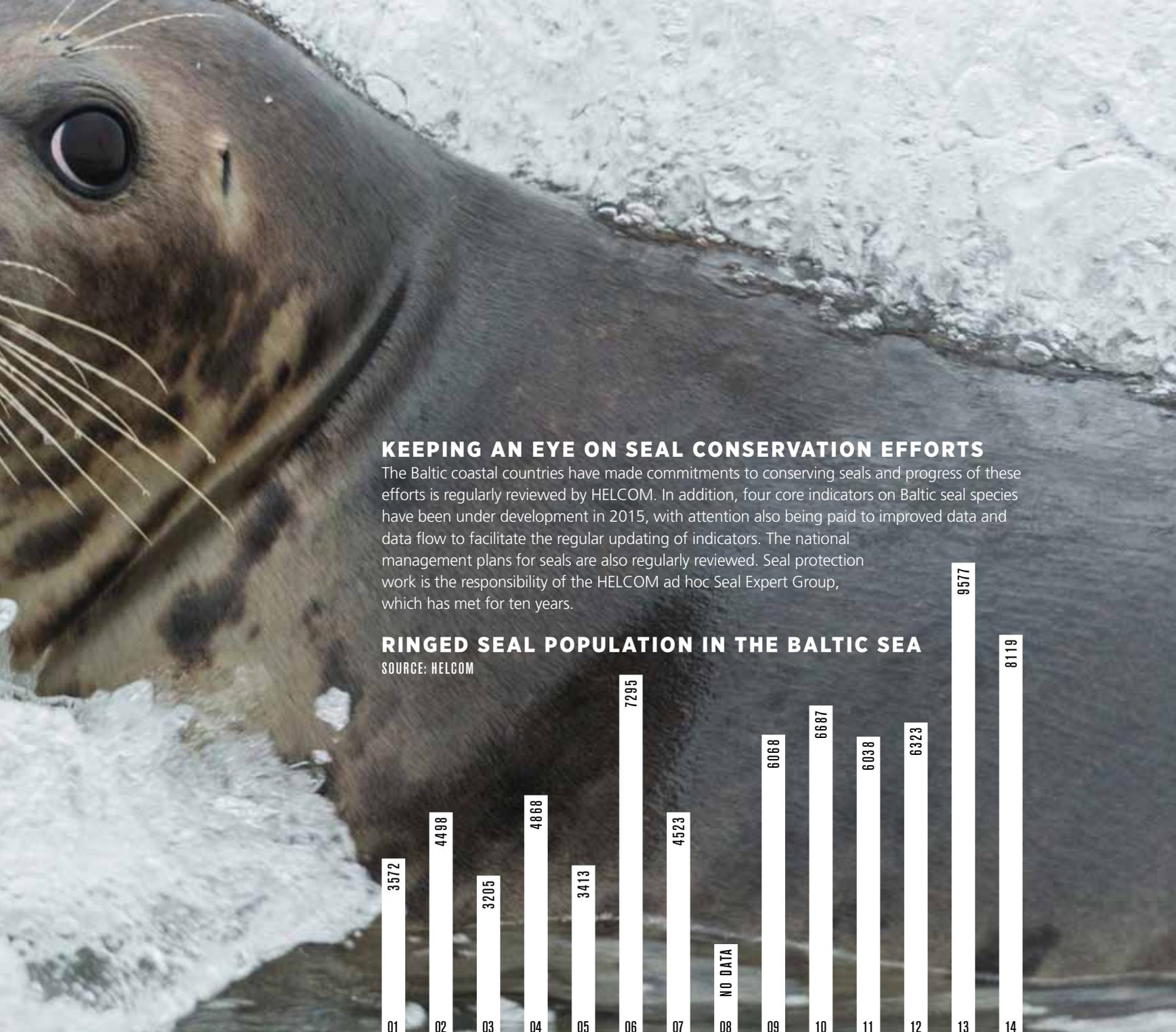
HOLAS II, the Second Holistic Assessment of the Ecosystem Health of the Baltic Sea, will provide information on the latest status of the marine environment, as well as cumulative pressures and impacts from major human activities. Preparations for the many components of HOLAS II are speeding up and the first version of the assessment is scheduled for mid-2017.

For the first time, social and economic analysis will be truly incorporated into the HELCOM assessment by linking human

activities to pressures and impacts on ecosystem components within one holistic framework.

Overall, HOLAS II will demonstrate an improved application of the ecosystem approach on a sea basin scale, thus promoting understanding of the ecosystem approach and its practical use.

HOLAS II will provide a solid basis for decision-making by helping to evaluate progress made in achieving Good Environmental Status by 2021, in line with the Baltic Sea Action Plan and follow-up commitments.

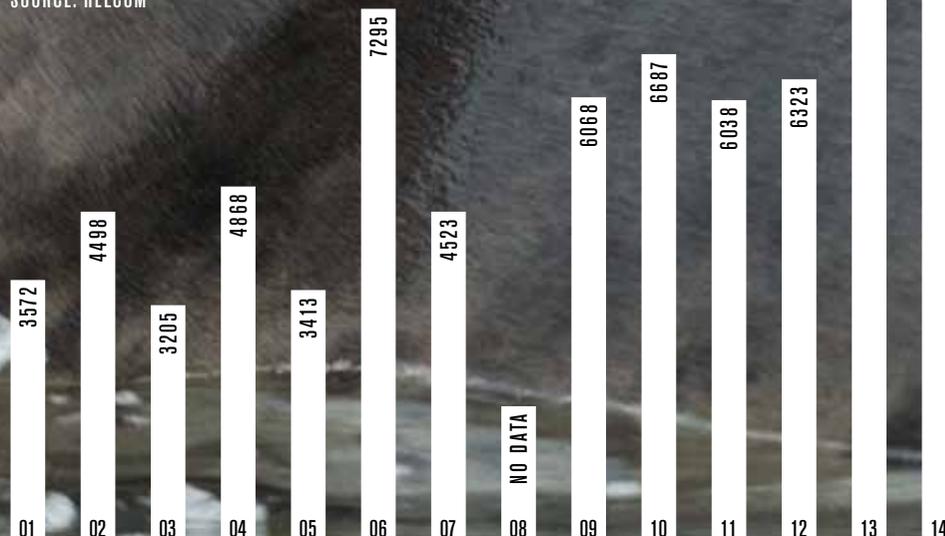


KEEPING AN EYE ON SEAL CONSERVATION EFFORTS

The Baltic coastal countries have made commitments to conserving seals and progress of these efforts is regularly reviewed by HELCOM. In addition, four core indicators on Baltic seal species have been under development in 2015, with attention also being paid to improved data and data flow to facilitate the regular updating of indicators. The national management plans for seals are also regularly reviewed. Seal protection work is the responsibility of the HELCOM ad hoc Seal Expert Group, which has met for ten years.

RINGED SEAL POPULATION IN THE BALTIC SEA

SOURCE: HELCOM



INTERREGIONAL MONITORING OF BIRDS LEAPS FORWARD

Seabirds are highly mobile, posing challenges for gathering sufficient knowledge and determining the best ways to protect them.

As such, both scientific and managerial cooperation with other regions is vital. Moreover, marine birds are sensitive to changes in the environment and are considered to be good indicator species for evaluating environmental status. By joining forces in the continued development of environmental core indicators, interregional

work on marine birds has started with fresh energy in the new OSPAR Commission covering the North-East Atlantic, as well as the International Council for the Exploration of the Sea (ICES).

BALTIC BIRD-WATCHERS UNITE

Countries along the Baltic Sea have monitored seabirds for decades; however, the resulting data has been stored in different institutes and databases. This has made it challenging to assess and act on the regionally important questions, such as

what the number of seabirds in a certain area can tell us about the health of the marine environment. Progress has been made in 2015 on a regional scale on seabird populations, distribution and mobility through a metadatabase as well as joint seabird monitoring guidelines created under the Testing new concepts for integrated environmental monitoring of the Baltic Sea (BALSAM) project. The seabird metadatabase includes detailed information on all water bird surveys in the Baltic Sea since 1991.

The first HELCOM MPAs were established in 1994. Since then the network has grown steadily to 174 MPAs covering 12% of the Baltic Sea.



INTERVIEW
JANICA BORG
HELCOM Secretariat

What are the highlights of the modernized HELCOM MPA database?

The main improvement in the new MPA database is the map interface which connects information for each site directly to the map of the area. This GIS-based map includes the location and size of each MPA,

the Natura 2000 sites, maps of HELCOM Red List species and habitats, as well as a shapefile download function. All information on, for example, species, biotopes, biotope complexes, management and regulated activities are stored in interactive tables which can be used to sort and analyse data. In addition, you can find information on what types of pressures are found within each MPA, a feature not covered by other similar databases.

The structure of the database helps keep the information up to date and accurate: the HELCOM countries directly update the database and all data is reported either from drop-down fields or, in the case of numerical data, from shapefiles. The lack of free text fields makes the error margin very small.

Why is the launch of the modernized HELCOM MPA database important? It is an important tool for HELCOM countries in

NEW DATABASE OPEN FOR HELCOM MARINE PROTECTED AREAS

The successful conservation of biodiversity and versatile ecosystems greatly depends on designating marine protected areas. The most recent achievement by HELCOM in this issue was the October 2015 launch of the modernized database on coastal and marine Baltic Sea protected areas (HELCOM MPAs), providing easier access to more detailed information on the sites.

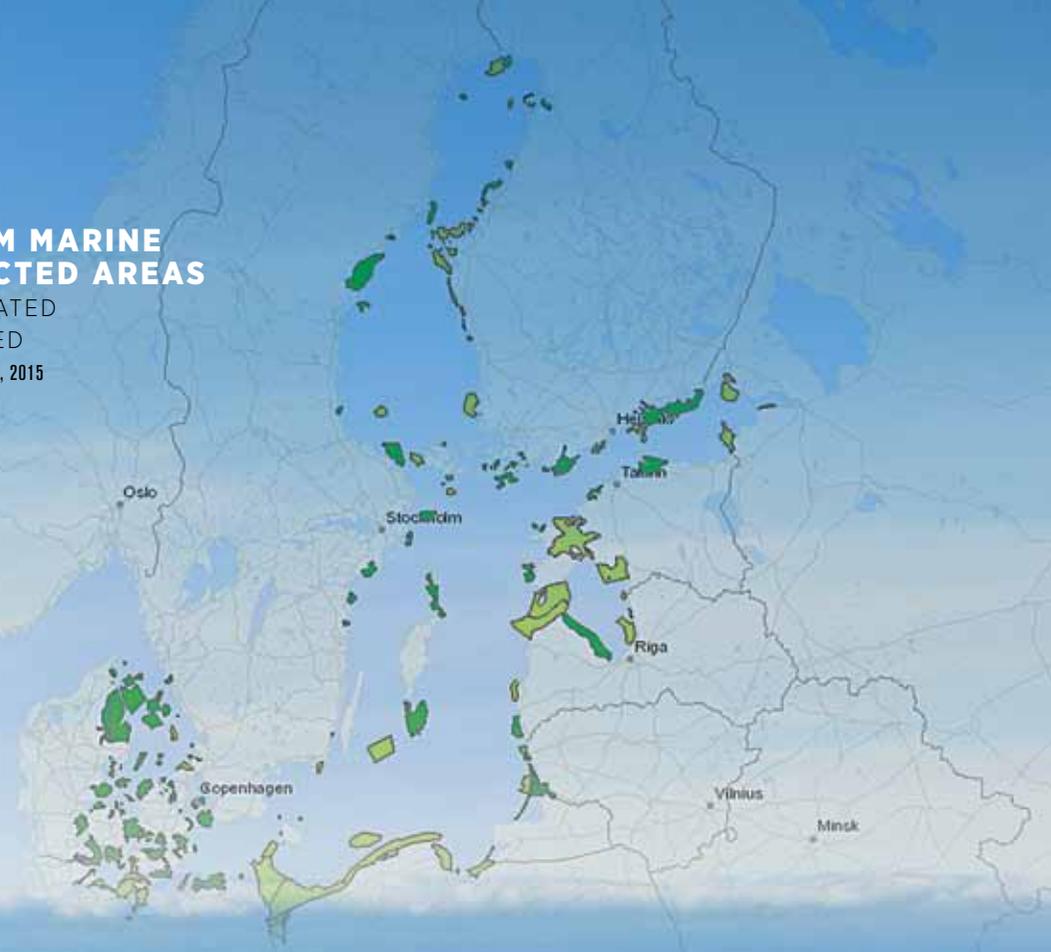
There are currently 174 HELCOM MPAs covering 12% of the marine area, making the Baltic Sea a pioneering region in marine protection.

HELCOM MARINE PROTECTED AREAS

■ DESIGNATED

■ MANAGED

SOURCE: HELCOM, 2015



updating, storing and analysing information on HELCOM MPAs. This kind of information is often stored nationally, which results in differences in data formats between countries, which in turn makes analysing and comparing the data difficult. The database also serves the common user; anyone can read and download both information and maps.

In addition, the predecessor to the new database (BSPA database) was no longer

meeting the requirements of HELCOM members, and there was a dire need for a new, enhanced tool.

What is the importance of the forthcoming report on the ecological coherence of HELCOM MPAs? Ecological coherence describes how well a collection of MPAs provide protection both individually and together as a network. The aim is to assess whether the protection extends beyond that provided by a single site.

The previous ecological coherence assessment was made in 2010. The goal, according to HELCOM Recommendation 35/1, is to establish an ecologically coherent and effectively managed network of coastal and marine Baltic Sea protected areas.

The fresh assessment of the ecological coherence of coastal and marine Baltic Sea protected areas is expected to be released in 2016.

NEW ERA FOR TACKLING MARINE LITTER

The Baltic Sea is known for its busy traffic and high population in its catchment area, raising the risk for considerable amounts of marine litter.

In the region, less visible littering—either below or above surface—has long been tackled, for instance in the much improved management of waste water and discards from ships. By the 1990s HELCOM had already launched the Baltic Strategy on Port Reception Facilities for Ship-Generated Wastes, which introduced a “No-Special-Fee” system for Baltic Sea Ports, meaning that all waste fees are already included in the harbour fees.

Emerging concerns on ghost nets, hazardous substances and microplastics have together inspired the creation of a joint HELCOM scheme to address the litter challenge. Near the start of the 2015’s beach and cruise season, HELCOM Regional Action Plan for Marine Litter in the Baltic Sea was officially adopted. The action plan, with thirty regional actions, will be carried out in 2015–2025 by HELCOM member states.

PRES

INTERVIEW STEFANIE WERNER

Federal Environment Agency

What was the process of creating the HELCOM Regional Action Plan for Marine Litter? Not long ago, marine litter was not regarded as a serious problem for the Baltic Sea. That changed due to various reasons. Beach litter pilot projects, such as MARLIN in 2013, proved that significant

amounts of litter along the Baltic Sea beaches are found, comparable in volume to other sea regions. Other studies became available, for example, on microplastics in sediments and water columns of the Baltic Sea. Marine Litter Actions Plans for other European seas such as the North-East Atlantic under OSPAR were adopted, demonstrating a range of actions which were applicable in other sea regions, too. Moreover, the EU Marine Strategy Framework Directive came into place

demanding an assessment of the state of pollution with marine litter and setting up of coherent monitoring by EU Member States.

Out of the list of thirty regional actions to tackle litter, which would be your top priorities? The problem of marine litter is very complex in nature and the list of actions was derived through the involvement of a wide range of related expert from various areas—including the fishing, shipping, sewage and storm water handling, waste



BEACH LITTER IN THE BALTIC SEA
ESTONIA, FINLAND, LATVIA, SWEDEN
MARLIN PROJECT, 2013



SOURCES OF MARINE LITTER IN THE BALTIC SEA
ARCADIS REPORT, 2013

PLASTICS • 56%



COASTAL TOURISM • 25%

SANITARY WASTE • 29%

SURE

management and cosmetic sectors. As they stand at the moment, the actions describe important fields where actions are needed and specific measures have to be developed. Only when these measures lead to visible reductions of litter in the Baltic Sea environment can we prioritize them in terms of their effectiveness.

Waste prevention is one of the activities in the Marine Litter Action Plan. What are some methods for implementing

this? One important requisite for increased sustainability in the manufacture of plastics—a main source of marine litter—lies in ‘smart’ product design. Although there are relatively few basic plastics, or polymers, many of the additives used in production can greatly impair their recycling or can result in more down-cycling than eco-effective recycling. A reduction in the use of hazardous substances in the production of plastics might help with recyclability. Product design

should focus on maximizing product persistence to avoid the decline of non-renewable natural resources as well as put into effect a general limitation on the production of new plastics. The repair of plastic products is often economically unprofitable—or not even technically possible. Furthermore, a fundamental change in the use of plastics usage would be desirable, for example, with take-away food.



KEEPING DOWN THE UNDERWATER NOISE

A knowledge base on harmful underwater noise in the Baltic Sea was kick-started this year by HELCOM to help suppress this growing concern for marine species.

A regional register of impulsive sounds, established together with OSPAR, is a concrete achievement. To register the occurrence of such abrupt, challenging-to-measure sounds, national reporting is required in a jointly agreed manner. Another major line of work for the new HELCOM Expert Network on Underwater Noise is the regionwide HELCOM indicator for ambient noise, that is, continuous low frequency anthropogenic sound.

AN IN-DEPTH LOOK AT DREDGING

Biotopes of the Baltic seafloor are negatively affected by human activities such as dredging, construction, fishing with bottom contact, fishing gear, as well as the extraction of sand and gravel. HELCOM has regularly inspected information submitted by member countries. An updated report on disposal of dredged material at sea for 1999–2013 has been prepared in 2015. Also, as a part of the revision of the HELCOM Guidelines for Management of Dredged Material at Sea, the new reporting format for dredging has boosted more diligent reporting from the countries about

their dredging, disposals and—importantly—estimations on hazardous substances contained in disposed materials at sea.

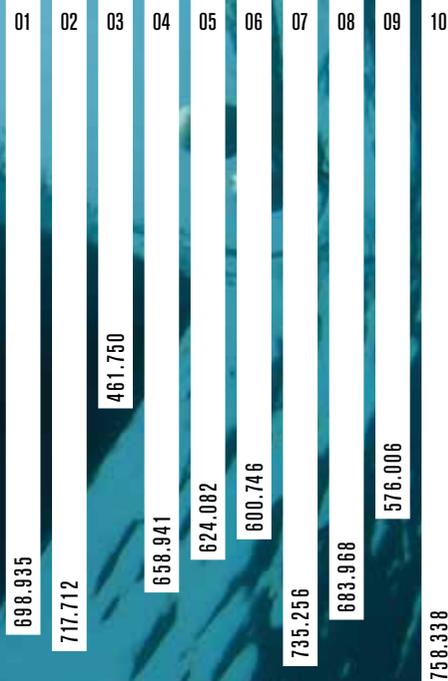
DEALING WITH SEWAGE SLUDGE

Work continues on identifying ways to best handle sewage sludge resulting from the treatment of municipal wastewater. Sewage sludge has energetic potential and contains components that can be reused. It is also, however, a collecting point for harmful substances and pathogenic flora contained by sewage water. As such, sustainable and environmentally friendly ways of sewage sludge handling are on top of HELCOM's

agenda. The upcoming Recommendation on Sewage Sludge Handling will identify the ways of sewage sludge handling that assure the maximum recycling of nutrients, in particular phosphorus, while minimising negative impacts on the environment. Potential areas where sewage sludge and its products can be used include agriculture and forestry, land reclamation and landscaping, as well as energy production. The final Recommendation will introduce restrictions for the use of the sludge to be applied in all the countries of the Baltic Sea drainage area.

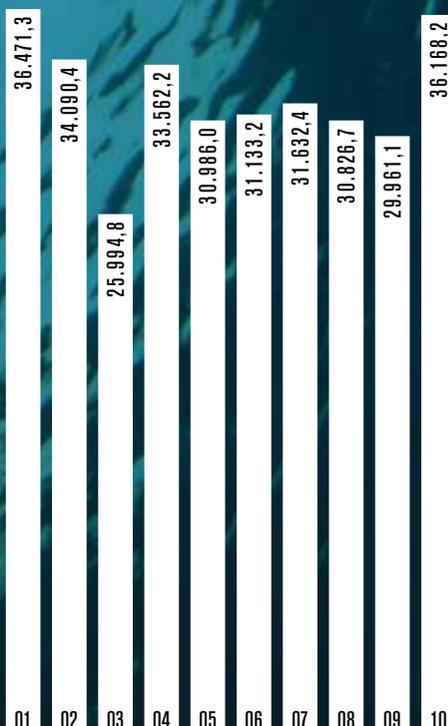
NITROGEN WATERBORNE INPUTS TO THE BALTIC SEA

RIVERINE + DIRECT POINT SOURCES
TONNES/YEAR | SOURCE: HELCOM, 2013



PHOSPHORUS WATERBORNE INPUTS TO THE BALTIC SEA

RIVERINE + DIRECT POINT SOURCES
TONNES/YEAR | SOURCE: HELCOM, 2013



NUTRIENTS TO THE BALTIC SEA ARE DECREASING

Countries' progress in reaching their HELCOM nutrient reduction targets is a priority topic for the HELCOM Pressure group, which issued a follow-up report in 2015 on country-allocated reduction targets. A more comprehensive follow-up system for the regional nutrient reduction scheme is under preparation based on the most recent data on polluting nutrient inputs.

The data for individual sub-basins is included in another recent report on the assessment of nitrogen and phosphorus input to the Baltic Sea in 2012. The statistical trend of the overall burden of nitrogen and phosphorus to the sea as a whole indicates decreases of 18% and 23%, respectively, in the past 15 years. However, the situation differs between the sub-basins. According to the HELCOM nutrient reduction scheme, reductions in inputs of nitrogen were needed to three sub-basins where Maximum Allowable Inputs were exceeded: Baltic Proper, Gulf of Finland and Kattegat. Out of these, only in Kattegat has the nitrogen input been sufficiently cut. However, statistically significant reduction has been achieved for the Baltic Proper – by almost 55,000 tonnes when considering the average annual input during 2010–2012 compared to the reference period 1997–2003.

SIX POLLUTION HOT SPOTS CLEANED UP

Six waste water treatment plants were approved for deletion in 2015 from the HELCOM Hot Spot list, which identifies significant pollution sites in the Baltic Sea catchment area. All six are located in the Polish terrain: three in Warsaw area and the rest in Krakow, Lublin and Poznan. The HELCOM list of Hot Spots originally named 162 sites as very major sources of pollution – including municipal and industrial waste water treatment, agriculture, as well as industrial sites. Currently a quarter are left thanks to clean-up efforts. The list was originally established as a part of the Baltic

Sea Joint Comprehensive Environmental Action Programme (JCP, 1992–2013).

IMPLEMENTING THE BALTIC SEA ACTION PLAN

A follow-up system for HELCOM requirements is under development; an online explorer will show the level of accomplishment by HELCOM countries according to certain agreed actions. The backbone of the assessment is made up of the actions in the HELCOM Baltic Sea Action Plan (BSAP) as well as the Ministerial Declarations of 2010 and 2013, which build on and complement the BSAP. The assessment is based on regionally agreed

criteria. Actions requiring implementation at the national level are informed by national reporting from HELCOM members.

The assessment explorer includes only those actions from BSAP and Ministerial Declarations that have clear and measurable targets. Actions with more general objectives are followed up by the relevant HELCOM working groups, providing a basis for evaluating progress over time. The overarching goals and objectives expressed in the BSAP—to achieve a Baltic Sea in good environmental status by 2021—continue to guide the work of HELCOM in years to come. In the future, the follow-up is planned to expand to HELCOM Recommendations.

GEAR HELPS COORDINATE IT ALL

The HELCOM Group on the Implementation of the Ecosystem Approach (Gear Group) has continued to outline the regional coordination of Programme of Measures needed to achieve a healthy Baltic Sea, as agreed in HELCOM Baltic Sea Action Plan as well as the EU Marine Strategy Framework Directive and the Maritime Doctrine of the Russian Federation.

Countries are currently developing measures to improve the state of the marine environment. During the last few years, efforts have been increased with the aim of

achieving a Baltic Sea in Good Environmental Status by 2021. This past year the Gear Group has continued regional coordination on information exchange and aligning measures primarily of national concern and responsibility. The group also worked on developing additional measures and actions at the regional level, considering transboundary issues.

The coordination process aims to ensure that national measures have a positive impact on waters under the jurisdiction of neighbouring countries and contribute to achieving or maintaining good environmental status on a regional scale.

During 2015 the Gear Group has also developed Joint Documentation on Regional Coordination of Programmes of Measures in the Baltic Sea area. It provides an overview of HELCOM agreements and how they contribute to achieving good environmental status in the Baltic Sea region. In this process, additional actions aimed at regional coordination, also contributing to HELCOM targets and objectives, have been recommended by HELCOM working groups. These will be further considered and specified as part of HELCOM's work in the coming years.

*Working towards achieving
a healthy Baltic Sea by 2021*

COORDIN

Cooperation with other regions and institutions has always been highly regarded by HELCOM. Recent connections have been made especially with OSPAR and ICES, as the joint group to assess the status of bird populations in the Baltic Sea and the North East Atlantic was formed in 2015. By joining forces in the continued development of environmental core indicators, HELCOM and OSPAR also plan to explore synergies that will ensure support for the ongoing pan-European assessment processes.

HELCOM

OSPAR

**BLACK SEA
COMMISSION**

**BARCELONA
CONVENTION**

NATION

AGRICU

EFFECTIVE MANURE MANAGEMENT BRINGS OPPORTUNITIES

Agriculture can pose problems for the health of the Baltic Sea as it is one of the major sources of nutrient leaching, which can cause eutrophication. In the fields, however, nutrients are vital for plant growth and nutrients leaching into watercourses are a financial loss for the farmer. While they are problematic when they end up in the wrong place, nutrients are valuable.

Moreover, one of the main nutrients, phosphorus, is an unrennewable resource. Mined phosphorus reserves will eventually be exploited; at the same time, we should produce 60% more food by 2050 to feed

the growing world population (FAO 2012). There is a need to start recycling phosphorus properly before it runs out from reserves.

Efficient manure management is the key to nutrient recycling and reducing nutrient loading to the Baltic Sea. Treating manure not as waste but as a resource requires taking manure nutrients fully into account when fertilizing crops. There are two excellent tools for this: nutrient bookkeeping and manure standards.

WHAT HAS HELCOM DONE ABOUT IT?

In the 2013 Ministerial Declaration, HELCOM members committed to establish national guidelines or standards for nutrient

content in manure by 2016, and to develop guidelines or recommendations on the use of such standards by 2018. HELCOM members also agreed to promote and move towards applying nutrient accounting at the farm level by latest 2018.

In 2015, the Agri Group worked towards establishing a baseline. Two HELCOM workshops were organized by lead countries Germany and Finland on nutrient bookkeeping and manure standards. Both workshops were attended by country experts to share experiences, identify possibilities for cooperation, and find the obstacles and knowledge gaps. In 2016, the Agri Group is continuing towards the goal set at the 2013 Ministerial Meeting.

GERMANY • 97

GROSS NUTRIENT BALANCE OF NITROGEN BY COUNTRY

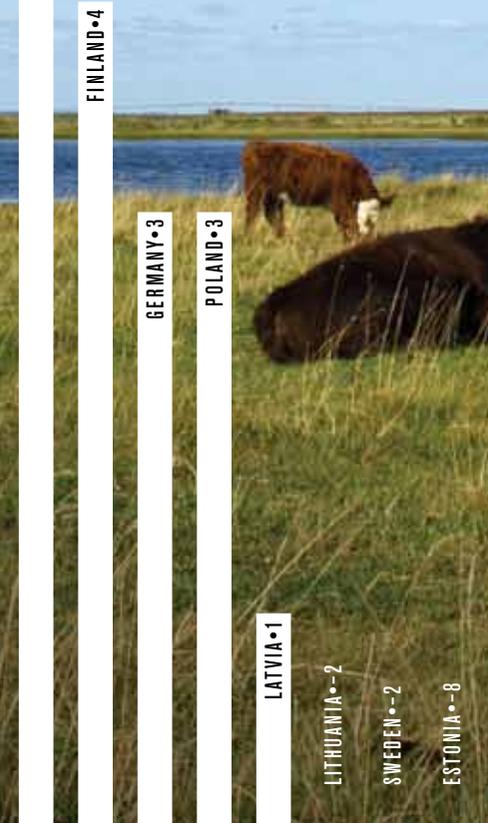
EXCLUDING RUSSIA
KG/HECTARE | SOURCE: EUROSTAT 2011



DENMARK • 5

GROSS NUTRIENT BALANCE OF PHOSPHORUS BY COUNTRY

EXCLUDING RUSSIA
KG/HECTARE | SOURCE: EUROSTAT, 2011



CULTURE

INTERVIEW

SARI LUOSTARINEN

Natural Resources Institute Finland

What are the most important aspects of applying nutrient recycling in agriculture to pursue environmental benefits?

The key aspects of nutrient recycling are manure management and good soil condition; they are closely interlinked. If soil is in good condition, there is less leaching of nutrients and crops grow better. Manure on the other hand contains organic matter, so applying manure to the fields helps soil stay in good growing condition. In the long run, more precise utilization of manure will also reduce the leaching of nutrients as there is less surplus.

Why is manure management such a current topic in the policy and research discussions on recycling resources?

It is a current topic because the advantages of manure are increasingly understood and appreciated. More effective manure utilization brings additional benefits, such as reduced need for mineral fertilizers,

improved soil condition and possibilities for the energy sector. On one hand, poor use of manure is a problem and a source of nutrient leaching so we need measures to tackle it. On the other hand, there are great opportunities in manure management as well as manure processing for creating new livelihoods.

The current trend of placing more value on manure as a resource started in 2000s. Both regulatory and financial restraints have played roles in lifting up the new accreditation of manure's worth. More stringent environmental regulations have helped drive innovations forward.

In your view, what are the key challenges of manure management and sustainable agricultural practices at large?

The profitability of agriculture is a challenge: solutions for manure management need to be economically viable for farms, thus financial incentives and subsidies are needed. As far as manure processing is concerned, profitability as well as a predictable policy framework are vital. For example, the subsidy system for biogas

production cannot change every few years—or there will be no investments in biogas plants.

Creating a joint understanding and shared practices of calculating manure quantity and quality in the Baltic Sea region is the way forward. This work is currently underway in the Agri Group.

How do you see the future? How will agricultural production in the region change and how will it affect the Baltic Sea?

We can already see that the sizes of farms increase while the number of the farms decrease. The trend is the same throughout the region. This development can bring new possibilities for manure management and processing since bigger farms can utilize the benefits of scale and make better profit. Furthermore, when more manure is processed, it can make cooperation between crop farms and animal farms easier. Another benefit is that such processed manure products are more easily transported from excess regions to those needing nutrients.

The profitability of agriculture is a challenge: solutions for manure management need to be economically viable for farms.

FISHERIES



TOTAL COMMERCIAL FISHERIES LANDINGS IN 2014

LOW HIGH

SOURCE: STEF DATA

COASTAL FISH POPULATIONS REVEAL MORE ABOUT SEA HEALTH

The Baltic Sea contains many different species of fish and their well-being relies on the health of the waters they call home. To better understand their status across the region, indicators on coastal fish were among the first of nearly 20 new HELCOM core indicators under development this year as a result of careful preparations by HELCOM experts. For example, the abundance of typical species of fish, such as perch and flounder, in coastal areas will now be systematically tracked. The new core indicators will play a vital role in ongoing work, as they help measure the progress made in achieving

Good Environmental Status (GES) in the Baltic Sea.

NEW RECOMMENDATION ON AQUACULTURE

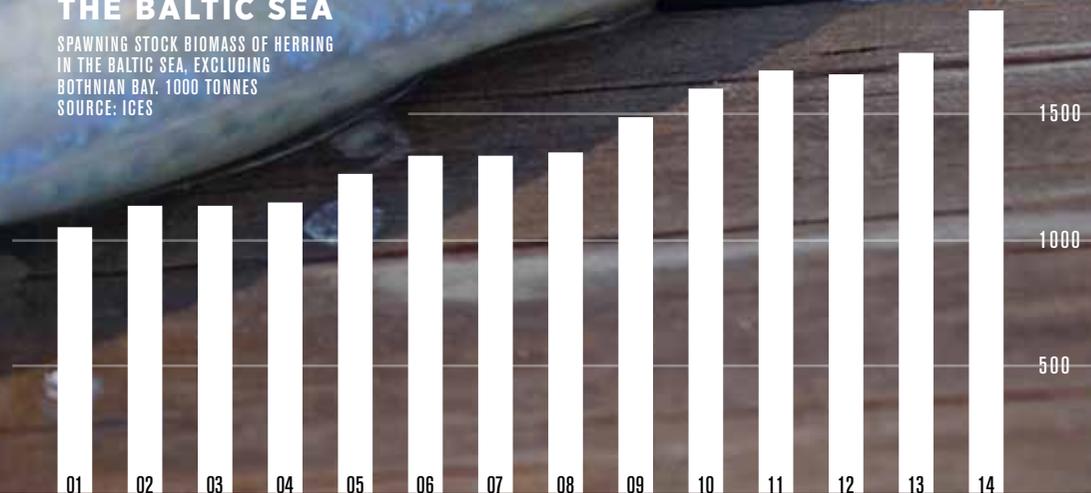
The goal of the new HELCOM Recommendation on sustainable aquaculture (37/3), developed within the HELCOM Group on Ecosystem-based Sustainable Fisheries (Fish Group), is to provide a process for determining what constitutes BAT and BEP in aquaculture in the region. The Recommendation outlines criteria for best practices for minimizing and preventing negative environmental impacts of aquaculture, including freshwater and marine fish farming, the introduction of non-indigenous species,

ecological and genetic impacts on wild fish stocks from unintended releases of farmed species, nutrient pollution, as well as the introduction of antibiotics and other pharmaceuticals. The great potential of developing and applying environmentally friendly technologies and production methods in aquaculture is still being realized in this growing industry. Several rounds of negotiations between HELCOM members took place during 2015 on this Recommendation, which is an indication of the vital interests and issues at stake. The Recommendation will be the main HELCOM instrument in implementing the requirements of the Helsinki Convention that relate to BAT and BEP in the aquaculture sector.

HERRIES

HERRING SPAWNING POPULATION IN THE BALTIC SEA

SPAWNING STOCK BIOMASS OF HERRING IN THE BALTIC SEA, EXCLUDING BOTHNIAN BAY. 1000 TONNES
SOURCE: ICES



INTERVIEW JENS OLSSON

Project Manager of FISH-PRO II,
Swedish University of Agricultural Sciences

Why were the core indicators on coastal fish chosen? Coastal fish communities are vital to fishing, recreation, as well as coastal ecosystem functioning and structure in the Baltic Sea. Given this, it is important to include coastal fish—both as species and as communities—in the assessment of the status of these waters.

The Baltic is a large brackish sea with pronounced differences in salinity, temperature, nutrient status and types of coastline. We tried to select indicators that are general

and applicable in all Baltic coastal areas despite the substantial environmental differences that are present. So, the chosen indicators not only describe the status of fish communities and coastal ecosystems but they can also be used Baltic-wide.

What do the indicators tell us about coastal fish populations and the health of the Baltic Sea? The indicators tell us, generally, whether coastal fish communities are in good status. A wide range of factors influence coastal fish communities and there is no one-to-one relationship between a single pressure and an indicator's response—which is why several measures are employed. Key species and piscivores are affected by commercial and recreational fish-

ing pressures, the amount and quality of available nursery and spawning habitat, a changing climate, as well as to some extent eutrophication and top-level predators. The abundance of cyprinids (in the south and west also mesopredatory fish) is mainly impacted by eutrophication, habitat and climate. A Baltic Sea in good status would be reflected by high abundances of piscivores and key species and by low to intermediate abundances of cyprinids.



UNIQUE IN EUROPE: SEA BASIN-SCALE MARITIME SPATIAL PLANNING

The joint HELCOM-VASAB Working Group on Maritime Spatial Planning (MSP) has coordinated regional work on MSP since 2010. The group is significant, as it constitutes the only formal cooperation involving all riparian countries as well as the EU in MSP discussions on a sea-basin scale in Europe.

The working group is a forum to promote coherent Maritime Spatial Planning in the Baltic Sea. It also advances the understanding and application of an ecosystem approach in MSP; HELCOM has a major role

to play in this work. Transboundary context is also of special interest.

BETTER DATA FOR MSP

The development of high-quality Maritime Spatial Planning (MSP) demands up-to-date and precise information on the ongoing use of marine areas and resources, as well as on planned development of human activities at sea. The importance of trustworthy spatial and factual data to support MSPs is also growing due to transboundary consultation on MSP. Effective consultations require the clearly defined sets of the data used for the development of MSPs by countries, their

availability, as well as compatibility of their technical parameters. A new data expert group was established in 2015 as part of the HELCOM-VASAB cooperation to launch a regional dialogue on common approaches to information support of MSP. On the agenda of the group is the integration of the minimum required set of national data to be available for transboundary consultation with the identification of their technical parameters. The group is also tasked to establish data exchange on metadata provided by national data holders, as well as the appropriate use of international information resources gathering sectorial data.

OFFSHORE WINDFARMS IN THE BALTIC SEA

- CANCELLED
- CONCEPT/EARLY PLANNING
- CONSENT APPLICATION SUBMITTED
- CONSENT AUTHORISED
- FAILED PROPOSAL
- GENERATING POWER
- UNDER CONSTRUCTION
- UNKNOWN

SOURCE: HELCOM



Maritime Spatial Planning requires up-to-date data gathered in cooperation with member states.

PROJECTS HELP MAINTAIN THE DYNAMIC FUTURE OF MSP

There are a number of ongoing or soon-to-be-started projects on MSP. For example, Baltic SCOPE focuses on planning various marine-based activities and determining whether such activities can coexist in different parts of marine areas. HELCOM's role in the SCOPE project—which is coordinated by the Swedish Agency for Marine and Water Management—has been to provide countries with maritime GIS data, as well as maps on ship movements based on the HELCOM

Automatic Identification System (AIS) network.

Projects on MSP such as Baltic SCOPE are important sources of information and best practices for the joint HELCOM-VASAB Working Group, which supports countries in doing ecosystem-based MSP.

NEW GUIDELINE ON ECOSYSTEM-BASED APPROACH IN MSP

The application of an ecosystem-based approach in Maritime Spatial Planning (MSP) got an extra boost this year. A procedurally oriented guideline developed by the joint

HELCOM-VASAB Working Group on MSP will fulfil a commitment made in the Regional Baltic Maritime Spatial Planning Roadmap (2013-2020). As a result, an ecosystem approach as an underlying overall principle for MSP in the Baltic Sea will become easier to apply.

Another set of regional guidelines has been under development for carrying out MSP cross-border consultations between the Baltic coastal states. The primary aim is to ensure early and efficient information exchange and engagement.

A large blue ship is being lifted by a yellow crane at a port during sunset. The crane is positioned on the left side of the frame, and the ship is on the right. The sky is filled with clouds, and the sun is setting in the background, creating a warm orange glow. The water in the foreground is dark and reflects the light from the sky.

HELCOM CELEBRATES 10 YEARS OF EXCHANGING DATA ON SHIP MOVEMENT

This year marked a decade of successful Automatic Information System (AIS) information exchange on ship movement in the Baltic Sea region. The HELCOM regional system to exchange and collect ship position messages sent through AIS devices went live in summer 2005, and has been used since that time to track, in near real time, ship traffic across the sea.

In addition to promoting and facilitating navigation safety, the vast amount of data collected has also been used for other

SHIP



initiatives. This year, the first versions of traffic density maps were prepared for case study areas—one in the Baltic Sea southwest and the other between Estonia, Latvia and Sweden—in support of a two-year maritime spatial planning project, Baltic SCOPE.

ADOPTING THE TECHNOLOGY

AIS was originally developed for aviation but at the turn of the millennium it rapidly gained in popularity for on-board use on larger ships, a trend strengthened by the 2000 decision to make AIS mandatory in some commercial vessels.

The widespread use of AIS made it possible to view an automatically updated picture of ship traffic in the entire region in near real time. This was made possible through the use of interlinked coastal antennas collecting radio messages from all AIS devices within the combined listening range.

The decision to establish a HELCOM AIS system for monitoring Baltic-wide ship traffic was made in 2001 after the Baltic Carrier accident, one of the most serious oil spills in the Baltic Sea during last decades. As a result of the event, how to improve the safety of navigation in the region became a strong priority through, among other things, the use of AIS.

The first meeting of the HELCOM AIS Expert Working Group was held in February 2002, chaired by Mr. Benny Pettersson—one of the innovators behind maritime AIS applications and a driving force on the topic at global forums such as the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) and the

International Maritime Organization (IMO).

The HELCOM AIS system was launched in 2005, when the transmission of a live Baltic-wide traffic picture became possible. Historical data of activity has also been collected since then by the Danish Maritime Authority on behalf of the HELCOM network. The system was the fruit of several years of work by members of the Expert Working Group for Mutual Exchange and Deliveries of AIS & Data (HELCOM AIS EWG).

AIS TODAY

The regional HELCOM AIS system continues to provide the coastal states and the HELCOM Secretariat with AIS data, which has also become of interest to new user groups such as maritime spatial planners, researchers, as well as commercial actors such as environmental consultancies. In 2016, the AIS Expert Working Group will focus on future developments concerning access to data. Further products making use of the extensive data will be released as part of the coming 2016 Maritime Assessment.

PING



NEXT MARITIME ACTIVITIES ASSESSMENT WILL BE COMPREHENSIVE

Preparations speed up for the comprehensive HELCOM assessment of maritime activities in the Baltic Sea area, anticipated for release in December 2016.

Based on national submissions, HELCOM annually updates a number of datasets on maritime activities in the Baltic Sea area, covering issues such as spills observed via aerial surveillance, shipping intensity (AIS)

and accidents, response operations, fisheries activities, and dredging. The HELCOM Maritime Assessment will synthesize the information and utilize different ongoing assessment activities as well as other sources to create a comprehensive overview of maritime activities and their environmental effects.

The Maritime Assessment, covering years 2005–15, will be an opportunity to consider the long-term effects of shipping regulations in the region.

CRUISE SHIP SEWAGE IN BALTIC PORTS THOROUGHLY MAPPED

HELCOM countries held intensive negotiations in 2015 on the enforcement of the Baltic Sea's special area status for sewage, decided by IMO in 2011. The starting dates for no longer discharging passenger ship sewage to the sea have been postponed to 2019 for new ships and 2021 for existing ships, as of the IMO meeting in April 2016. For direct passages between St.



BLOCKING ALIEN SPECIES THROUGH BALLAST WATER

Ships' ballast water may carry alien species which are harmful to the marine environment, which is why HELCOM has worked regionally on ballast water issues for over a decade. One aspect of this work is to obtain a realistic view of the requirements for safe ballast water exchange, as environmental precautions are not always needed, depending on the voyage. How to carry out such exemptions and exceptions to the rules of the IMO Ballast Water Management Convention (BWMC) has moved ahead as HELCOM has been actively working on regional aspects of the Convention. The Joint Harmonized Procedure for Ballast Water Exemptions of HELCOM and OSPAR from 2013 has been considered within IMO as a good example of interregional cooperation.

A final milestone was reached in autumn 2015 when, based on field trials around the Baltic Sea 2013-2014, the joint procedure was revised to achieve even more cost efficiency and to add a Baltic Sea target species list. The system is now ready for use by HELCOM members.

The Joint HELCOM/OSPAR Task Group on Ballast Water Management Convention Exemptions (HELCOM/OSPAR TG BALLAST)—formed by the participating countries, shipping industry and NGOs—has also discussed revising the criteria for target species or species of special interest. Such target species are a key feature of the procedure which aims to assess, in a scientifically justifiable way, the risk of deviations from ballast water practices outlined in the IMO Ballast Water Management Convention.

HELCOM works to obtain a realistic view of the requirements for safe ballast water exchange

Petersburg and the North Sea, there is an extension until 2023.

Technical cooperation has continued on sewage delivery within the Port Reception Facilities (PRF) Cooperation Platform between countries, industry stakeholders and civil society with more events in the pipeline in 2016.

HELCOM published an overview report in early 2015 covering the active cruise voyage months of 2014. The report describes in detail the cruise ships operating

in the Baltic Sea, the length of their sea voyages, frequency and duration of port visits as well as sewage facilities.

ADVANCING THE SAFETY OF WINTER NAVIGATION

HELCOM has updated its Recommendation on the Safety of Winter Navigation (25/7), which gives guidelines on essential cold weather-related issues to member states. In particular, a revised correspondence chart has been included to allow Finnish-Swedish

ice classes to be easily compared to other key ice class systems. Importantly, it provides up-to-date information on approximate correspondence as the chart takes into account updates made in recent years to other classification systems. Such updates are part of HELCOM's ongoing work to ensure navigational safety in the Baltic Sea.

If the Baltic Sea was designated as a NECA area, nitrogen deposition from shipping would decrease by an estimated 40% by 2040.

A major milestone was reached in March 2016, when all HELCOM countries agreed on a Roadmap which includes a commitment to submit a proposal to IMO for a Baltic Sea NECA.

GETTING CLOSER TO NECA STATUS IN THE BALTIC SEA

Nitrogen Oxide (NOx) emissions from shipping is a major issue touching the Baltic Sea. To tackle this ongoing challenge, HELCOM has been working towards NOx Emission Control Area (NECA) status. A Baltic NECA will ensure that NOx levels decrease over the long term by requiring new ships sailing in the area to meet tighter emissions standards.

The process of gaining NECA status for the Baltic Sea started in 2007, when HELCOM began carrying out the necessary environmental and economic studies, as well as assessing technical requirements and finalizing submission papers. Intensive

negotiations have also been conducted on the right timing for a final submission to the International Maritime Organization (IMO), which will approve the proposal. The NECA efforts are being made alongside international partners, who are simultaneously working to apply the same standards to the North Sea, located west of the Baltic. The tighter Tier III NOx emission standards for new ships are planned to come into force in 2021.

REVISITING MINIMUM FINES FOR SHIPS

Since the 1990s, HELCOM has had in place a system of minimum fines for any ship violating the anti-pollution regulations in the Baltic Sea region. The latest concerned HELCOM Recommendation (19/14) is from 1998; it specifies the minimum recommended level of fines for infringements of international environment legislation relevant for shipping (e.g., MARPOL).

Updating these regional minimum fines for ships to correspond to more stringent regulations has been the task of a dedicated Correspondence Group under the HELCOM Maritime Working Group led by Denmark in 2015.

NO_x EMISSIONS FROM ALL SHIPS

LOW HIGH

SOURCE: HELCOM, 2011



INTERVIEW JORMA KÄMÄRÄINEN

Finnish Transportation Safety Agency

Why is it important that the Baltic Sea become a NO_x Emission Control Area (NECA)?

Nitrogen oxides (NO_x) contribute to eutrophication, a major threat to the Baltic Sea. About 25% of the total nitrogen input to the marine environment occurs through atmospheric deposition and shipping emissions play a significant role in this. To reach the agreed nutrient levels—i.e., close-to-natural levels—measures must be taken in the Baltic to reduce loading from all sectors, including shipping. NO_x emissions also add to the acidification of the environment and cause negative human health effects.

What are the challenges in the process?

The development of the Baltic Sea NECA application is an ongoing process, as more studies on NO_x emissions and their harmful effects on the environment and human health have been done since the current version was accepted in 2012 at the HELCOM annual meeting.

How does the NECA roadmap relate to HELCOM's Baltic Sea Action Plan?

HELCOM Baltic Sea Action Plan, adopted in 2007, committed to implement more stringent requirements for emissions from shipping by evaluating the impact of NO_x emissions from shipping in the Baltic on the marine environment. A roadmap for making the Baltic Sea a NO_x Emission Control Area is a concrete step in support of these goals.

INTERVIEW SILLE JUHL PRANG

Ministry of the Environment, Denmark

An adequate level of fines for infringements is an important element in enforcing environmental regulations for shipping in the Baltic Sea, including MARPOL special area rules, thus ensuring a level playing field for fully compliant members of the industry. To this end Denmark is working with the other Baltic coastal countries to find a common regional level of minimum administrative fines through the revision of HELCOM Recommendation 19/14, fully aware that some coastal countries focus more on criminal sanctions.

A total of 82 mineral oil spills were detected in 2015, the lowest number ever recorded.



RESPONSES

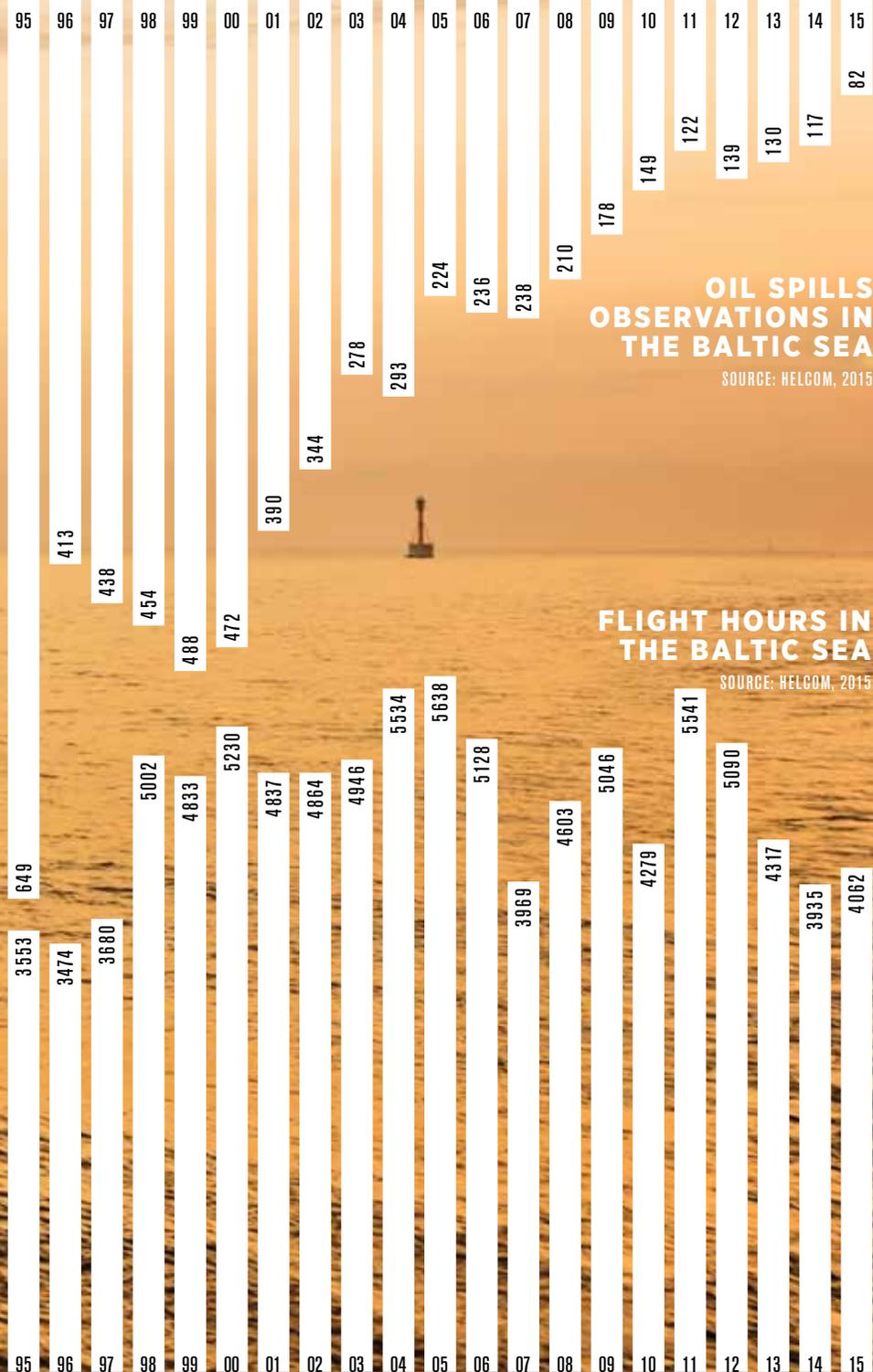
BOOSTING CAPACITY FOR BETTER POLLUTION RESPONSE

Marine pollution response at sea is one of the longest running areas of HELCOM cooperation. The current Baltic set-up on the availability of vessels, gear and human resources—known as the minimum national response capacity—is specified in HELCOM Recommendation 31/1. With recent increases in the size of ships, the HELCOM Response Working Group is reconsidering these regional minimum capacity recommendations.

In addition to the Baltic-wide Helsinki Convention of 1992 and the bi- and trilateral response agreements which countries have signed with their neighbours, the Response Group has recently been exploring a third geographic level of cooperation through the concept of four “response regions” according to HELCOM Recommendation 28E/12. Within these regions the Baltic coastal countries would more fully utilize their response capacities. Finland is leading the intersessional work to consider developing Recommendations for such response regions.

SUCCESSFUL OIL DISASTER RESPONSE SIMULATION OPERATION AT POMERANIAN BAY

Twenty ships under the HELCOM flag conducted a successful simulation operation in September to contain and recover two oil spills from collided vessels off the Polish coast in the Pomeranian Bay, as part of the annual Baltic Sea pollution response exercise Balex Delta 2015. A large-scale national on-shore exercise was organized simultaneously for the deployment of clean-up units as well as for rehearsing coordination.



**OIL SPILLS
OBSERVATIONS IN
THE BALTIC SEA**

SOURCE: HELCOM, 2015

**FLIGHT HOURS IN
THE BALTIC SEA**

SOURCE: HELCOM, 2015

For over 25 years HELCOM has sustained the internationally operational preparedness in maritime emergencies and polluting accidents at sea—in one of the most vulnerable and busiest sea areas in the world. The fact that HELCOM member states send their vessels each year for an international drill is quite special as such well-established frameworks are rare elsewhere in the world.

**LOWEST NUMBER
EVER RECORDED ON
SPILLS FROM SHIPS**

The long-term trend of ship spill detection through aerial surveillance has been a decrease in oil spill discoveries and the size of spills. In 2015, 82 mineral oil spills were detected, which is the lowest number ever recorded. The vast majority (98%) were smaller than 1m³ with 78% being smaller than 100 litres. Of particular concern is that about half (49%) of all the detections in 2015 were identified as other substances

than oil or as unknown observations. Such spills may cause a threat to the marine environment as they are not properly regulated.

HELCOM cooperation on aerial surveillance within the Baltic Sea area was established in the 1980s to spot and monitor spills of oil and other harmful substances, with the aim of preventing violations to existing regulations on ship pollution. The 10-year average of flight time has been around 4,500 flight hours a year in the Baltic Sea; this has, however, dropped to around 4,000 flight hours in years 2014 and 2015.



ILLEGAL OIL DISCHARGES 1998-2015

SOURCE: HELCOM, 2015

More systematic work on oiled wildlife response is one recent part of HELCOM preparedness work.

ILLEGAL DISCHARGES UNDER JOINT SURVEILLANCE IN THE BALTIC AND NORTH SEAS

Aircraft from six countries from the Baltic Sea and North Sea areas carried out a joint international aerial surveillance operation with the purpose of detecting illegal discharges at sea during 42 total flight hours. The operation, hosted by the Danish Defence Command, resulted in only one observation of a minor discharge of vegetable oil and another spot of an unknown substance detected in the operation area stretching 62,000 km² over Skagerrak and Kattegat.

The 2015 Super Coordinated Extended Pollution Control Operation (CEPCO) was attended by Denmark, Finland, Germany, Ireland, Norway and Sweden. Such coordinated work is a regular biannual effort of the HELCOM countries, this time conducted jointly with the Bonn Agreement and the Danish Defence Command Air Station Aalborg (EKYT) as a base. The purpose of the operation is to continuously survey a selected area with high probability of illegal discharges, to identify, record, document and report the detected pollutions and polluters, as well as to improve cooperation.

WORKING TO IMPROVE REGIONAL AIRBORNE SURVEILLANCE

Steps have been taken to improve regional airborne surveillance, which is vital to the detection of oil spills and other hazardous substances entering the marine environment. HELCOM Recommendation 34E/4, revised this year, recommends that regular surveillance be undertaken by air across the entire region and that existing remote sensing systems be improved to allow for use in night and hostile weather conditions. Improved surveillance may contribute to better identification—and,

RESPONSE VEHICLES IN THE BALTIC SEA

AIRPLANES
HELICOPTERS
AND VESSELS

SOURCE: HELCOM, 2003-2012



potentially, the prosecution—of offenders. HELCOM has fostered cooperation on aerial surveillance among Baltic coastal states since the 1980s.

CLEANER SHORES AND SAFER WILDLIFE IN CASE OF ACCIDENT

Response to oil spillages and other harmful substances on the shore falls under HELCOM's mandate. The related Response Manual, Volume III, has been under revision by the HELCOM Expert Working Group on Response on the Shore (EWG Shore). Under the HELCOM Response Working

Group, Shore is an ad hoc group that works as a regional platform for the exchange of information on recent national and regional developments concerning on-shore response, best practices and exercises in addition to developing new policy proposals.

More systematic work on oiled wildlife response is one recent part of HELCOM preparedness work on spills. The HELCOM Expert Working Group on Oiled Wildlife Response (EWG OWR) meets regularly to exchange information on developments as well as organize trainings and exercises, and reports regularly to the HELCOM Response Working Group. An assessment is

currently ongoing on oiled wildlife response preparedness in the Baltic Sea region and the expert working group has provided inputs to the development of a wildlife chapter to the HELCOM Response Manual.

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HELCOM – BALTIC MARINE ENVIRONMENT PROTECTION COMMISSION

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