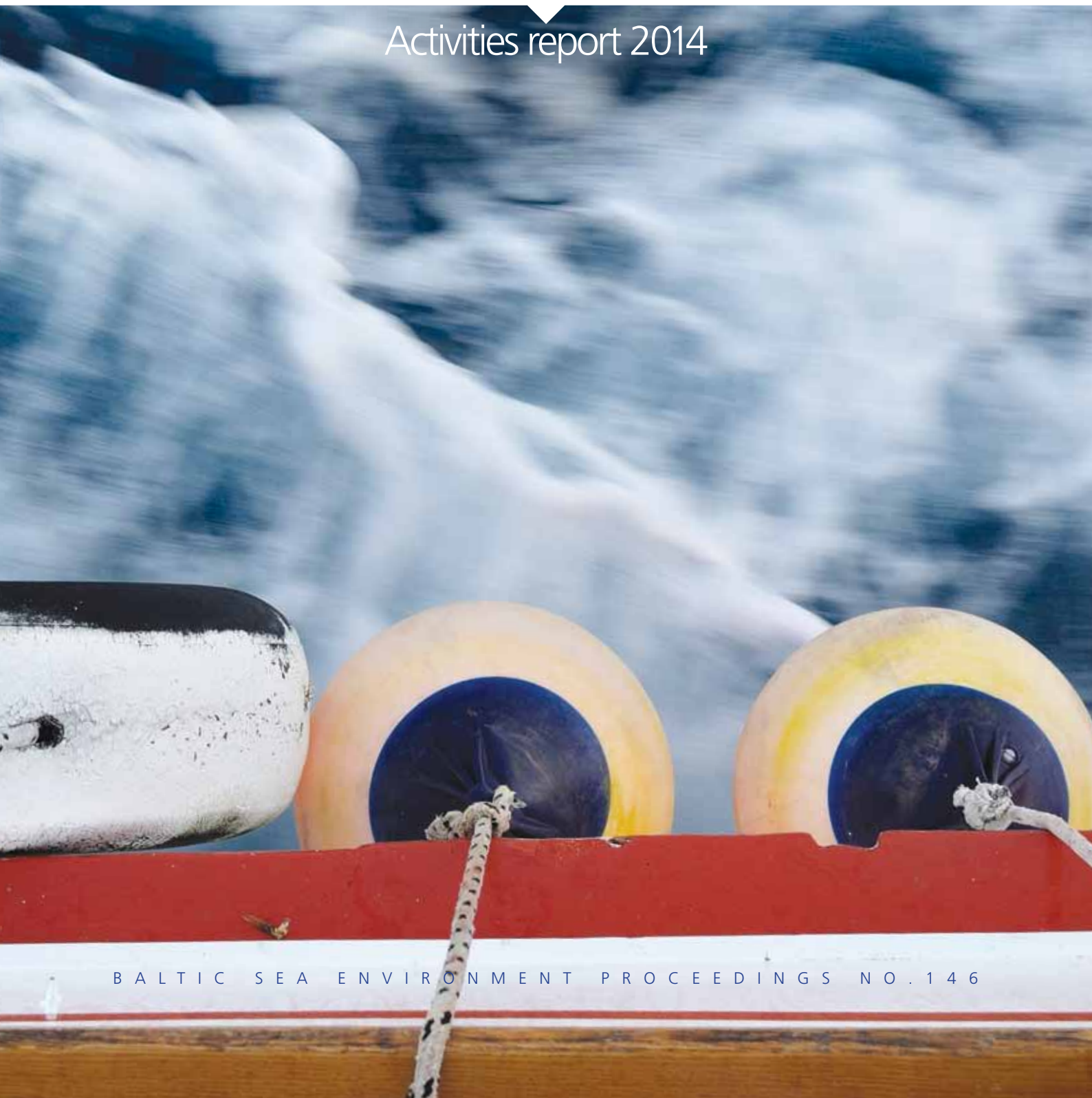




Activities report 2014



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*HELCOM is like a bridge between experts and policy-makers, helping to formulate a shared vision based on scientific evidence.*

An aerial photograph of a cable-stayed bridge, likely the Bixie Bridge in the Baltic Sea, stretching across the water. The bridge has several tall, slender pylons supporting the deck with numerous cables. The water is a light blue-grey color, and the sky is a pale, hazy blue. The bridge is the central focus of the image, receding into the distance.

# The Baltic Marine Environment Protection Commission, HELCOM

is an intergovernmental organisation that works for the protection of the Baltic marine environment. 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 basis of HELCOM is the Helsinki Convention, a regional treaty first signed in 1974 and amended in 1992.

The Helsinki Convention obliges the countries to take all appropriate legislative, administrative or other measures to prevent and eliminate pollution in the Baltic. The Contracting Parties of the Convention must also follow HELCOM Recommendations and the Baltic Sea Action Plan (2007–2021), created to ensure that a healthy status of the vulnerable marine environment of the Baltic Sea is achieved.



# Foreword

EXECUTIVE SECRETARY MONIKA STANKIEWICZ



*I'd like to introduce my close friend to you, an accomplished and distinguished lady, close to middle age, but far from the middle age crisis. In fact, her life seems to get better after forty.*

*Over the years of hard work and little sleep, she may seem a little overweight. One doesn't normally discuss a lady's weight - but let's admit it, she's put on a few extra kilograms here and there. No wonder she sometimes feels a little out of breath.*

*However, last year proved that she was ready to deal with the situation – she enrolled into a new fitness programme to keep up with the pace of modern times and stay fit for what the future might bring.*

*She's also proven to be a good and prudent housewife - with a small budget, she can prepare excellent meals from the ingredients in her cupboard. Nothing gets wasted. She keeps a tight ship, not one to organise lavish dinners and receptions, at least not in recent years.*

A wide-angle photograph of a rocky coastline. In the foreground, a person wearing a bright green shirt is wading in shallow, clear water, possibly collecting samples or debris. The water is calm, reflecting the sky. The background shows rugged, grey rock formations under a blue sky with light clouds. The overall scene is serene and natural.

# Dear Friend of

*Instead, she offers to those who wish to become her friends or partners days packed with thrills and suspense as well as long hours of work stretching late into the evening.*

*Her extended family lives all around the Baltic Sea with close relations also in Brussels and other sea regions. She nurtures cooperation and fosters understanding among her family. She believes in her mission and is convinced that she can make a difference. She's dedicated to making the world a better place for future generations by rescuing the Baltic Sea.*

*This lady is, of course, our Helsinki Commission who celebrated her 40th anniversary in 2014. Her fitness programme, or streamlining, is well under way and has brought new energy to all her actions. She can be proud of her family and look back on her achievements over the past decades with satisfaction. It's also our good fortune that she has the character and tenacity to face the great challenges that still lie ahead.*

*HELCOM's mission to cure the Baltic Sea is all about people: Heads of Delegations,*

*chairs of working groups, national experts, the Secretariat and observers, to name a few. It's through everybody's hard work, dedication and belief in our common mission that HELCOM has become a world-wide recognized model of regional cooperation.*

*Like HELCOM's jubilee slogan says, "Life gets better after 40".*

*This report gives you an overview of HELCOM's jubilee year 2014, which was mainly celebrated by working harder than ever.*

# the Baltic Sea





*“Obligations emerging from the Helsinki Convention, both the original and the current one from 1992, are something that binds us together. They show that we are mature enough to commit to responsibilities – and shoulder them both in times of economic upturn and recession.”*

HELLE PILSGAARD, HELCOM CHAIR 2012-2014



Life gets better after

## ANNIVERSARY JUBILEE 5 MARCH 2014

*Honorary guests, expert speakers and panellists, along with the extended HELCOM family, celebrated the 40th anniversary of the signing of the Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area in March. The Jubilee session was streamed live. A historical exhibition was enjoyed by all participants.*

### CELEBRATING 40 YEARS OF HELCOM COOPERATION

Joyful mood accompanied the HELCOM 40th anniversary Jubilee session in Helsinki, Finland, inaugurated by President Tarja Halonen; Minister of Environment of Finland, Ville Niinistö; Jacqueline Alder from the Division of Environmental Policy Implementation of United Nations Environment Programme (UNEP), and Helle Pilsgaard, Chair of HELCOM.

President Tarja Halonen on behalf of the host country of HELCOM, Finland, opened the Jubilee by acknowledging that while many seas in the world struggle due to political and economic situations, the Baltic region enjoy economic prosperity and stability putting even more expectations on us. “Despite economic downturns from time to time, the Baltic Sea coastal countries have what it takes to be persistent, ambitious and forward-looking in their efforts to save the sea.”

Ms. Halonen also said that in the Baltic Region, the work of the states is very important but not enough. “In order to achieve effective measures to clean our Baltic Sea, we need all actors of society on board.”







### THE BALTIC SEA: ECOSYSTEM AND PROSPERITY

In the second part of the Jubilee, a few seasoned experts marched on stage with reflections on ecosystem, prosperity and the Baltic Sea. The guest audience listened to presentations by Professor Erik Bonsdorff, Åbo Akademi University; Bo Gustafsson, Director of Baltic Nest Institute Sweden as well as Marianne Kettunen, Senior Policy Analyst, Institute of European Environmental Policy.

### MUSIC AND MOVING PICTURES

The Jubilee opened with a musical performance by the improvisational ensemble Huima Laulu (Wild Song), and closed with the premiere of the 40th Anniversary animation video. The exhibition in the lobby area displayed best pics from the photo archives, along with other curiosities from the past decades.



### WORKING TOGETHER FOR COMMON GOALS

The common goals of cooperation with a view for future were discussed by the ensuing panel. The Executive Secretaries of HELCOM, BONUS and OSPAR were joined by the General Secretary of ICES as well as Representatives from the Russian Federation and European Commission. The lively dialogue was moderated by Pauli Merriman, WWF Baltic Programme



PRESIDENT TARJA HALONEN



ENTER



# Planning is the art of thinki

## SPEECH OF THE NEW HELCOM CHAIR HARRY LIIV

VASAB MINISTERIAL CONFERENCE  
26 SEPTEMBER 2014, TALLINN, ESTONIA

It is easy to agree with the statement that policy and planning should be based on what we know of the world – what one might call facts. However, if taken seriously, this relatively simple idea is surprisingly hard to live up to. An excellent illustration of the kind of efforts it may take is the international cooperation on the Baltic Sea.

An intensive scientific cooperation on the Baltic Sea has been going on for over a hundred years. During the forty year lifespan of HELCOM, the generation, exchange and use of marine and maritime information on our region has further intensified.

The women and men working in HELCOM – the affiliated national

institutions on marine research, maritime transport, land-based industry, defence, fisheries and agriculture – have during the last decades carried out a massive number of observations at sea, in the air and on land on the many different characteristics of the Baltic Sea and its inhabitants, and of human activities like ship traffic and pollution loads. The results have also been analyzed and even transformed into computer models useful for scenario building.

Without this century of efforts, we would not be in the situation where we are today – where we can detect even relatively small changes in the environment, make claims on the current status of the Baltic Sea and the sustainability of human activities, as well as confidently recommend corrective science-based measures towards a healthier Baltic Sea.

All countries gathered here today have contributed, and continue to contribute, considerable intellectual and financial resources to develop and maintain this reassuring bedrock of “best available science” for maritime spatial planning and other regional policies related to the Baltic Sea, as a part of the extended HELCOM cooperation. I urge you to use this source of information in maritime spatial planning.

Further, I am looking forward to further develop the HELCOM monitoring and surveillance activities, as well as the resulting data and GIS services, as one of the priorities of the Estonian Chairmanship in HELCOM, to serve even better spatial policy and planning needs.

Planning is the art of thinking ahead. However, in the case of maritime spatial planning in the Baltic

# NEW HELCOM

## STREAMLINING PROCESS COMPLETED

The need to streamline HELCOM – to make the processes more effective, to have better focus and clearer deliverables, to allow for better flexibility and so forth – was acknowledged some years back with the hands-on work starting in October 2013. Less than a year later, the dedicated Task Force was happy to officially launch the outcome.

HELCOM's structures, scope of action and working efforts are now better concentrated on the most important issues. Its involvement has a clear value-added

to the Contracting Parties in relation to their other ongoing processes and existing cooperation schemes.

In general terms, the new HELCOM works towards better country ownership by engaging the Contracting Parties more. This should also assist the countries in synchronizing with other national policies and legislation. On the other hand, other sectors and processes need to be taken into consideration with the aim of integrating marine protection to policies other than just environmental ones.



# ng ahead

Sea, I am convinced that it will also benefit from another thought from history. Namely, to get a perspective on the patience and effort needed to generate the currently available knowledge base on the marine environment and maritime activities, underpinning the implementation of the ecosystem approach.

Also, a couple more thoughts sideways to other currently ongoing processes, such as the implementation of the EU Marine Strategy Framework Directive, could enable even more synergies and even cost savings in terms of data generation and overall implementation for maritime spatial planning.

In concluding, I warmly welcome the VASAB Ministerial Declaration published today as another step on our joint path to implement maritime spatial planning in the Baltic Sea region.

## Priorities of Estonian Chairmanship

The Chairmanship of HELCOM covers a two-year period and rotates among the Contracting Parties in alphabetical order. On 1 July 2014, Estonia started its responsibilities and announced the new Chair, Harry Liiv. The summarized key priorities of the Estonian Chairmanship are:

### POLLUTION MANAGEMENT

- Reduction of pollution load
- Reduction of the impact of hazardous substances
- Regional Marine Litter Action Plan

### PLANNING, MANAGEMENT AND MARINE PROTECTED AREAS

- Use, conservation and protection of the Baltic Sea regional coastal and marine areas
- Well-managed and ecologically coherent network of marine protected areas
- Fish stock and other environmental resources

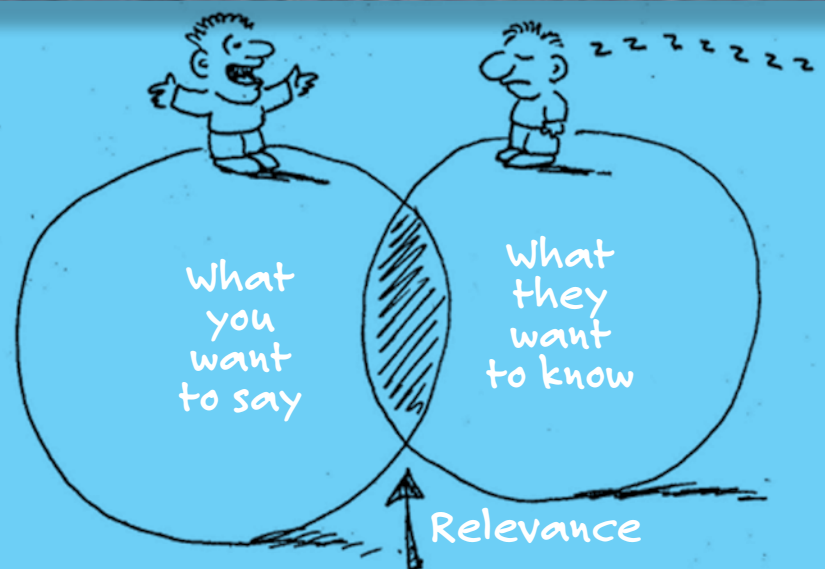
### ASSESSMENT OF ENVIRONMENTAL STATUS AND INFORMATION

- HELCOM's up-to-date monitoring programme
- Assessment based on indicators and environmental objectives
- Access to environmental information and visibility of HELCOM activities



### SOME MORE DETAILED RESULTS

- Mandates and deliverables of the groups are clearer
- New HELCOM roadmap with exact timelines until 2021
- Groups' working plans more interlinked, harmonized
- More meetings online
- Now: Five permanent working groups and three time limited groups
- New groups: State and Conservation; Pressure (No more: HABITAT, MONAS or LAND)
- New groups for sustainable fisheries and agriculture
- Clearer role for the Gear group: to manage and integrate
- Structure will better deal with crosscutting issues



# Gear group

## ensures coherence in marine policies

The Group for the Implementation of the Ecosystem Approach updated its Terms of Reference in 2014. The Gear group is mandated to work towards region-wide cooperation on all elements of national marine strategies. The Group serves as a regional instrument for the national work of the HELCOM EU Contracting States in implementing the EU Marine Strategy Framework Directive, and includes coordination with activities under the Maritime Doctrine of the Russian Federation.

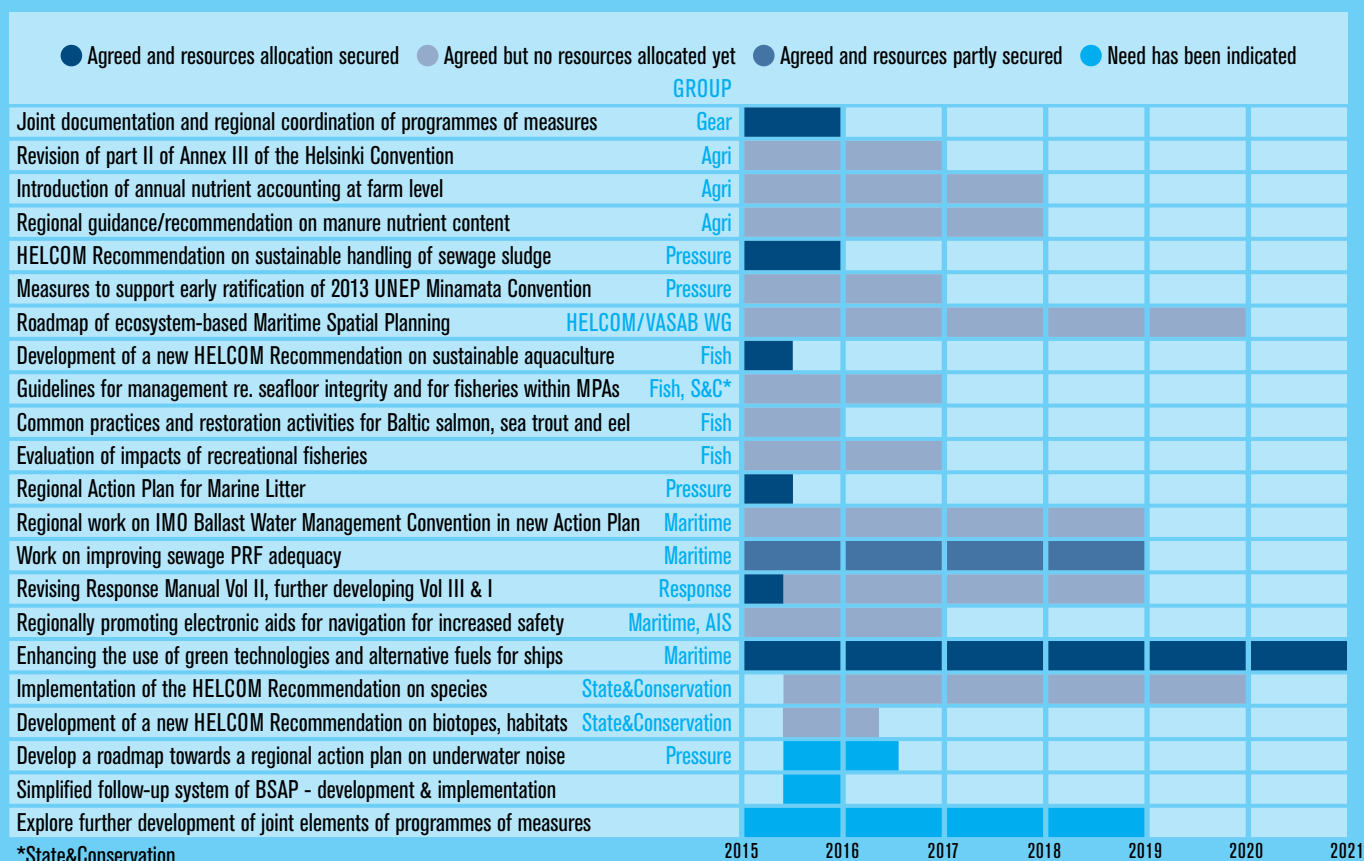
The integration and coherence between the working groups and the implementation of the ecosystem approach in HELCOM is the specific

role of Gear. In practice, this requires that the group will continue planning activities that support regional coordination, steering development in both relevant projects and deliverables according to the Roadmap of HELCOM activities on ecosystem approach.

The Roadmap of HELCOM activities on the ecosystem approach provides an outline and timetable for major activities and deliverables until 2021. It has been created to serve as a tool for the Contracting Parties in planning and coordinating the HELCOM various activities also in relation to the work of other organizations at the European and global level.

## Programmes of measures

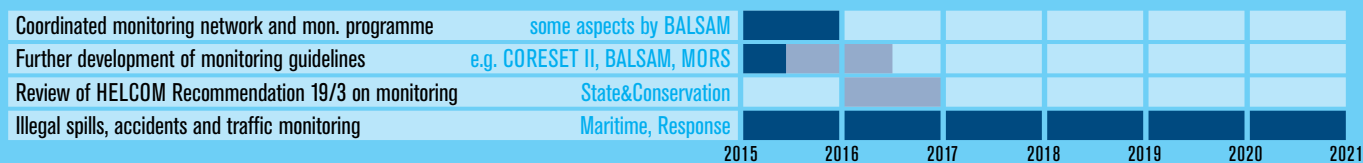
Ensuring effective planning and execution of measures to mitigate the environmental problems in the Baltic Sea is a key priority for HELCOM, also concerning the different requirements from national, regional and global levels.





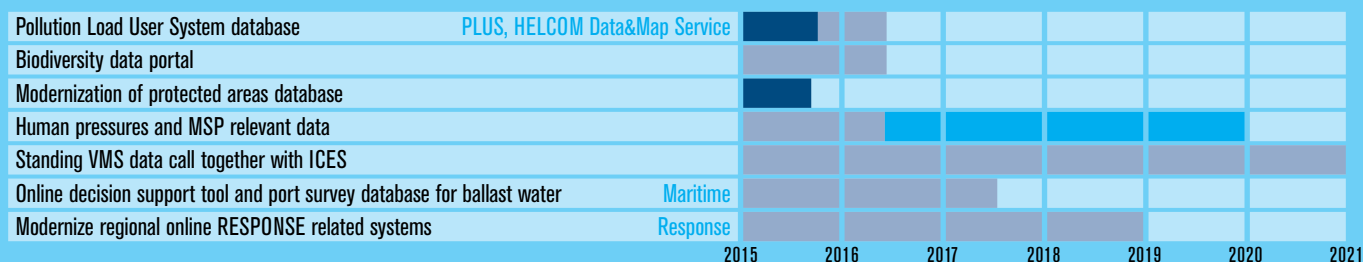
## Monitoring

Coordinated joint monitoring is a well-established HELCOM activity, carried out since the 1970s and essential for assessing the status of the Baltic Sea.



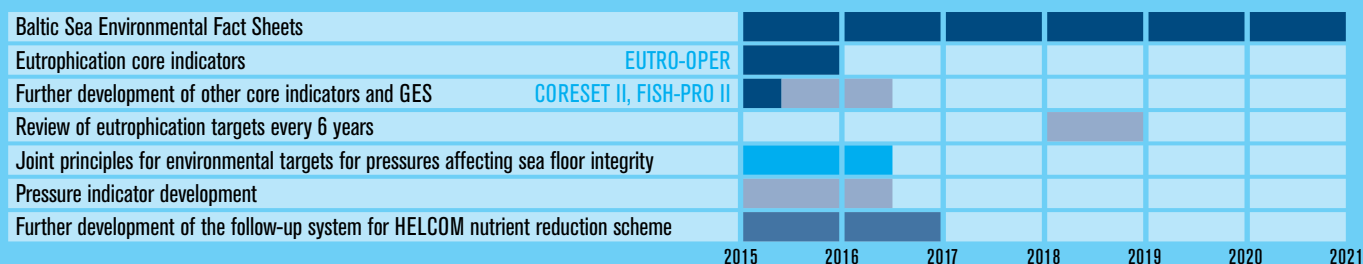
## Streamlined data management

Collecting and storing regional data has increased its significance for HELCOM. At present, HELCOM provides free access to e.g. over 500 map layers of choice.



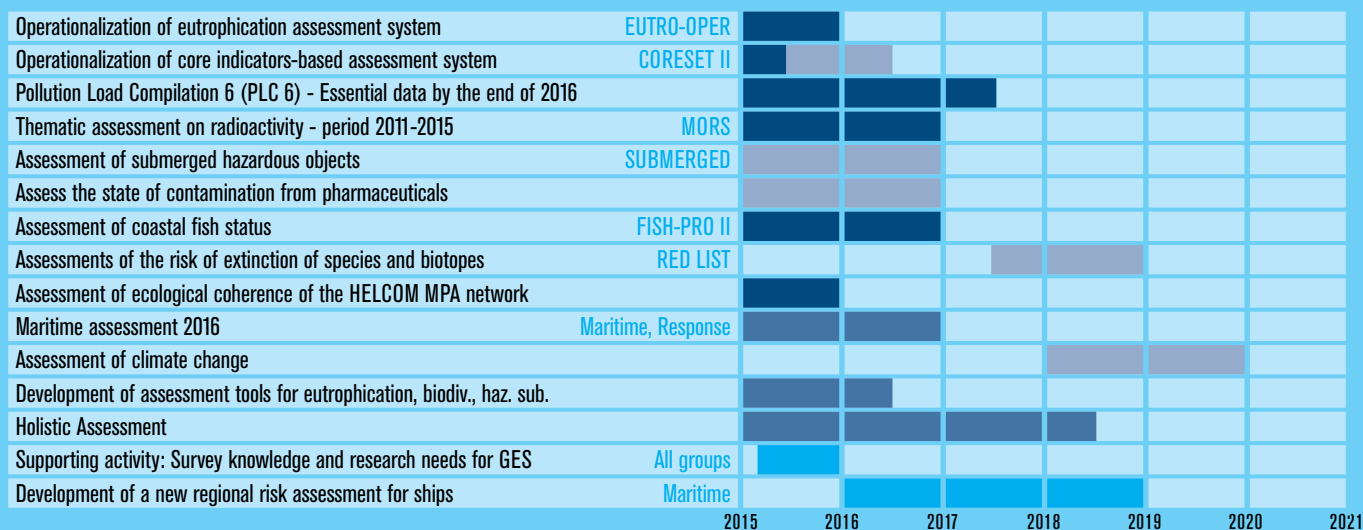
## Indicators and targets

Necessary for any assessment of the marine environment, the region-wide HELCOM core set of indicators is under finalization. The targets set e.g. for eutrophication require regular re-visiting.

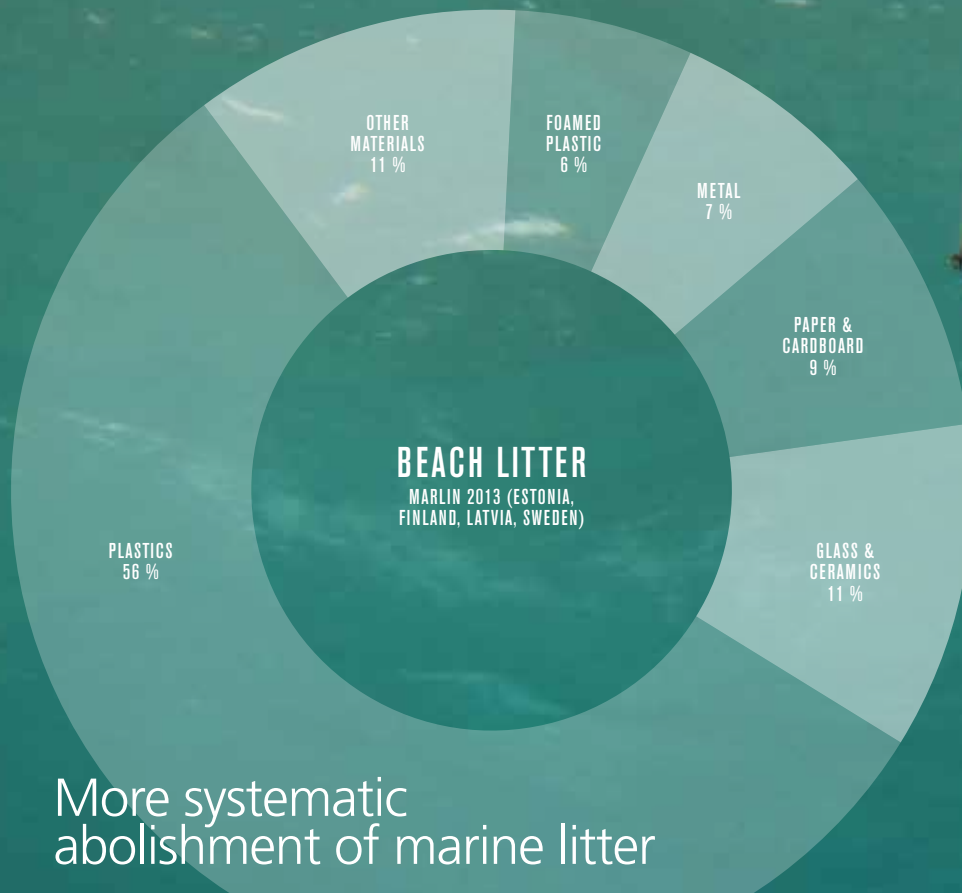


## Assessments

The Second holistic assessment of Ecosystem Health of the Baltic Sea has begun, expecting release mid-2018. "HOLAS II" will interlink the on-going work on HELCOM assessments.



# Marine



## More systematic abolishment of marine litter

The year 2014 was busy in preparing regional action on marine litter in the Baltic Sea, expecting adoption in the spring of 2015.

The drafting process has benefited a lot from expertise from non-governmental organizations, research institutions, industry, as well as concerned administration and authorities. The bottom up approach with broad participation of stakeholders has been ensured right from the beginning, to achieve a good basis for discussions and common ground for agreement on regional as well as voluntary national actions. Moreover, the wide consultations have been important for the successively improved draft plans, including the proposed actions to reduce marine litter in the Baltic Sea.

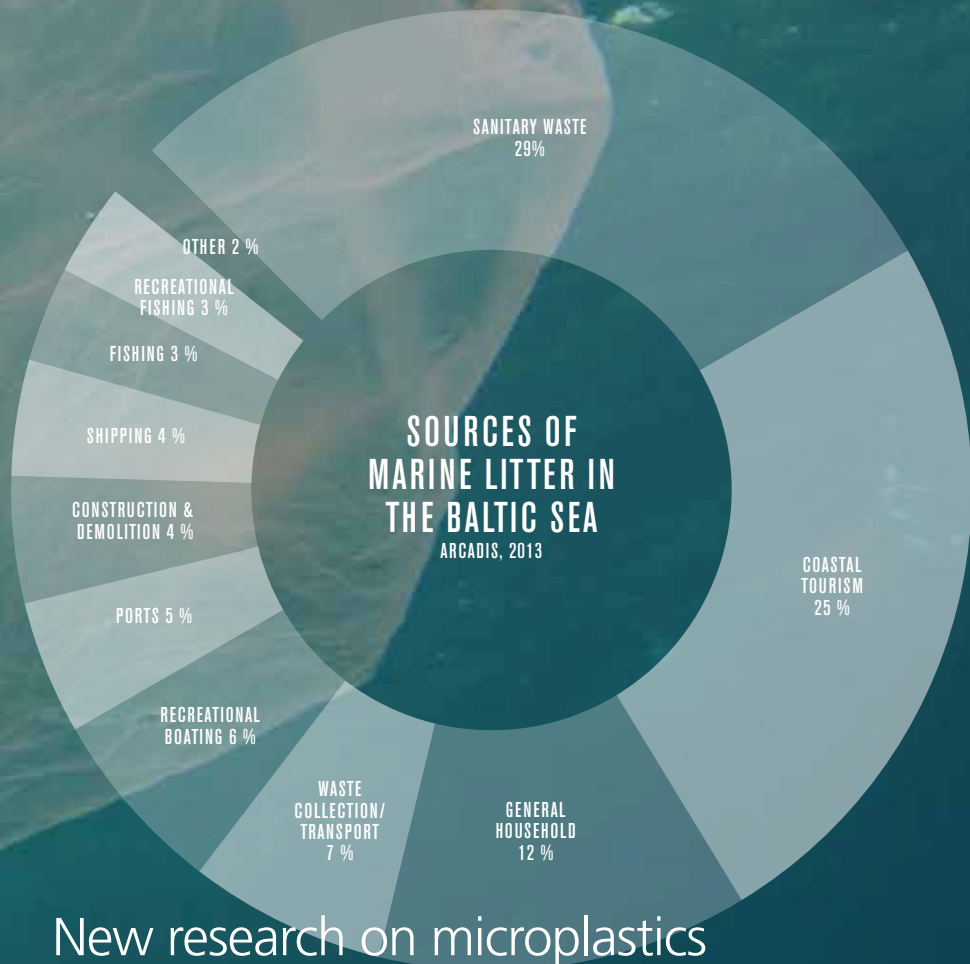
The plan will integrate actions at regional and national levels, covering different pathways for marine litter.

The list includes waste management, sewage and storm water management, maintaining beaches and urban areas, fisheries and shipping. Special measures are aimed at the top ten items found in the Baltic Sea marine environment as well micro-plastics. The document also pays attention to environmental education as well as involving the offenders to reduce marine litter.

Marine litter is a rapidly growing concern at sea and shores alike. With its large impact on the environment, it is a priority for the Estonian Chairmanship of HELCOM. Consumer behaviour is considered as the most important cause for marine litter in the Baltic Sea: 48% is estimated to originate from household-related waste, including sanitary waste while waste generated by recreational or tourism activities is some 33%.



# e litter



## New research on microplastics

A study conducted in St. Petersburg, Russia, found that the treatment process effectively reduces the amount of micro-sized plastics in waste water. Nevertheless, the massively large waste water treatment plants themselves are a point source of microplastics as some 10% of the micro particles are not removed. The report was issued under the HELCOM BASE Project.

Thanks to this successful cooperation, the Vodokanal of St. Petersburg will be able to continue microplastic research independently. Due to the preliminary status of the research project, however, the results must be seen as indicative.

Microplastic litter is a growing concern - it harms the coastal and marine environments and enters the

food chain of the marine habitats only to end up on our plates. While public and scientific interest in microplastic waste in marine environments has increased in recent years, relatively little is known about the sources of these fragments that are less than 5mm in size.

Intensive discussions continue within HELCOM for a better understanding of the problems concerning both primary microplastics, referring to the very small manufactured particles which are a direct result of human usage of materials and products; and also secondary microplastics, which have been broken down by the environment. Work continues for finding potential solutions and effective action in all decision making levels.

**236,6**  
ITEMS / 100 M  
IN URBAN BEACHES  
MARLIN 2013

*Agriculture sector has important potential for environmental gains in relation to the nutrient losses and thus the status of the Baltic marine environment*

## Manure management plan for Kaliningrad making progress

According to the study completed in 2014 under the BASE Project, all the processed animal and poultry manure in Russia's Kaliningrad Region could be used as organic fertilizer. Moreover, manure will stay in high demand as there is currently a shortage of organic fertilizers in the region. The report, submitted to the regional Ministry of Agriculture, has helped to prepare the Kaliningrad manure management plan. Experts estimate that the implementation of such a plan would significantly reduce the entry of nutrients into the environment.

Furthermore, the study identified several necessary measures to secure that the production of organic fertilizer from manure is both profitable and environmentally sustainable. For guiding each individual farm to choose the most appropriate technology, an online database lists the technologies, machines and equipment available for manure processing. Decision-making guidelines at the farm and regional levels have also been developed based on the nutrient (nitrogen and phosphorus) balance calculation.

Agriculture is a major source of nutrient inputs to the Baltic Sea, contributing to over 60-70% of diffuse and over half of total waterborne inputs to the sea. Diffuse loading makes reducing nutrient loads from agriculture more complicated than simply cutting them from point sources. There is also a considerable time lag between the implementation of measures and visible effects in the water bodies.



# Agriculture



## Sustainable nutrient management the focus of new Agri group

HELCOM continues the joint regional work for sustainable agricultural practices within the entire catchment area. An example of such efforts is agreeing in the 2013 Ministerial Declaration to establish national standards, by 2016, for the nutrient content in manure and to promote nutrient bookkeeping.

The use of nutrients in the agricultural sector should be more effective. To this end, a few key measures have been identified such as the development of standards for nutrient content in manure and the application of a nutrient accounting system at the farm level. Another key action is the recycling of nitrogen and phosphorus generated at farms, i.e. for fertiliza-

tion, instead of nutrient input from external sources.

Reducing the leaching of nutrients to the environment at different stages of agricultural production is another major set of measures. This can be done through improving the related techniques and practices, and by upgrading manure storages and drainage systems.

## New EN-RU glossary on agriculture

Less unnecessary ambiguity in international cooperation regarding agriculture, livestock and manure management has become possible thanks to the translation of an extensive glossary in Russian by the HELCOM BASE Project in 2014. The Glossary of Terms on Livestock and Manure

Management helps to standardize terminology and also assists in the international exchange of experience and results in science, technology and policy frameworks alike.

The terminology is sometimes very technical and even small nuances can change the meaning of a concept.

The glossary, first compiled in English in 2003, will benefit a wide group of experts. The English glossary is freely available on the RAMIRAN website and the Russian version on the HELCOM website.

# culture



## New group on ecosystem-based sustainable fisheries

As with most of the other main groups, the HELCOM work on fish and fisheries sharpened up after HELCOM's modernization in 2014, signifying for this group an updated Terms of Reference as well as a new name: HELCOM Group on Ecosystem-based Sustainable Fisheries (the Fish group).

The Fish group has continued HELCOM's efforts to address fishing practices, which potentially have a negative impact on both conservation goals and on threatened or declining species and habitats, especially in the coastal and marine protection areas.

As one of its tasks, the Fish group has to address data gaps that prevent

the adequate assessment of human pressures on the ecosystems. More data, such as in relation to physical loss and damage to the seafloor, need to be gathered in cooperation with the relevant bodies to be able to contribute more to HELCOM's holistic assessments (HOLAS II).

## Monitoring guidelines revised for coastal fish communities

Coastal fish communities are an important component of Baltic ecosystems, monitored in some areas as far back as the 1960s. HELCOM guidelines

for coastal fish monitoring were last updated in 2008 to better match the management needs. The new guidelines, adopted in November, describe

the methods and gears used, and the variables to be monitored to study coastal fish populations.

# Fisheries



## Recommendation on sustainable aquaculture

Fisheries and environmental experts and authorities have worked intensively on a draft HELCOM Recommendation on sustainable aquaculture which, once adopted, will help cultivate fish in a more balanced and environmentally sustainable way. The recommendation will, among others, set the common, regional principles and understanding of the Best Available Technologies (BAT) and Best Environmental Practices (BEP) to be applied in the sector.

Sustainable fishing is a key area for HELCOM, as fisheries in the Baltic Sea is one of the sectors having the

largest environmental impact on the status of the marine environment, including its biodiversity. The new HELCOM group on ecosystem-based sustainable fisheries will respond to the need to find solutions how the sector could further contribute to reaching Good Environmental Status of the Baltic Sea by 2021. This includes the work on aquaculture.

The HELCOM 2013 Ministerial Meeting has agreed on the development of the new recommendation on sustainable aquaculture to replace the existing (Rec 25/4) one from 2004. The commitment aims at limiting potential

environmental impacts of aquaculture activities such as the introduction of non-indigenous species; ecological and genetic impacts on wild fish stocks from unintended releases of farmed species; nutrient input; and the introduction of marine litter and pharmaceuticals.

The growth rate of worldwide aquaculture has been sustained and rapid, averaging about 8% per year for over thirty years. In the Baltic Sea region, the developments so far have been subtle and the sector has potential to develop in a sustainable manner.





# Industrial

## More measures needed to block pharmaceuticals

The final report of a study on pharmaceutical flows from waste waters in St. Petersburg was published in 2014 as part of the findings of the HELCOM BASE Project. An estimated load of 400 kg of a common anti-inflammatory pain killer (Diclofenac) ends up in the Gulf of Finland annually via the River Neva.

The results clearly indicate that the currently employed waste water treatment processes are insufficient for the anti-inflammatory drug as so much ends up in the Baltic Sea with a probable negative effect on living organisms. The necessary first step, in this case, is to improve the technology. The study looked also into some anti-

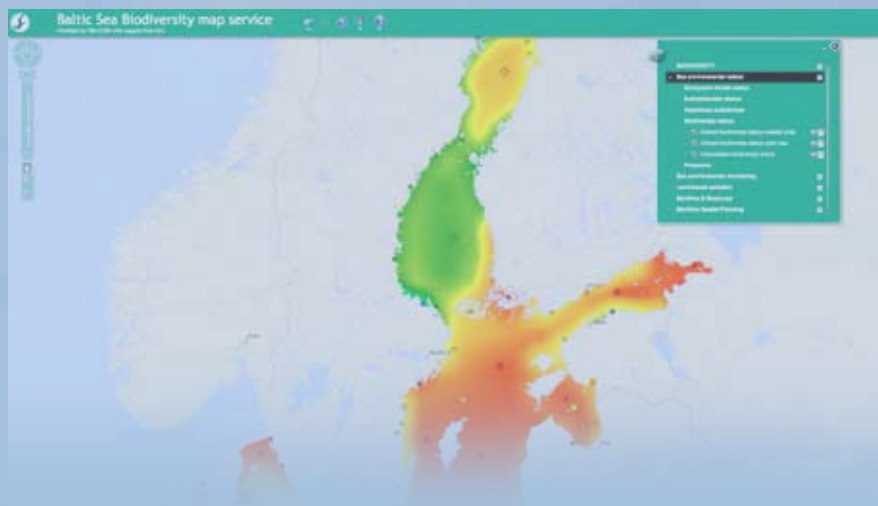
biotics and contraceptives which posed a lower risk to the environment.

Pharmaceuticals and their harmful effects in waterways are a growing concern: only recently, the elevated concentrations have been measured in the marine environment, also in the Baltic Sea with over 80 million people in its catchment.

## New biodiversity map service published

As a part of the free HELCOM Data and Map Service, a thematic biodiversity map service was published in December increasing the total number of HELCOM map layers to 500. Providing maps ranging from biodiversity landscape features to information on maritime traffic since 2010, this HELCOM service is probably one of the world's largest hubs of compiled regional spatial information on the marine environment.

The Red List datasets added in 2014 provide distribution maps on red-listed biotopes (36), benthic invertebrates (59), fish species (58), bird species (32), and marine mammals (5). The preparation of datasets for online publishing has been supported by the European Commission.



# Species an



# releases

## Dredged material in safer hands

Helping to minimize the impact of any disposed material containing heavy metals and other hazardous substances is the ultimate goal of the revised HELCOM Guidelines on dredged material. The revision was timely in order to incorporate recent legislative and technological developments, as well as better follow the processes at the global level (IMO London Convention and Protocol) and in the neighbouring marine regions

such as the North-East Atlantic (OSPAR Convention).

Dredging is essential to maintain navigation in ports and harbours as well as for developing port facilities. However, dredging represents one of the human pressures on the marine environment as it impacts sea floor integrity, releases and relocates contamination, and disturbs sea life by noise, turbidity and siltation. Some sediments may contain a cocktail of

hazardous substances while others are not, or only slightly contaminated by human activity.

The revised HELCOM Guidelines for the disposal of dredged material at sea address options for sustainable handling of both contaminated and 'clean' material, avoiding loss of resources and at the same time not compromising good environmental status.

## Common rescue plan for the Baltic sturgeon

The Baltic Sturgeon Rehabilitation Project draws on the Baltic Sea Action Plan agreement on the restoration of lost biodiversity and specifically aims to reintroduce the Baltic sturgeon. During the year, an implementation plan for a common strategy towards the remediation of the species was developed and a joint project application was prepared.

The aim is to coordinate national activities, including the development of a joint action plan for the restoration of the Baltic sturgeon, to expand breeding and release plans, and to initiate an evaluation of its habitats in interested countries.

# and habitats

# Marine prot

## SAME AREAS, NEW TERM

IN 2014, ALONG WITH THE ADOPTION OF THE NEW RECOMMENDATION, A NEW ACRONYM WAS ALSO ENFORCED: INSTEAD OF THE FORMER BSPAS, THE COASTAL AND MARINE BALTIC SEA PROTECTED AREAS WILL BE KNOWN AS HELCOM MPAS.

*The first 62 Coastal and Marine Baltic Sea Protected Areas were established in 1994; today there are a total of 163. The aim of establishing these areas is to protect valuable marine and coastal habitats in the Baltic Sea. This is done by designating sites with particular nature values as protected areas, and by managing human activities within those areas. Each designation is planned to have its unique management plan.*

## New Recommendation adopted

HELCOM's work on marine protected areas (HELCOM MPAs\*) took a major leap forward as the new HELCOM Recommendation on coastal and marine Baltic Sea protected areas (Rec 35/1) was adopted in April. Protected areas are essential for maintaining healthy biodiversity and ensuring the versatility of ecosystems.

The new recommendation addresses, among other things, the selection criteria of HELCOM MPAs. Countries are now also encouraged to

provide specific protection to Red-listed species and biotopes, based on the outcome of the HELCOM Red List project completed in 2013. Another essential feature is that the network of HELCOM MPAs should be ecologically coherent, in other words the collection of sites protects the full range of biodiversity in the region.

The area of HELCOM marine protected areas has increased three-fold since 2004 and now covers about 12% of the marine area of the Baltic

Sea. This exceeds the target of 10% spatial coverage set by the Convention on Biological Diversity. The Baltic Sea was one of the first regional seas in the world to reach this target. The next goal is to reach 10% protection in each sub-basin of the Baltic Sea.

Attention will now be placed on including more off-shore areas under the protection regime; on increasing ecological coherence; and on finalising management plans for the already established HELCOM MPAs. \*FORMER BSPAS



# ected areas



## New database on protected areas shaping up

Reporting on the Baltic Sea sites under protection will become easier once the modernization of the HELCOM database on coastal and marine Baltic Sea protected areas - HELCOM MPAs\* - is completed. Receiving regular information and data is essential for following up the related HELCOM agreements and assessing the ecological coherence of these areas.

The work to develop a new HELCOM database started in 2014 and will be completed in 2015. The aim is to create an approachable database via restructuring the existing information, and to harmonize the new HELCOM database as much as possible with similar ones on North-Atlantic (OSPAR) MPAs and EU's Natura 2000 sites.

The new database will also contain a direct connection to the HELCOM Map and Data Service, enable the Contracting Parties to easily upload data and for all users to view, download and analyze the geographically referenced data in the system.

\*FORMER BSPAs

## More high-quality MSP data in the horizon

Efficient exchange of geographical data is a prerequisite for effective maritime spatial planning (MSP) – and also the concerned EU Directive from 2014. The dedicated HELCOM-VASAB Working Group on MSP has been preparing for a regional correspondence sub-group on MSP data to support

the updating and creation of regional datasets for MSP.

There are still challenges in the availability, compatibility, usability and spread of data that is useful – or necessary – for MSP. Cooperation in data and information sharing would improve through the new data ex-

pert group under plan. The group's intended tasks include identifying and addressing the key impediments on data access and use; securing links to other MSP data initiatives and groups; and ensuring more structured and continuous work on data requirements for successful regional MSP.

## HELCOM inspires regional discussions on maritime spatial planning data

New approaches for sharing and creating data on maritime spatial planning (MSP) were discussed by the representatives of organizations and initiatives in the Baltic Sea region in a targeted session during the Baltic MSP Forum in June, in Riga, Latvia.

There is still much to do in the field of regional data exchange concerning the Baltic Sea even if this activity has

been going on for over 100 years and within HELCOM for the last 40 years. HELCOM's approach of favouring links to the original data providers via the Web Map Service (WMS) and other GIS software tools improves the flow of MSP data in the Baltic Sea area. This method helps to avoid any outdated data, a risk when copying data to a centralized database.

In 2014, HELCOM opened a thematic and targeted MSP map service to facilitate regional data exchange and browsing.

*Maritime spatial planning (MSP) is a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that usually have been specified through a political process – United Nations*

# Maritime spa



# Experts in coherent maritime spatial planning in the region

The joint Working Group on Maritime Spatial Planning (MSP), formed by HELCOM and Vision and Strategies around the Baltic Sea (VASAB), is ready to ensure the regional coherence of implementing requirements concerning MSP.

The completed activities of the joint Working Group, meeting regularly since 2010, include the Regional Baltic maritime spatial planning (MSP) roadmap 2013–2020 adopted at the 2013 HELCOM Ministerial Meeting

and supported by the 2014 VASAB Ministerial Conference. The roadmap is a concrete set of next steps for MSP in the region, also finding for new ways to better include fishing and the fisheries sector to MSP. These activities have been carried out as part of the co-leading role of HELCOM for the Horizontal Action Spatial Planning of the EU Strategy for the Baltic Sea Region.

EU Strategy for the Baltic Sea Region (EUSBSR) was adopted in 2009

and its Action Plan is currently under revision. MSP reflects well the key points highlighted in the Strategy: macro-regional and cross-sectoral relevance as well as multi-level governance.

Furthermore, ensuring coherence across the Baltic Sea Region in implementing the 2014 EU MSP Directive is a new perspective in the discussion under the joint HELCOM-VASAB MSP WG.



**OFFSHORE WIND FARMS**  
PLANNED AND OPERATIONAL

# Maritime spatial planning

## What is monitored, where and when

All the information on regionally coordinated monitoring of the Baltic marine environment is now collected under one online site - HELCOM Monitoring Manual - that was published in October. It compiles information on what is monitored, where and when, enabling access to timely information on the state of the Baltic Sea thus providing a basis for the informed decisions on environmental measures and policies. For the EU member states, the Manual has also served to support the reporting of monitoring programmes to the EU.

The manual makes a link to HELCOM indicators under development that will be used to assess the progress towards Good Environmental Status. As HELCOM's mandate is to regularly assess the status of the Baltic Sea, monitoring both the state of and the pressures on the environment are all incorporated into the manual. Updated once a year, it also translates the general principles of the 2013 HELCOM Monitoring and Assessment Strategy into concrete specifications and requirements. The EU co-funded BALSAM project has significantly contributed to the manual,

for instance by collecting information on fisheries and on monitoring biodiversity in the Baltic.

In 2015, HELCOM will review and gradually integrate the existing technical guidelines for coordinated monitoring in the manual, including the Pollution Load Compilation guidelines (PLC-Air and PLC-Water); the COMBINE manual; the monitoring of radioactive substances (MORS); the surveillance of incidental and illegal oil spills; and guidelines for dredging and dredged material.

## Regional Seas Conventions cooperate on biodiversity indicators

Experts from the Baltic and North-East Atlantic regions initiated cooperation on biodiversity indicators in 2014, thus forwarding the policy ambitions of all the twenty countries in the HELCOM and OSPAR Regional Seas Conventions (RSCs).

Cooperation on activities to monitor and assess the status of highly mobile animals, such as birds and fish migrating across the RSCs borders, as well as other

aspects of biodiversity is crucial for a wider understanding of the marine environments of both marine regions. Both HELCOM and OSPAR have concluded on the advantage to cooperate on the implementation of their respective Regional Seas' strategies and action plans, as well as the coherent approaches in relation to other related frameworks in the two areas such as the EU Marine Strategy Framework Directive.

In 2014, joint expert meetings were held and the first concrete steps were proposed on how to utilize synergies and expert resources when developing indicators on biodiversity, in particular. In the coming years, closer cooperation between expert groups is expected as well as better comparability of evaluations, which are based on monitoring data.



# Monitoring and assessment



## Holistic health assessment starts

The hands-on work for preparing the second holistic assessment of the ecosystem health of the Baltic Sea (HOLAS II) has started through a project under same name. The project will assess the state of and the pressures on the entire sea, including the associated social and economic impacts of a deteriorating environment as well as the benefits of a Baltic Sea

in good environmental status. The release is set for mid-2018.

The large-scale project, a follow-up the first one in 2010, will depict how the Baltic Sea is affected by individual and cumulative pressures, and how far and how fast we need to go to reach the common management goals set out in the Baltic Sea Action Plan.

The assessment will be developed so that it can be used in reporting other international frameworks such as the EU Marine Strategy Framework Directive.

Comprehensive assessments will be conducted every six years to ensure up-to-date information and a solid basis for decisions on policies and measures.

## Indicators of change

The HELCOM Monitoring and Assessment Strategy, adopted in 2013, is based on an assessment system with commonly agreed core indicators. The indicators are used to evaluate how much the current state of the Baltic Sea environment deviates from the desired Good Environmental Status (GES). They enable an evaluation of whether the objectives of HELCOM Baltic Sea Action Plan are being met, and for the countries that are also EU members,

they comprise the requirements of the EU Marine Strategy Framework Directive.

The first set of core indicators for biodiversity and hazardous substances are aimed at becoming operational by mid-2015. The core indicators will, for example, be used to evaluate the status of marine mammals, waterbirds, coastal fish, the seafloor communities and the concentration of dioxins and metals in fish. Complementing the initial set of core

indicators developed by 2013, new core indicators are also under development for eutrophication and to evaluate emerging pressures on the environment such as marine litter and underwater noise. They will be pivotal to the implementation of the planned HELCOM holistic assessment.

Core indicators are currently being developed in the HELCOM CORESET II (2013–2015) and EUTRO-OPER (2013–2015) projects.

## New monitoring guidelines for seals

Another improvement in regional monitoring was reached by the endorsement of monitoring guidelines for seals, helping to improve coordination of the monitoring activities.

The monitoring guidelines have been developed by the EU co-funded BALSAM project and the HELCOM SEAL expert group. The BALSAM project is also developing databases for seal abundance and distribution to be made available online

in 2015. To date, as only the harbour porpoise has a dedicated up-to-date database, the development of the seal databases will help in following-up the population trends and status of the three Baltic seal species.

In the 1970s and 1980s, the population numbers of all seal species in the Baltic Sea were alarmingly low due to reproductive disorders, which have been

connected to chemical pollution. HELCOM has worked long-term to ensure the future existence of these mammals; for example, increasing numbers of grey seals have been observed since the 1980s. However, the recolonization of the former southern areas has been slow in Germany and Poland, for example.





# Monitoring and assessment

## New guidelines on nutrients input reporting

As eutrophication, caused by the oversupply of nutrients, is considered to be the major threat to the Baltic Sea, compiling regular data on nutrient releases into the sea environment is one of HELCOM's key activities. The data serve to follow up progress towards implementation of the

HELCOM nutrient reduction scheme. For the most part, the data on nutrient inputs are reported by the Contracting Parties.

In order for the Contracting Parties to prepare for reporting data on nutrient inputs, it is necessary to agree on the parameters, calculation methods and

other reporting requirements. The new guidelines, prepared by the HELCOM PLC-6 project members, will thus enhance the comparability, consistency and quality of the reported data from the HELCOM countries.

## Regular compilation of all pollution loads

The project in charge of the next HELCOM Pollution Load Compilation (PLC-6, years 2012-17) will prepare a comprehensive assessment of the water and airborne inputs and their sources to the Baltic Sea during 1994-2014, with a more detailed assessment concerning 2014. Interim assessments have already been conducted, for example, in preparations for the 2013 Ministerial Meeting.

The work is the answer to the commitment of HELCOM to carry out every sixth year (since 1994) a pollution load assessment (PLC), including a quantification of waterborne point, diffuse and natural sources.

The results of PLC-6 will include information on nutrient inputs via air and water as well as their sources. Moreover, the outcome provides valuable informa-

tion for assessing progress in reaching the HELCOM Baltic Sea Action Plan nutrient reduction targets, and to assist the EU member states in the 2018 reporting requirements under the EU Marine Strategy Framework Directive (MSFD).

## Improving follow-up on the nutrient reduction scheme

The challenge to easily follow-up how much polluting nutrients end up in the sea each year and where they originate was addressed more vigorously in 2014. HELCOM has set up a scheme, based on complex calculations, to determine the maximum amount of nutrients per sea-basin and per coastal country that the Baltic Sea can take in order to restore the

Good Ecological Status (GES) of the Baltic marine environment by 2021.

The follow-up scheme aims to increase transparency in monitoring the progress achieved by each HELCOM member state.

The provisional figures on maximum allowable inputs per sea-basin and the country allocated reduction targets were first created in 2007 and updated in 2013

after a more in-depth scientific analysis.

While the levels of nitrogen and phosphorus are decreasing, there is still much to do to achieve GES. The improved follow-up system attempts to address the following: By how much have the countries succeeded in reducing the levels? Is this enough to achieve the targets for maximum allowable input?





## Quality first: better database for loads

The PLUS project aims to modernize the HELCOM waterborne pollution load compilation (PLC) database, and to develop a web application to access the data. This will provide a more efficient data system both for reporting and retrieving data derived from pollution discharges into the Baltic Sea.

Another key aim is to develop an automatic quality assurance system to

ensure more comparable, consistent and validated data. More importantly, the PLUS should also improve the processes involved in the PLC-6 reporting, at the same time serving as a basis for the future PLC assessments, and support the role of HELCOM as a cooperation platform for the regionally coherent implementation of the BSAP, as well as the reporting obligation on the European and global level.

## Baltic onshore response becomes part of international law

The Helsinki Convention 1992, the international legal treaty on the Baltic Sea between the coastal countries of the Baltic and the EU, was amended on 1 July 2014 to explicitly cover response on the shore. The changes in Annex VII strengthen the Baltic Sea pollution response cooperation

in situations where oil or other substances have reached the shore.

The 2013 Ministerial Meeting also agreed on the expansion of the operational HELCOM Response Manual with onshore response. The new Volume III of the manual focuses especially on response

to pollution incidents on the shore, defining a common approach on how to plan and carry out international combating operations in the Baltic Sea region. HELCOM has targeted Expert Working Groups on response on shore and oiled wildlife working under the HELCOM Response Group.

## A closer look at hazardous objects on the seabed

Environmental risks of hazardous submerged objects - covering contaminated wrecks and lost or dumped dangerous goods (e.g. containers and other objects) - will be assessed in a publication expected to be finalized by 2016. New information is needed as the risk of encountering hazardous objects under the Baltic Sea surface

is growing due to the increasing use of the seafloor by, for example, offshore wind farms, sea cables and pipelines.

The work on submerged hazardous objects builds on the outcome of the completed HELCOM work on dumped chemical munitions, summarized in the report 'Chemical Munitions Dumped in

the Baltic Sea' published in 2013. The work will be carried out under a new expert group on environmental risks of hazardous submerged objects (HELCOM SUBMERGED), which had its first meeting in October 2014.

## Joint procedures on chemical response under review

The HELCOM manual on response to chemical marine pollution in the Baltic Sea is under review due to global technological and operational developments in the field of chemical response.

The review of the 'HELCOM Manual Volume II on response to accidents at sea involving spills of hazardous substances and loss of packaged dangerous goods' (from 2000) is currently being carried out

by a dedicated task group and will be completed by the end of 2016.

# Response



## Efficient joint response ensured by operational exercises

The annual Balex Delta oil spill response exercise organized within the HELCOM framework is of vital importance to maintain and improve the skills on the joint prevention of major damage from spills both in the sea and on the shores of the Baltic Sea countries.

This international exercise was organized for the 25th time in a row in June 2014, when sixteen response vessels from the coastal countries and EMSA took part in a simulated response action off the coast of Ventspils, Latvia. The organizer of the Balex Delta 2014 was the

Latvian Naval Flotilla Coast Guard Service (LCGS) in cooperation with the State Environmental Service (SES). The 2015 exercise will be organized by Poland in August and take place in the Gdansk Bay area.

## Aerial surveillance ensures a trend of fewer illegal spills

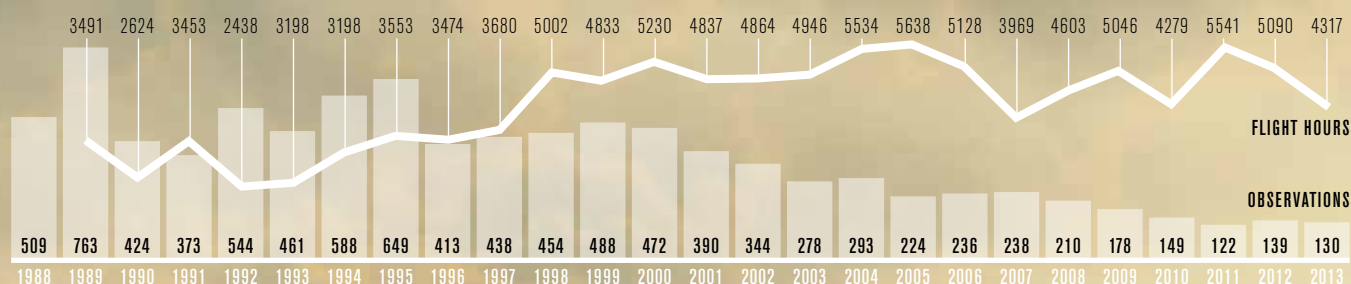
In line with a long-term trend, the HELCOM aerial surveillance activities in the Baltic Sea have during recent years detected relatively few illegal spills – 130 in 2013 – and the volumes tend to be small (80% under 100 litres in 2013) with some detected from leaking wrecks. As a new development in the Baltic Sea,

the monitoring of substances other than oil will be recorded more carefully in the coming years. Aerial surveillance will also be considered for the implementation of the Sulphur Emission Control Area (SECA) regulations in the region.

In addition to regular surveillance, Coordinated Extended Pollution Control

Operations (CEPCOs) also take place at least once a year. As an example, the CEPCO North 2014 was organized by the Estonian Police and Border Guard. HELCOM's aerial surveillance body is the Informal Working Group on Aerial Surveillance (IWGAS).

FLIGHT HOURS AND CONFIRMED OIL SPILLS IN THE BALTIC SEA



e to spills

## Polishing regional procedures in ballast water management

During 2014, HELCOM allocated considerable resources to ballast water issues. Preparing for the entry into force of the IMO Ballast Water Management Convention, the coastal countries of the Baltic and North Seas as well as the EU have further developed the jointly agreed regional procedure for applying and granting exemptions, adopted by HELCOM and OSPAR in 2013. Ballast water from ships may

increase alien species introductions to the Baltic Sea.

The procedure refined within a dedicated HELCOM-OSPAR working group supplements the earlier regional measures on ballast water management since 2004, including guidance on ballast water exchange.

In 2014, HELCOM launched a modernised web-based risk assessment tool and database; streamlined the

port sampling procedure for optimised cost efficiency via two pilot projects; released a guide on regional measures on ballast water management in the Baltic; and revisited the list of target species - to be agreed in 2015 - which plays a key role in the jointly accepted risk assessment procedure.

## Tough negotiations on ships' sewage

The current status of ports' reception facilities for sewage from passenger ships operating in the Baltic Sea, as well as their use, have been debated among the national contacts as well as industry and civil society observers in the maritime field.

Adequate sewage reception in ports is needed to enable the entry into force of Annex IV of the MARPOL Convention, decided in 2011 by

IMO. The resolution, based on a joint submission by the HELCOM countries, declared the Baltic Sea a special area for sewage.

In 2014, tough negotiations were carried out both regionally and nationally to enable a joint notification to IMO on the status and needed measures of the ports' sewage reception facilities. The process to limit sewage discharges to the Baltic Sea from

passenger ships was formally initiated by HELCOM in 2007.

HELCOM, in cooperation with the cruise ship industry, ports and national administrations has collected information and prepared a comprehensive report on the topic, to be published in February 2015.

The joint overview includes facts on passenger traffic and sewage reception facilities in the region.

## Mainstreaming sustainable shipping technology

Advancing sustainable shipping and in this way reducing emissions in the Baltic, particularly from exhaust gas pollutants such as Sulphur (SO<sub>x</sub>) and Nitrogen (NO<sub>x</sub>), has been one key themes of HELCOM maritime cooperation in 2014. This work has run in parallel to the continuing efforts to find common ground at a political

level regarding the future of the process of designating the Baltic Sea as a NO<sub>x</sub> emission control area under the MARPOL Convention, a debate which is also ongoing at the global level at IMO.

A regional platform of business and public partners to promote the development and use of green

technology and alternative fuels was launched in January 2014 in cooperation with HELCOM partners. To help organize the cooperation, HELCOM established a permanent sub-group in December 2014.

# Ship

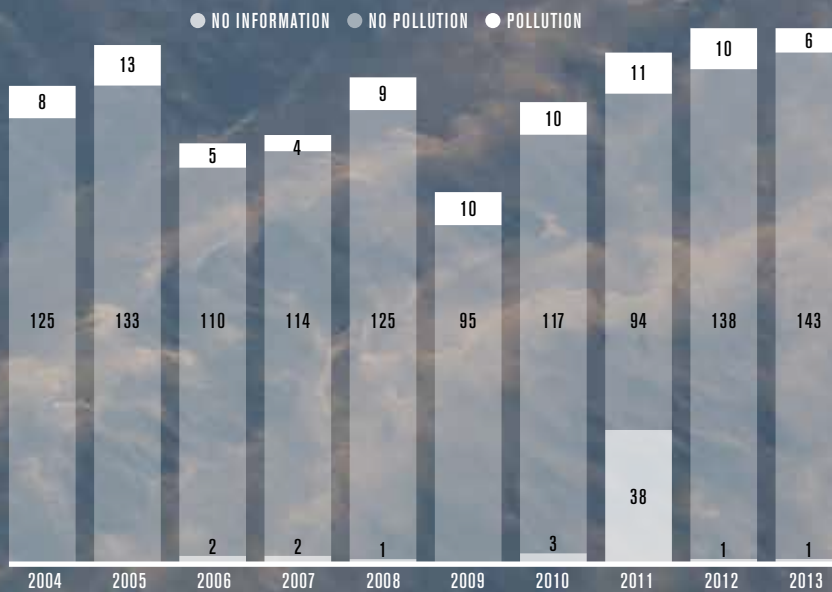


# Safer shipping in the Baltic Sea

During 2014, the HELCOM Group on Safety of Navigation discussed the existing and planned ships' routing measures. In addition, the group has advanced regional approaches for determining ships' safe under keel clearance based on the existing national and international guidance; strengthened existing cooperation with IMO and established new links to the Baltic Sea Ordnance Survey Board (BOSB).

Follow-up on the efficiency of regional safety measures was enabled by the annual HELCOM reports on shipping accidents in 2012 and 2013, published last year. The inclusion of response measures, carried out as a result of such accidents, has been discussed as a new development of these important regional publications.

## NUMBER OF REPORTED ACCIDENTS IN THE BALTIC SEA



ping

# Underwa



## Solid provider of quality data and maps

HELCOM is focusing on improving data flow arrangements, in particular through projects such as EUTRO-OPER. Furthermore, in 2014, the HELCOM Data and Map Service was updated and the thematic grouping of different map layers were organized into new groups. The most extensive addition to the service during the year was the inclusion of the vast amount of biodiversity related datasets from the HELCOM RED LIST project. The map service was also reinforced with display of monitoring stations, which was

part of the HELCOM Monitoring manual.

According to the statistics, the map service was loaded 6,848 times during 2014. Although the geographical distribution of users is mainly in the Baltic countries, there were visitors from 88 different countries.

In addition to user statistics, a new feature has been tested for storing access requests to all HELCOM data sets. During the 21-day test period in November, 65,000 requests were received to the map interface. This large number is explained

by the use of web services, which are mostly machine-to-machine requests. For example, other web applications can make use of HELCOM datasets as background maps, which possibly explain the large popularity of the depth relief map if it is configured to load each time a web map application is zoomed in or out. Other popular data products are status maps, assessment units, shipping-related data and HELCOM MPAs.

# Data an





# Water noise

## Sounds of silence – coordinating work on underwater noise

HELCOM coordination has started on the first, more systematic regional effort to map out and support the management of human-induced underwater noise.

Human-introduced noise from wind farm construction and shipping, for example, is increasing. Such sounds, highly challenging to measure

and manage, may have a significant negative impact on animals in a number of ways, on both individual and population levels. Underwater noise can travel across ocean basins and it is highly complex to measure and manage.

Regional experts have mapped the scientific background to the problem

in the Baltic Sea and have started to develop suggestions for monitoring guidelines. Moreover, a major task will be to establish, as agreed in the 2013 Ministerial Declaration, a set of indicators including technical standards, which may be used for monitoring ambient and impulsive underwater noise in the Baltic Sea.

HELCOM map products can now be shown dynamically, for example in the European Marine Observation and Data Network (EMODnet) biology portal and in national web map portals. Consultancy work to support this improvement was conducted within EU Framework contract 'Development of a shared data and information system between the EU and the regional sea conventions'. The development work will continue to strive for better compliancy and compatibility of data products.

## THE TEN MOST POPULAR MAP LAYERS

IN THE HELCOM WMS INTERFACE BASED ON THE NUMBER OF REQUESTS OVER 21 DAYS

DEPTH RELIEF MAP • 36 338

AIS DENSITY 2011 • 6 849

HELCOM MPAS • 4 917

HELCOM SUBBASINS • 3 076

INTERPOLATED CHEMICAL STATUS • 2 497

INTERPOLATED EUTROPHICATION STATUS • 2 034

BALTIC SEA PRESSURE INDEX • 868

INTERPOLATED BIODIVERSITY STATUS • 859

SHIPPING ACCIDENTS • 738

OXYGEN STATUS 728

# and maps

## Handle with care – recycling sewage sludge

Better sewage sludge handling, which would improve phosphorus recycling and reduce its losses to the Baltic marine environment, has been high on the HELCOM agenda during 2014. The 2013 HELCOM Ministerial Declaration called for sustainable use of nutrients in the Baltic Sea Region and to respond to this call. The draft HELCOM Recommendation on sewage sludge handling is being prepared under the lead of Germany and Sweden.

The waste water treatment sector generates vast amounts of sludge with high nutrient content that could be utilised sustainably with due environmental precautions. Having a set

of specific requirements on sewage sludge handling would also respond to the topical issue of nutrient recycling.

In normal operations of a waste water treatment plant, the generated sewage sludge contains nutrients, micronutrients and particles that can be utilised on arable land to grow crops. Catching phosphorus from waste water is a sustainable way to save nutrient resources for farming. Sludge can also be utilized for energy recovery. If, on the other hand, phosphorus from sewage sludge is not handled properly or collected for reuse there is a risk of its leaking to the Baltic Sea.

## One Hot Spot less in St. Petersburg

One of HELCOM's 'sub-hot spots' was deleted in 2014 from its list, referring to the region's significant pollution sites first identified in 1992. 'The construction of new sewer connections', or sub-hot spot No. 18.1, is a part of the waste water treatment system of St. Petersburg.

A large-scale environmental project for the construction of the northern tunnel collector was finalized in October 2013, preventing the

discharge of untreated waste water into the Neva River by approximately 122 million m<sup>3</sup> per year. Since then, 98.4% of waste water has been estimated as adequately treated in St. Petersburg for its five million inhabitants. HELCOM's hot spot list originally included 162 of the region's most significant sources of pollution, of which over two thirds have since been mitigated.

The overall status of Hot Spots in Russia was evaluated by the HELCOM BASE project in 2014. Of the twelve remaining Russian sites identified in the Baltic Sea catchment, one third could be removed from the original list as the necessary measures to meet the requirements have been introduced. Six hot spots are either implementing or planning improvements, the study concludes, while two sites remain with lower levels of mitigation efforts.

# Waste





## HOT SPOTS

DECEMBER 2014

TOTAL 162 **ACTIVE** 51 **DELETED** 111

AGRICULTURE ● 6 ● 11

COASTAL PROGRAMME ▲ 3 ▲ 2

INDUSTRY ■ 20 ■ 45

MUNICIPALITY ◆ 22 ◆ 53

# water



# www.helcom.fi

## HELCOM ACTIVITIES REPORT 2014

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## Activities report 2014

