HELCOM

Annual Report 2022

HELCOM activities report for the year 2022

Baltic Marine Environment Protection Commission

Baltic Sea Environment Proceedings n°193

HELCOM.fi

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

www.HELCOM.fi

For bibliographic purposes this document should be cited as:
“HELCOM activities report for the year 2022. Baltic Sea Environment Proceedings No. 193”

This document is part of the flagship publication series of HELCOM, the Baltic Sea Environment Proceedings (BSEP), and that has been running since 1980. Although this document has been approved for publication by the members of the Helsinki Commission, views expressed in this publication are the authors’ own and might vary from those of the Helsinki Commission or its members. Any maps that are featured in this publication are intended for illustration purposes only and do not necessarily designate the exact boundaries of sovereign states and entities.

Contributors:
Jannica Haldin, Markus Helavuori, Susanna Kaasinen, Marta Ruiz, Lotta Ruokanen, Rüdiger Strempel

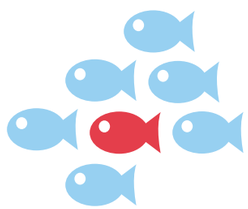
Editing:
Johanna Laurila

Layout:
Laura Ramos Tirado

Photo credits: all photos © Adobe Stock, except page 9, 11 and 49 (© HELCOM), 22 (© Henning Mühlinghaus) and 36 (© Havariekommando)

ISSN 0357-2994

Contents



Foreword

AT THE BEGINNING OF 2022, COVID-19 gradually seemed to abate and, after two years of working in pandemic mode, hopes within HELCOM – as elsewhere – ran high that this might be the first relatively "normal" year since 2019. It was not. Inevitably, the current geopolitical crisis also seriously impacted our organization. However, it did not bring HELCOM to a standstill. Rather, new mechanisms for the work of the Commission were established, enabling continuity of operations.

One defining element of the year was the shift from elaboration to implementation of the updated Baltic Sea Action Plan (BSAP), adopted in October 2021. While the target year for the overall implementation of the Plan is 2030, many of its actions need to be realized sooner – some, in fact, as early as 2022 – and HELCOM was successful in meeting those deadlines while also continually working towards achieving the more long-term aims of the 2021 BSAP.

2022 was also marked by intense work on the Third Holistic Assessment of the Baltic Sea (HOLAS 3). A major endeavour and a flagship product of HELCOM, these periodic assessments help us better understand the state of the Baltic Sea and track progress in working towards our objectives. The summary report of HOLAS 3 and the thematic reports will be published in the course of 2023.

While the BSAP and HOLAS are highly visible HELCOM products, our work consists of many moving parts – all of which were kept in motion in 2022. Projects dedicated to specific issues, often financed by Contracting Parties or through European Union funding instruments, are an indispensable feature of our work and 2022 saw the successful completion of several of these, as well as the commencement of others. Our activities in 2022 covered topics across the full range of HELCOM action areas. And in working towards our ultimate goal of a healthy Baltic Sea environment, we once again cooperated with partner organizations within and beyond our region, thereby also contributing to the global ocean agenda. In 2022, we partnered with other Regional Sea Conventions, but also with organizations as varied as the Food and Agriculture Organization of the UN (FAO), the IUCN World Commission on Protected Areas (WCPA) and the Council of Baltic Sea States (CBSS).

Despite unexpected challenges, therefore, 2022 was a busy and successful year for HELCOM, as reflected in this report.

Rüdiger Strempel,
Executive Secretary of
HELCOM

1. About HELCOM and the Baltic Sea

The Baltic Sea is a semi-enclosed sea in the north of Europe. Overall, the sea is relatively shallow, with brackish waters low in oxygen. Surface water temperatures vary greatly depending on the season and the geography, with sea ice in the north during winter and warmer waters around 20°C in the south during summer.

Due to its peculiar biochemical properties, the Baltic Sea contains a unique mix of marine and freshwater species adapted to the brackish conditions, as well as a few true brackish-water species. Where salinity levels are low in the Baltic Sea's northern and eastern waters, fewer marine species thrive, and the communities of organisms are dominated by those adapted to freshwater, especially in estuaries and coastal waters.

The limited number of about 3,000 macroscopic species implies that each individual species has an exceptionally high importance within the food web. The disappearance of a single key species could have dire consequences for the entire ecosystem, possibly leading to its collapse. For this reason, the Baltic Sea is considered particularly vulnerable to external disturbances.

The catchment area, which hosts about 85 million people, is four times larger than the sea itself. Human activities therefore abound in this busy region, and so do anthropogenic pressures. Agriculture, industry and urban development have taken a serious toll on the marine environment in the past. Despite considerable efforts by all HELCOM countries, the Baltic Sea has not fully recovered and is not showing good environmental status (GES) yet.

What we work for

"A healthy Baltic Sea environment, with diverse biological components functioning in balance, resulting in a good environmental and ecological status, and supporting a wide range of sustainable human economic and social activities."

HELCOM activities report
for the year 2022

About HELCOM

The Baltic Marine Environment Protection Commission – also known as the Helsinki Commission (HELCOM) – is an intergovernmental organization (IGO) in the Baltic Sea area, consisting of ten Contracting Parties: the nine Baltic Sea countries Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden, plus the European Union. A platform for environmental policy making at the regional level, HELCOM works for a healthy Baltic Sea. Its mandate stems from the Helsinki Convention, whose implementation it oversees. It maintains a Secretariat, which is located in Helsinki, Finland.

The Helsinki Convention

The Helsinki Convention is a regional sea convention originally signed in 1974 by the Baltic Sea coastal countries to address the increasing environmental challenges from industrialisation and other human activities that were having a severe impact on the marine environment. The Helsinki Convention aims to protect the Baltic Sea from all sources of pollution from land, air and sea. It also commits the signatories to taking measures to conserve habitats and biological diversity and to ensuring the sustainable use of marine resources. In 1992, the Helsinki Convention was updated to take into account the geopolitical changes and emerging environmental challenges in the region. The current version entered into force in 2000.

Our action areas

The HELCOM Area

The Helsinki Convention defines the "Baltic Sea Area" – the HELCOM area –as the Baltic Sea and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57° 44.43'N. The Baltic Sea Area also includes the internal waters.

2. Strategic pause of HELCOM

On 4 March 2022, against the background of the current geopolitical crisis, the German Chairmanship of HELCOM issued a statement declaring that the European Union and the Contracting Parties to the Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area that are Member States of the European Union (H 9) unanimously agreed that they could not currently engage in business as usual with the Russian Federation in the context of HELCOM.

Therefore, the Chairmanship, in agreement with the H 9, suspended all official meetings of HELCOM bodies and meetings of project groups with Russian involvement under the HELCOM umbrella with immediate effect. This concerned all HELCOM Working Groups, Expert Groups, and other subsidiary bodies of the Commission, as well as the HELCOM projects. The meetings were not cancelled, but rather postponed until further notice. At the time of writing, this suspension, also referred to as a strategic pause, has not been lifted. The suspension, however, did not imply that HELCOM ceased to operate.

The Chairmanship, in agreement with the H 9, suspended all official meetings of HELCOM bodies and meetings of project groups with Russian involvement under the HELCOM umbrella with immediate effect

3. Change of Chairmanship

On 1 July 2022, Latvia took over the chairmanship of HELCOM from Germany for a period of two years. The chairmanship rotates between the Contracting Parties in alphabetical order.

Like previous Chairmanships, Latvia has identified several priorities which will set strategic directions for HELCOM, in order to effectively combat the threats and pressures impacting on the Baltic Sea. Among the focus areas are the protection of marine biodiversity and advancing ecosystem-based sustainable marine management, as envisioned in the Baltic Sea Action Plan (2021 BSAP), and enhancing the effectiveness of HELCOM as a regional organization.

Specifically, the priorities of the Latvian Chairmanship will focus on:

- HELCOM as an effective and well-functioning organization of regional cooperation which is capable of action, including in unforeseen and force majeure situations.
- Implementation of the updated Baltic Sea Action Plan (BSAP 2021), with particular attention to:
  - protection of marine biodiversity
  - advancing ecosystem-based sustainable marine management through the integration of environmental objectives with socio-economic goals
- Strengthening the role of regional cooperation in the context of international ocean governance.

Latvia will furthermore host the next Ministerial Meeting, to be held in 2024.

Ms. Evija Šmite, Deputy Director General and Director of the Fisheries Control Department, State Environmental Service of Latvia, holds the function of Chair of HELCOM. She has worked on matters regarding marine environmental protection and fisheries control in the public administration of Latvia since 1997.

Ms. Ilona Mendziņa, Deputy Director of the Nature Protection Department, and the Head of the Species and Habitats Protection Division of the Latvian Ministry of Environmental Protection and Regional Development, was appointed as Vice-Chair of HELCOM.

Prior to Latvia, Germany chaired HELCOM from 2020 to 2022 and had set priorities focusing on strengthening marine biodiversity and addressing pressing challenges such as climate change, submerged munitions and underwater noise, among others.

To mark the end of the German Chairmanship and summarize the achievements and conclusions of the German Chairmanship, ending on 30 June 2022, a leaflet on current HELCOM work was prepared for downloading and printing from the HELCOM website.

Ms. Evija Šmite, Deputy Director General and the Director of Fisheries Control Department, State Environmental Service of Latvia, holds the function of Chair of HELCOM

H.E. Kristīne Našeniece, Ambassador of the Republic of Latvia (right) received the ceremonial "Chair's key" from Hans Koeppel, Chargé d'affaires of Embassy of Germany (left) in Finland.

4. Preparing for the Third Holistic Assessment of the Baltic Sea (HOLAS 3)

To better understand the Baltic Sea environment and our relationship with it, HELCOM periodically prepares holistic assessments of the state of the Baltic Sea, or HOLAS for short.
Each holistic assessment captures a comprehensive snapshot at a given moment in the dynamic life history of the Baltic Sea.

The assessment is holistic because it strives to provide insights into what drives change in the marine ecosystem, analyses how and what activities put pressures on the ecosystem, how these pressures affect the state of the environment and cause impacts on biodiversity, the ecosystem and its functioning. Based on this information we then need to establish effective measures to minimize these negative impacts.

The HOLAS reports highlight a broad range of aspects under the overarching themes of the state of the ecosystem, environmental pressures and human well-being and contribute to a vast sharing and development of knowledge both within and across topics. The focus of the assessment is to show results of relevance at the regional scale, and large-scale patterns across and between geographic areas in the Baltic Sea. Each assessment provides a clearer picture of where we are, how things are connected, and what needs to be done.

The holistic assessment specifically enables tracking progress towards the implementation of the goals and objectives of the 2021 Baltic Sea Action Plan and functions as a regional contribution to the reporting under the Marine Strategy Framework Directive (MSFD) for those HELCOM Contracting Parties that are also EU Member States. The results of the assessment underpin HELCOM policy, and the information contained in the assessment is incorporated in the ecosystem-based management of the Baltic Sea, as well as in measures nationally, regionally, and globally.

For the working structure of the HOLAS 3 assessment, a nested approach for approval, capitalizing on the existing meeting schedule and structure, is used. This implies that for each product the approval moves increasingly higher in the HELCOM hierarchy, while still allowing the relevant supporting groups to provide input and comments, within the same process.

30 May 2022 was the deadline set for HOLAS 3 data reporting, which commenced in October 2021. Regionally harmonized data are the basis which indicator evaluations and indicator assessments are built on. The indicator assessment reports were completed during the autumn of 2022, and the writing of the Thematic Assessment reports began simultaneously. The final reports as well as the Summary report will be released in 2023.

The focus of the assessment is to show results of relevance at the regional scale, and large-scale patterns across and between geographic areas in the Baltic Sea

HELCOM activities in 2022

Species & habitats

Spatial conservation and MPAs

Agriculture

Nutrients

Hazardous substances

Marine litter

Dredging & seabed

Underwater noise

Shipping

Response to spills

Submerged hazards

Fisheries

Maritime spatial planning

Climate change

Economy and society

Monitoring & assessment

International processes

5. Species and habitats

In 2021 the HELCOM Contracting Parties agreed, in the framework of the Baltic Sea Action Plan, to several actions targeting species specific conservation. These include conservation of fish, birds and mammals, specific habitats, as well as the development of indicators for biodiversity, to improve tracking of the actual effect the actions have on the environment. In 2022 HELCOM concluded the indicator evaluations for phyto- and zooplankton, coastal fish, waterbirds and marine mammals, as well as indicators evaluating pressures on species and habitats, such as impacts on benthic habitats and bycatch.

In addition to the indicator evaluations, which examine the overall status of various components of the Baltic Sea food web, there is also a need to track changes in the status of individual species, to understand which species may be under threat. This is done through the HELCOM RED LIST II project, which started in August 2022, and which will evaluate the threat status for both Baltic Sea species and biotopes by 2024, using the criteria and approach developed by IUCN.

Further, the Contracting Parties have recognized the need not only to protect species and habitats, but to increase efforts to more concretely restore biodiversity. The preparation and implementation of an Action Plan for Restoration is one of the actions under the Baltic Sea Action Plan. This sectorial Action Plan will include qualitative and quantitative regional targets, a prioritized list of actions, and an associated implementation toolbox outlining best practices and methods for restoration in the Baltic Sea region. In 2022 HELCOM worked to secure resources to support the development of the Restoration Action Plan.

HELCOM Red List II

Regularly reviewing the status of Baltic Sea species and habitats/biotopes enables the tracking of long-term trends in the status of Baltic Sea biodiversity. This makes it possible to assess whether actions taken to halt the loss of biodiversity have been effective. Together with other HELCOM assessments, such as the State of the Baltic Sea report and the Pollution Load Compilation (PLC), the HELCOM Red Lists represent an essential part of the HELCOM evaluation system, enabling responsive, dynamic, and adaptive management and measures.

The Contracting Parties have recognized the need not only to protect species and habitats, but to increase efforts to more concretely restore biodiversity

6. Spatial conservation & MPAs

The establishment of well-managed marine protected areas (MPAs) is one of the primary mechanisms for safeguarding biodiversity, ecosystem functions and natural resources, as well as securing resilience in the face of a changing climate.

The aim of the coastal and marine Baltic Sea protected areas (HELCOM MPAs) is to protect marine and coastal habitats in the Baltic Sea by managing human activities within and around those areas.

MPAs are also essential to habitats and species beyond the protected zones. They provide refuge for mobile species such as seabirds and marine mammals, serve as spawning and nursery grounds for fish, and act as buffer zones between areas of intensive human use.

As part of the actions under the 2021 Baltic Sea Action Plan, the HELCOM Contracting Parties agreed to the ambitious target of protecting 30% of the area of the Baltic Sea by 2030. Furthermore, 1/3 of this, or a full 10% of the Baltic Sea area, should fall under strict protection by the same year. In addition to the spatial targets, the 2021 BSAP outlines how HELCOM will work to improve MPA management efforts, thus increasing effectiveness of protection. This includes providing support to Baltic Sea MPA managers through capacity building e.g. through annual workshops, as well as updating and applying the HELCOM MPA management guidelines across the region. In 2022 HELCOM worked to develop a cohesive and comprehensive plan for addressing the MPA-related BSAP actions, and securing the resources needed to ensure that the spatial conservation actions can be achieved. The countries also reported on, and analyzed the results of, the implementation on Recommendation 35/1 System of Coastal and Marine Baltic Sea Protected Areas (HELCOM MPAs) and prepared plans for how both the Recommendation and its implementation could be improved.

The 2021 BSAP also outlines the initial steps for a joint regional approach to the novel concept of other effective area-based conservation measures (OECMs). In 2022, HELCOM arranged a cross-sectoral workshop, supported by the International Union for Conservation of Nature (IUCN) World Commission on Protected Areas (WCPA) and the Food and Agriculture Organization of the United Nations (FAO). The aim of the event was to explore the possibilities and challenges associated with OECMs, as well as to promote a common understanding of OECMs and the OECM criteria. In 2022 HELCOM also developed a decision tree to support national efforts to identify potential OECMs.

The aim of the coastal and marine Baltic Sea protected areas (HELCOM MPAs) is to protect marine and coastal habitats in the Baltic Sea by managing human activities within and around those areas

7. Agriculture

Agriculture remains a major source of nutrient loading to the Baltic Sea, leading to eutrophication – an excess of nutrients in the sea. In recent years, HELCOM has focused on promoting more efficient manure management and nutrient recycling. The aim is to close the nutrient loops and to reduce nutrient surpluses on the farm and regional level, to avoid nutrient runoff to the sea.

The updated Baltic Sea Action Plan contains several actions on agriculture and nutrient recycling to promote sustainable agriculture and reduce nutrient losses. The implementation of these actions kicked off in 2022.

The HELCOM Agri Group made progress on several fronts. Especially worthy of mention are the revision of HELCOM Recommendation 24/3 to put more emphasis on mitigating ammonia emissions from agriculture as well as the drafting of guidelines for annual nutrient accounting at farm level. In cooperation with key stakeholders, preparations were initiated to apply for a regional project supporting the implementation of the Nutrient Recycling Strategy

The revised Part II of Annex III of the Helsinki Convention ("Criteria and measures concerning the prevention of pollution from land-based sources") entered into force.

The HELCOM Agri Group made progress on several fronts. Especially worthy of mention are the revision of HELCOM Recommendation 24/3 to put more emphasis on mitigating ammonia emissions from agriculture

8. Nutrients

Eutrophication remains the major environmental threat to the Baltic Sea. It results in intense algal growth and depletion of oxygen on the bottom of the sea, further leading to vast areas with anoxic or hypoxic conditions and affecting the entire ecosystem. The riverine input of nutrients is the main source of both nitrogen and phosphorus, with diffuse sources such as losses from agricultural land to rivers making up a large share, while point sources such as wastewater treatment plants or industries contribute only a few percent of the total input. Airborne transport also plays a significant role for the input of nitrogen, adding up to more than a quarter of the total load.

The HELCOM nutrient input reduction scheme is a regional approach to sharing the burden of nutrient reductions. The aim is to achieve the goal of a Baltic Sea unaffected by eutrophication, as agreed by the Contracting Parties of HELCOM. The scheme was first introduced and agreed on in 2007 as part of the HELCOM Baltic Sea Action Plan and revised in 2013 and 2021.

The regional input targets for reaching good environmental status of the Baltic Sea are the maximum allowable inputs of nutrients (MAI) – indicating the maximum level of inputs of water- and airborne nitrogen and phosphorus to the Baltic Sea sub-basins. Within this scheme, the maximum input to the Baltic Sea that can be allowed is 792,209 tonnes of nitrogen and 21,716 tonnes of phosphorus annually.

In the nutrient input reduction scheme of the 2021 Baltic Sea Action Plan, Nutrient Input Ceilings (NIC) define maximum inputs via water and air to achieve good status for each country, with respect to eutrophication for the Baltic Sea sub-basins. In 2022, an additional interim NIC assessment was conducted with the new NICs based on the progress reported for 2017. Furthermore, the first actual NIC assessment, Progress towards nutrient input ceilings achieved by 2020 (NIC2020), was finalized for approval by the HELCOM Heads of Delegation. The second part, a technical/scientifical background report, will be finalized in the spring of 2023.

In the 2021 BSAP there are 36 measures targeted at curbing eutrophication, from follow-up of the implementation of the nutrient input targets to agriculture, wastewater sector, atmospheric nitrogen emissions and nutrient recycling. The HELCOM Pressure Working Group, along with the PLC-8 project – responsible for the next PLC - and the RedCore Expert Group – started the work to support and coordinate implementation of those BSAP actions that are under their remit.

The PLC-8 project runs until the end of 2024. Three project activities were completed by the end of 2022: publishing the updated PLC-water guidelines, publication of the annual Baltic Sea Environment Fact Sheet on waterborne nutrient inputs 1995–2020 and preparing the first part of the NIC2020 assessment for adoption by the Heads of Delegation.

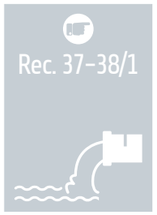
The last remaining outputs of the PLC-7 project were finalized and published in 2022: a thematic report on effectiveness of measures to reduce nutrient inputs (BSEP 184), an assessment of sources of nutrient inputs to the Baltic Sea in 2017 (BSEP 187), as well as the Executive Summary of the PLC-7 project.

For the first time in the Baltic Sea Environmental Fact Sheets (BSEFS) on waterborne nutrient inputs, the composition of the riverine nutrient inputs 2020 on total and inorganic nitrogen and phosphorus was presented.

Related resources

HELCOM PLC Water Guidelines for waterborne pollution

PLC-7 Thematic report on effectiveness of measures to reduce nutrient inputs



HELCOM Recommendation 37-38/1-Rev.1

HELCOM Recommendation 37-38/2-Rev.1

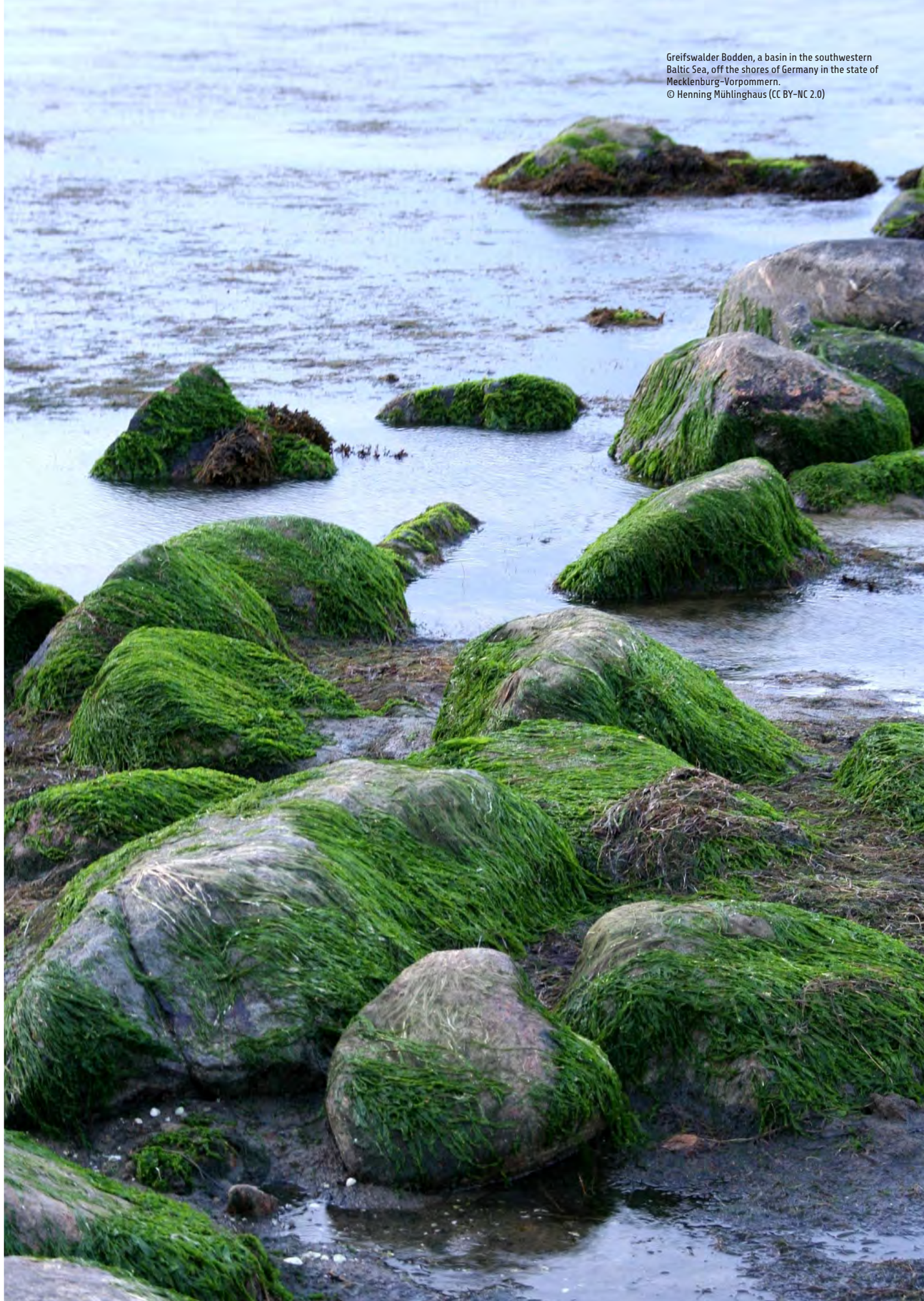
Assessment of sources of nutrient inputs to the Baltic Sea in 2017

Interim NIC assessment with the updated NICs based on the progress reported for 2017

BSEFS Nitrogen emissions to the air in the Baltic Sea area

BSEFS Atmospheric nitrogen deposition to the Baltic Sea

BSEFS Waterborne nitrogen and phosphorus inputs and water flow to the Baltic Sea 1995–2020



Greifswalder Bodden, a basin in the southwestern Baltic Sea, off the shores of Germany in the state of Mecklenburg-Vorpommern.
© Henning Mühlinghaus (CC BY-NC 2.0)

9. Hazardous substances

The Baltic Sea remains heavily impacted by hazardous substances. However, due to scarcity of data, it is currently impossible to obtain a comprehensive picture of the extent of the contamination of the Baltic Sea. Hazardous substances originate from a wide range of human activities on land and at sea. Thousands of chemicals and synthetic materials are widely used in households and sewage treatment systems are their primary pathways to the aquatic environment. Urban storm water and agricultural runoff contribute to diffuse loading. Industries use chemical compounds in technological processes or as a raw material, and their emissions through air or water also pose an environmental risk. Offshore sources of hazardous substances include the leaching of chemicals from antifouling paints, discharge of polluted water from ships, aquaculture, and offshore installations, as well as accidental or intentional spills of oil or other harmful substances.

In 2022 the HELCOM Expert Group on Hazardous Substances (EG HAZ) started to work with a new, wider mandate and sub-teams concentrating on:

- A strategic/holistic approach;
- Priority substances, substances of emerging concern and screening;
- Measures;
- Monitoring, indicators and assessment;
- Pharmaceuticals;
- Biological effects;
- Sediment cores.

2022 also saw the start of several new projects. The HAPhazard project is intended to work towards a regional strategic approach to strengthening the management cycle for hazardous substances and an action plan for hazardous substances and also to develop biological monitoring of contaminants. The latter work is done in close cooperation with the BEACON project. In addition, preparations for HELCOM's part in the Interreg BSR core project EMPEREST, targeting the management of per- and polyfluoroalkyl substances (PFAs) started towards the end of the year.

Initial results of the Pre-EMPT project became available in 2022. Wide-scope target screening for over 2 500 substances and suspect screening for more than 65 000 substances from ca. 100 mussel, fish, and sediment samples from around the Baltic Sea were conducted. Pre-EMPT results support the work on priority substances and improve the assessment of hazardous substances in the Baltic Sea region also offering possibilities to cooperate with the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention), the Arctic Monitoring and Assessment Programme (AMAP) and the International Council for the Exploration of the Sea (ICES) on developing an assessment tool.

The work of the sub-teams of EG HAZ as well as the projects aim to support implementing the hazardous substances segment of the 2021 BSAP that contains over 30 measures concerning issues from legacy pollutants to emerging substances and from management and policy development to awareness raising.

With co-funding by Nordic Environment Finance Cooperation (Nefco), Germany and Sweden, the project Holistic Action Plan – Hazardous substances (HAPhazard) supports the implementation of the 2021 BSAP action HL1 and, within one work strand (HELCOM Biological Effects of Contaminants, H-BEC), also action HL13.

The Interreg BSR co-funded project Application of biological effects methods in monitoring and assessment of contaminants in the Baltic Sea (BEACON) also supports HL13 implementation.

Pre-empting pollution by screening for possible risks (Pre-EMPT) is co-funded by Nefco.

Related resources

Micropollutants in wastewater sewage sludge

HELCOM PLC Water Guidelines for waterborne pollution

BSEFS on the airborne input of selected hazardous substances

Policy brief on phenolic substances

Policy brief on PFAS

Policy brief on heavy metals

Policy brief on pharmaceuticals

Policy brief on industrial wastewaters

10. Marine litter

Marine litter, including microplastics, is globally recognized as an issue of concern, for a number of reasons. It has a significant impact on marine life due to possible ingestion or entanglement and as a vector of harmful chemicals and non-indigenous species. It also negatively affects human health and safety (navigation, consumption of fish and seafood which may contain microplastics) and there are considerable economic costs associated with its presence in the sea and related removal activities. 2022 was marked by the historic agreement, at the resumed Fifth Session of the United Nations Environment Assembly (UNEA 5-2) in March, to develop an international legally binding agreement to end plastic pollution by 2024. HELCOM is committed to supporting the development of the global instrument, as stated in a related HELCOM voluntary commitment to the UN Ocean Conference held in Lisbon in June 2022.

The initial steps towards the implementation of the revised HELCOM Regional Action Plan on Marine Litter were taken in 2022. Thus, implementation plans for each of the actions in the Action Plan were agreed upon, and countries started taking the lead on their implementation. There is a lot of work ahead, but the first outputs achieved this year, policy briefs addressing microplastics removal from wastewater and stormwater and tyrewear particles, look promising.

Within one of the activities of the HELCOM BLUES project, work continued during 2022 towards the beach litter assessment in HOLAS 3, as well as on the drafting of the HELCOM monitoring guidelines on microlitter in the water column and in sediments. The outputs of the project are available on the project website as of January 2023, whereas the microlitter monitoring guidelines are already part of the HELCOM Monitoring Manual. In addition to beach litter, the marine litter assessment in HOLAS 3 will also address the status of macrolitter on the seafloor, thanks to the work on this matter conducted within the regular HELCOM framework in 2022.

Related resources

Policy brief on existing and emerging technologies for microplastics removal from wastewater and stormwater

Policy brief on tyre wear particles

Monitoring guidelines for microlitter in the water column

Monitoring guidelines for microlitter in sediments

2022 was marked by the historic agreement, at the resumed Fifth Session of the United Nations Environment Assembly (UNEA 5-2) in March, to develop an international legally binding agreement to end plastic pollution by 2024

11. Seabed

Dredging and depositing of dredged material at sea are important threats to seabed integrity. They contribute to the level of physical disturbance, but also to the input of hazardous substances to the marine environment – either from the deposited material as such or related resuspension of substances.

There is a general prohibition of dumping in the Baltic Sea according to the Helsinki Convention, but this does not apply to dredged material. However, dumping of dredged material containing harmful substances is only permitted according to HELCOM Guidelines for Management of Dredged Material at Sea.

The Contracting Parties are obliged to regulate and report on the material that has been deposited in the Baltic Sea Area annually. Data on depositing of dredged material in 2020 were reported by the end of September 2021 and verified by the national experts in early 2022.

Recommendation 36/2 and the Guidelines for Management of Dredged Material at Sea stipulate consolidated reporting to the London Protocol on the depositing of dredged material at sea and identify the reporting procedure. The 2020 data were thus finally reported in the summer of 2022.

In 2022, the Expert Group on dredging/depositing operations at sea (EG DREDS) started to work with its updated terms of reference. One of the main work strands was to start the review process of the HELCOM Guidelines for Management of Dredged Material at Sea with a questionnaire and discussion on its ambition level, structure, content, and reporting template, supported by a questionnaire on the use of national threshold values for contaminants.

Related resources

BSEFS

BSEFS on depositing of dredged material 2020

The Contracting Parties are obliged to regulate and report on the material that has been deposited in the Baltic Sea Area annually

12. Underwater noise

Sound plays a significant role in the functioning of aquatic ecosystems. Human-generated impulsive and continuous underwater noise severely affects noise-sensitive aquatic species and may cause degradation of their populations. Explosions, pile driving, seismic explorations and low frequency sonar are among the human-generated sources of impulsive noise with the highest intensity, whereas anthropogenic noise of a more continuous nature encompasses sources such as pipelines, oil platforms, dredging, shipping, and offshore windfarms, among others.

Following the adoption of the HELCOM Regional Action Plan on Underwater Noise as HELCOM Recommendation 42-43/1 in 2021, the work on its implementation started in 2022. Countries have already taken the lead in implementing some actions of the Plan, and to initiate its implementation in the most efficient way possible. A short list of actions to be implemented first has been created.

In terms of monitoring and assessment, the work of the Expert Group on Underwater Noise has been supported, also during 2022, by the HELCOM BLUES project. For continuous noise, new modelled soundscape maps for 2018 calibrated with monitoring data have been produced and are available in the HELCOM database. For impulsive noise, the HELCOM/OSPAR noise registry has been improved to increase its usability. Furthermore, the assessment of both continuous and impulsive noise, as part of the thematic assessment of pollution in HOLAS 3, is planned to be available in early 2023. The assessment of continuous noise evaluates the sound pressure levels in the Baltic Sea in 2018, a year that is considered to be representative of the overall conditions in the 6-year assessment period (2016-2021). Impulsive noise was evaluated on the basis of the occurrence of impulsive noise-producing maritime activities reported by Contracting Parties to the regional HELCOM/OSPAR noise registry, which is hosted by the International Council for the Exploration of the Sea (ICES).

Related resources

Rec. 42-43/1

HELCOM Recommendation 42-43/1 on the Regional Action Plan on Underwater Noise

Explosions, pile driving, seismic explorations and low frequency sonar are among the human-generated sources of impulsive noise with the highest intensity

13. Shipping

The HELCOM Contracting Parties work together in the implementation of commitments made under global sectorial bodies dealing with maritime affairs. Thereby they contribute to progress on maritime transport issues, which are of considerable significance for the Baltic Sea with its heavily used shipping lanes.

In accordance with the provisions of Annex IV of the Helsinki Convention, the Contracting Parties cooperate within the International Maritime Organization (IMO), in particular in promoting the development of international rules, and regionally to promote the harmonized implementation of such rules.

In 2022, HELCOM Heads of Delegation approved Recommendation 33/1-Rev.2 on a Unified interpretation in relation to access to and use of HELCOM AIS data, as developed by the AIS Expert Group and approved by the Maritime Working Group.

Other activities in 2022 included *inter alia* planning of the implementation of shipping related actions in the Baltic Sea Action Plan.

Work continued in the EMERGE project on shipping emissions in EU marine waters. Coordinated by the Finnish Meteorological Institute, the 4-year EMERGE project will quantify and evaluate the effects of potential emission reduction solutions for shipping in Europe. Furthermore, it will develop effective strategies and measures to reduce the environmental impacts of shipping.

Related resources

HELCOM data analysis dashboard on shipping accidents in the Baltic Sea region 2004–2022

Given the substantial shipping activities and heavily used shipping lanes in the Baltic Sea, maritime transport is one of the key sectors addressed by HELCOM work

14. Response to spills

HELCOM has a long record of cooperation and coordination in relation to pollution incidents involving oil and hazardous or noxious substances as per Annex VII of the Helsinki Convention. The cooperation framework is further detailed in the HELCOM Response Manual and a number of HELCOM Recommendations. It involves *inter alia* joint assistance in response operations, where vessels and equipment are deployed by other Contracting Parties, notification of suspected incidents, information sharing, aerial surveillance and regular exercises, notably including the annual BALEX exercise which is one of the largest response exercises in the world. The Response Manual is continuously being kept up to date by the HELCOM Response Working Group, in which all Contracting Parties cooperate to ensure the best possible joint response capacities in the Baltic Sea.

The HELCOM Response Working Group finalized and approved the feasibility study regarding long-term risk analysis for oil and hazardous and noxious substances (HNS) pollution of the Baltic Sea, in line with BSAP Action S31.

Following years of work within the Submerged Expert Group, the Response Working Group also approved the draft HELCOM Submerged Assessment on Warfare Materials in the Baltic Sea for publication.

In 2022, the annual HELCOM BALEX exercise, organized to ensure good cooperation in case of a pollution incident, was held in Mecklenburg Bay and on the shore near Rostock, Germany. An alarm exercise (BALEX Bravo) was held on 17 February 2022. The Multi-regional Marine HNS Response Manual (Bonn Agreement, HELCOM, REMPEC), as adopted by HELCOM 42-2021, was implemented as part of the HNS response exercise of BALEX 2022.

Other activities in 2022 related to response activities include *inter alia* the approval of the HELCOM Annual Report on discharges observed during aerial surveillance in the Baltic Sea 2021.

Related resources

HELCOM Annual Report on discharges observed during aerial surveillance in the Baltic Sea 2021

The Response Manual is continuously being kept up to date by the HELCOM Response Working Group, in which all Contracting Parties cooperate to ensure the best possible joint response capacities in the Baltic Sea

Response to a chemical spill and incident during the BALEX DELTA 2022 exercise © Havariekommando

15. Submerged hazards

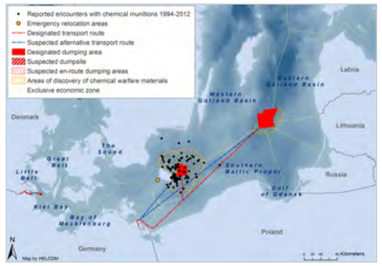
A large number of hazardous objects and warfare material rest on the Baltic Sea seabed. These objects are a potential or actual hazard to the marine environment but also to human health and safety. While the location of certain types of objects, such as mines, chemical munitions, and wrecks, is relatively well known, major uncertainties exist concerning the amounts and types of submerged hazardous objects in the Baltic Sea and their state of corrosion.

Following years of work within the Expert Group on Environmental Risks of Submerged Objects (EG Submerged), the Response Working Group approved the draft HELCOM Submerged Assessment on Warfare Materials in the Baltic Sea for publication. Furthermore, planning started regarding actions needed for addressing the issue and mitigating the risk associated in particular with submerged warfare materials in the Baltic Sea.

In December 2022, an expert roundtable on dumped munitions in the Baltic Sea was co-organized by the Council of the Baltic Sea States (CBSS), the German Federal Foreign Office, the German Federal State of Schleswig-Holstein, and the European Union and the Contracting Parties to HELCOM that are Member States of the European Union. The roundtable was the result of a thorough planning process on the best approach between the organizations involved. The objectives of the event were to establish a common understanding and initiate a multi-disciplinary Baltic Sea-wide dialogue on submerged munitions, including the best options for remedial action or removal of such hazardous objects in the Baltic Sea.

Overview map of known and suspected dumpsites of chemical warfare materials in the Helsinki Convention Area. Reported encounters with chemical warfare materials and emergency relocation areas are also indicated. Click image to enlarge. The data used in the map can be downloaded from the HELCOM Data and Map Data Service.

Related resources



HELCOM Maps and Data Service overview map of reported encounters with chemical munitons 1994–2012

While the location of certain types of objects, such as mines, chemical munitions, and wrecks, is relatively well known, major uncertainties exist concerning the amounts and types of submerged hazardous objects in the Baltic Sea and their state of corrosion

16. Fisheries

Fisheries contribute substantially to the economy and are key elements of the cultural heritage of the Baltic Sea region. However, Baltic fisheries are not yet entirely environmentally sustainable, and some fish stocks are declining.

Through its Group on Ecosystem-based sustainable fisheries (Fish Group) HELCOM deals with fisheries in relation to the implementation of the ecosystem-based approach. Moreover, the Group works towards finding solutions on how the sector could further contribute to reaching Good Environmental Status (GES) of the Baltic Sea.

The mandate period of the Correspondence Group with a specific task on aquaculture matters (CG Aquaculture) came to an end in December 2022. The group invested considerable effort in finalizing the Best Available Techniques/Best Environmental Practices (BAT/BEP) for sustainable aquaculture in the Baltic Sea in accordance with HELCOM Recommendation 37/3, expected to be approved by the Fish Group in early 2023.

The Fish Group also kept track of the reporting of Recommendation 32-33/1, planned the implementation of relevant actions in the BSAP, continued work related to reporting on the Roadmap on fisheries data in order to assess incidental bycatches and fisheries impact on benthic biotopes in the Baltic Sea, and discussed further cooperation with the Baltic Sea regional fisheries body BALTFISH and the Baltic Sea Advisory Council (BSAC).

The Fish Group works towards finding solutions on how the sector could further contribute to reaching Good Environmental Status (GES) of the Baltic Sea

17. Maritime Spatial Planning

Maritime spatial planning (MSP) is the marine equivalent to terrestrial spatial planning, which is used to rationally develop e.g. urban areas, but also to protect environmental and cultural values. However, whereas terrestrial spatial planning has long been an integral part of national law in many European countries, MSP-related regulations are a relatively novel form of legislation. MSP also provides the possibility of widening the horizon beyond purely sectorial policy measures towards an integrated spatial approach within the Baltic marine areas.

The Baltic Sea region is a global frontrunner on MSP, especially in international cooperation. All HELCOM countries have either already developed national maritime spatial plans or are currently in the process of doing so.

The joint HELCOM-VASAB Maritime Spatial Planning Working Group drives the implementation of the Regional MSP Roadmap for 2021-2030, which is focused on:

— strengthening the joint efforts and coherence throughout the region to implement Maritime Spatial Plans;
— aiming for sustainable development of the Baltic Sea region;
— building a sound basis for an adaptive Maritime Spatial Planning process applying the ecosystem-based approach.

Based on the MSP Roadmap and taking into account the 2021 BSAP, the HELCOM-VASAB MSP WG prepared a draft workplan to be approved by the HELCOM Heads of Delegation (HOD) and VASAB Committee on Spatial Planning and Development of the Baltic Sea Region (CSPD/BSR), concentrating on the years 2022-2024 but also reaching further into the future.

Several new international projects related to MSP with HELCOM involvement

The project Emerging ecosystem-based Maritime Spatial Planning topics in the North and Baltic Seas Region (eMSP NBSR), co-financed by the European Maritime and Fisheries Fund (EMFF), commenced its active phase in 2022. HELCOM together with the Swedish Agency for Marine and Water Management (SwAM) are co-leading work on the Ecosystem-based Approach (EBA). HELCOM, together with the Swedish Agency for Marine and Water Management, co-leads the work on the Ecosystem-based Approach (EBA). The HELCOM Secretariat is, moreover, strongly involved in data sharing, information and communication technology serving MSP. The compilation of information on good practices for the EBA in MSP in the North Sea and Baltic Sea regions was also be completed in 2022.

Altogether three new projects started in 2022. PASPS, co-funded by the Interreg Baltic Sea Region programme (Interreg BSR), is scheduled to run until 2024 and supports the coordination of the Policy Area (PA) Spatial Planning of the EU Strategy for the Baltic Sea Region. The HELCOM-VASAB MSP Working Group is the Steering Group of the PA in MSP related matters.

Another project, titled Improved science-based maritime spatial planning to safeguard and restore biodiversity in a coherent European MPA network (MSP4BIO) and funded by HORIZON Europe, aims to develop, by 2025, an integrated and modular Ecological-Socio-Economic (ESE) management framework for the protection and restoration of marine ecosystems. The solutions developed in the project will fill knowledge, criteria and measure gaps on marine biodiversity and its management, by better linking spatial ecological features with socio-economic elements. The Baltic Sea is one of the six European test sites of the project and the HELCOM Secretariat leads the work package on policy coherence and co-production of solutions that aim to establish a joint understanding of and improve coherence between the key EU policies.

The project Reviewing and evaluating the monitoring and assessment of maritime spatial planning (ReMAP) develops approaches to reviewing maritime spatial plans, concentrating on development of data tools, models and reuse of operational data infrastructure by 2025.

The project Platform Capacity4MSP, funded by the Interreg BSR, was finalized in the spring of 2022. The project aimed to strengthen the capacity of MSP stakeholders and decision makers. Some of the main outputs were:
— identifying support mechanisms for implementation of MSP;
— an integrated report on stakeholder engagement in MSP processes;
— organizing planners' forums and;
— a synthesis report on outcomes of various previous projects.

Related resources

Regional voluntary guidance for assessment of cross-border coherence in MSP

18. Climate change

Climate change impacts are evident in the Baltic Sea: water temperatures are rising, the ice cover is decreasing, and annual mean precipitation is increasing over the northern part of the region. All these changes affect the sea, its ecosystems, their function and subsequent ecosystem services, as well as the human activities depending on the sea.

The aim of HELCOM work regarding climate change is to increase the resilience of the Baltic Sea ecosystem – its capacity to recover from stress and disturbance resulting from climate change impacts.

Climate change is adding more pressure to a fragile ecosystem already affected by a wide variety of anthropogenic impacts. As prerequisites for informed decisions and for implementing policies, decision makers need to understand what changes have already occurred and what further changes and impacts we can expect in the future.

HELCOM strives to ensure that climate change is duly taken into account in marine policy making and incorporated into the day-to-day work of HELCOM. This was apparent in the process of updating the Baltic Sea Action Plan, where the role of HELCOM in addressing climate change is a recurrent theme.

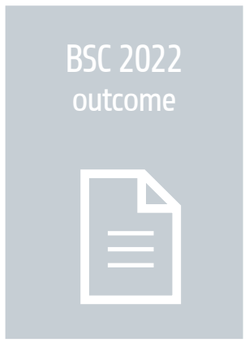
In 2022 HELCOM, jointly with Baltic Earth, presented the findings and information from the HELCOM Climate Change Fact Sheet at a Baltic Stakeholder Conference (BSC2022) hosted by Germany, The Conference focused on both broad dissemination and targeted discussion on how HELCOM could continue its work to support mitigating climate change effects in the Baltic Sea region.

Moreover, initial steps were taken to ensure that climate change becomes an integral part of HELCOM's work across all work strands, with the introduction of climate change-related tasks into all terms of reference of the HELCOM working groups.

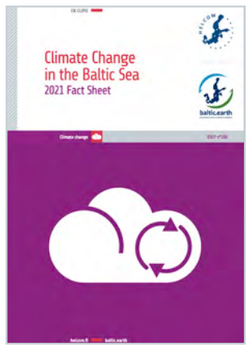
Climate change has also, for the first time, been included in all HELCOM indicator reports, providing valuable contextual information to support the indicator evaluations and their results.

Related resources

Day 1 of the Baltic Stakeholder Conference 2022 – Climate Change in the Baltic Sea



Outcome of Day 1 and 2 of the Baltic Stakeholder Conference 2022 – Climate Change in the Baltic Sea



Baltic Sea Climate Change Fact Sheet

HELCOM strives to ensure that climate change is duly taken into account in marine policy making and incorporated into the day-to-day work of HELCOM

19. Economy and society

Our societies and economies benefit tremendously from the marine environment. However, in doing so they often harm the environment, ultimately reducing its ability to produce many of those same benefits. A key challenge for society is to find the appropriate balance between exploitation and environmental protection. There is no single correct solution to this dilemma, and each society must make these decisions for itself. Economic and social analyses can help to make informed choices, for instance through the identification of cost-effective environmental measures and the estimation of economic value gained from the marine environment.

2022 was the final year of a two-year effort to update several regional economic and social analyses, including use of marine waters, cost of degradation, the effectiveness and sufficiency of measures, and ecosystem services. Additionally, initial efforts were made to analyze policy incentives throughout the region and, for the first time ever, HELCOM started exploring the possibility of including information on driver indicators for the Baltic Sea region into the holistic assessment of the Baltic Sea.

These new tools will deepen our understanding of the relationship between society and the environment and how to manage our impact. The work builds on previous HELCOM efforts to advance our appreciation for the interconnectedness of society and the marine environment and to improve our efforts to manage our impact on that environment.

The analyses and information were incorporated into the thematic report on social and economic analyses, part of the holistic assessment of the status of the Baltic Sea environment.

Co-financed by the EU and coordinated by HELCOM, the HELCOM BLUES project ((Biodiversity, litter, underwater noise and effective regional measures for the Baltic Sea) was designed to support regional capacity, coordination, and cooperation with regard to developing effective measures to secure good status of the marine environment. Running from January 2021 to January 2023, BLUES analyzed the use of marine waters, cost of degradation, cost benefit of measures, effectiveness and sufficiency of measures and contributed to the work on ecosystem services.

These new tools will deepen our understanding of the relationship between society and the environment and how to manage our impact

20. Monitoring and assessment

To assess progress towards established objectives and targets, we need to understand the actual effects measures have on the marine environment. This requires access to extensive temporal and spatial monitoring data, collected in a comparable fashion for the entire region.

Monitoring in the Baltic Sea region is supported by commonly agreed monitoring approaches, based on HELCOM Monitoring and Assessment Guidelines. The guidelines form the basis of common data collection which, in turn, constitutes the foundation for regional and harmonized assessments.

HELCOM carries out major assessments at regular intervals, underpinned by the monitoring data collected through the national and regional monitoring programmes. The third holistic assessment of the Baltic Sea commenced in 2022.

The HELCOM core indicators, with their quantitative threshold values measuring the state of a variety of ecosystem components and pressures affecting the sea, constitute the main basis for the assessments. The indicators are dependent on the data needed to run them, largely provided through the HELCOM monitoring programmes, and dedicated work has been undertaken to improve and establish data flows. Among other things this concerns the presentation and reporting of data. 2022 saw a major data collection effort to ensure that the data needed for the assessment were available, quality checked, reviewed, and approved, thus enabling running the indicator evaluation, as well securing the integrated assessments that form the core of the holistic assessment of the Baltic Sea. As part of the BLUES project, a new indicator website was developed, providing easier access to the indicator results and information.

In 2022, HELCOM started the implementation of several actions related to monitoring as part of the 2021 BSAP. These include the regular review of the HELCOM monitoring programmes, as well as the review of the HELCOM Monitoring and Assessment Strategy and Data and Information Strategy by 2023.

The HOLAS 3 Data Call was submitted to Contracting Parties in April 2021 and concluded in May 2022. The call was a major regional data collection effort, covering all current regular monitoring data reporting as well as supplemental data that are required for the State of the Baltic Sea report.

The Baltic Data Flow project seeks to enhance the sharing and harmonization of data on the marine environment originating from existing sea monitoring programmes, and to move towards service-based data sharing.

To help achieve GES of the Baltic Sea, the HELCOM BLUES project supported the development of new and regionally coordinated measures addressing various pressures affecting the sea. It has also backed assessments of the state of the Baltic Sea through improved monitoring, notably on biodiversity, marine litter, and underwater noise. The outcomes of the project also underpin the implementation of the updated 2021 Baltic Sea Action Plan by providing monitoring data and guidance on the implementation of measures.

The HELCOM core indicators, with their quantitative threshold values measuring the state of a variety of ecosystem components and pressures affecting the sea, constitute the main basis for the assessments

21. Global processes

Global frameworks and international processes such as the Sustainable Development Goals (SDGs) and the Aichi targets (and prospectively the Post-2020 Global Biodiversity Framework) have long been important factors in HELCOM work to conserve the marine environment.

In 2022, HELCOM continued its involvement in various other global and international processes, as outlined in the respective sections above, and cooperated actively with other regional seas organizations and the UN Regional Seas Programme.

Through the year, HELCOM was represented at numerous international or global events reaching beyond the Baltic Sea area, such as the II International Forum on Marine Litter and Circular Economy (MARLICE 2022) in Seville, Spain, the UN Ocean Conference in Lisbon, Portugal (cf. below), and the 3rd Meeting of the Sustainable Ocean Initiative (SOI) Global Dialogue with Regional Seas Organizations (RSOs) and Regional Fishery Bodies (RFBs) in Busan, South Korea.

Overall, we continued to cooperate with organizations and institutions around the globe. In a continuation of its work on Other Effective Area-based Measures (OECMs) as required by the 2021 BSAP, HELCOM organized a cross-sectoral workshop on 1-3- February 2022, supported by the International Union for Conservation of Nature's (IUCN) World Commission on Protected Areas (WCPA) and the Food and Agriculture Organization of the United Nations (FAO).

UN Ocean Conference – Voluntary Commitments and Baltic Sea side event

One of the HELCOM-related activities in connection with the UN Ocean Conference held in Lisbon, Portugal from 27 June until 1 July 2022 was a much-noted side event titled "Delivering global commitments in the Baltic Sea Region – Marine Protected Areas and the success of Regional Seas Conventions".

One key aim of the event, which was organized by the Baltic Sea countries, the OSPAR Commission, the World Commission on Protected Areas (IUCN/WCPA), Coalition Clean Baltic (CCB) and the Institute for Advanced Sustainability Studies (IASS), was to present marine protection as a concrete example of the instrumental role of the regional sea conventions in implementing Sustainable Development Goal 14 – Life under water – in particular, as well as other global commitments in general, at the macro-regional and sea-basin levels.

The 75-minute side event presented HELCOM's 2021 Baltic Sea Action Plan as a best practice example for an ecosystem-based approach to marine management from science to action. The BSAP provides concrete tools for reaching the regional commitments, such as the establishment of a coherent MPA network, which has made substantial progress in the Baltic Sea Region. Moreover, the growing importance of the OECMs was explored as a relatively novel concept for spatial conservation measures.

Ecosystem-based management addresses human activities in a holistic manner and in relation to the marine environment, correlating our doings with the pressures they may cause on habitats and species. The aim is to maintain a healthy sea that can continue to provide valuable ecosystem-services

Contracting Parties and Heads of Delegation (2022)

Denmark
Ms Lone Søderberg
Ministry of Environment

Estonia
Mr Rene Reisner
Ministry of the Environment

European Union
Mr Michel Sponar
DG Environment
European Commission

Finland
Ms Sara Viljanen
Ministry of the Environment

Germany
Ms Meike Gierk
Federal Ministry for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

Latvia
Ms Baiba Zasa
Ministry of Environmental Protection and Regional
Development

Lithuania
Ms Egidija Dūdaitė
Ministry of Environment

Poland
Ms Ewelina Fałowska
Ministry of Infrastructure

Russia
Ms Natalia Tretiakova
Ministry of Natural Resources and Environment
of the Russian Federation

Sweden
Mr Martin Larsson
Ministry of the Environment

Baltic Marine Environment
Protection Commission

HELCOM.fi