

1. Introduction

1.1. Why is a holistic assessment of the Baltic Sea needed?

Achieving good ecosystem health is a core area of collaboration among countries bordering the Baltic Sea, which make up the Contracting Parties to HELCOM. Pressures from various human activities have an impact on Baltic Sea ecosystems, affecting the status of species and habitats, as well as human well-being. The close links between different parts of the Baltic Sea mean that actions often have to be coordinated across national borders for environmental measures to be effective. Environmental pressures vary spatially and their importance can change over time, depending on how human activities develop and on how efficiently we are able to manage and minimize negative impacts.

The third HELCOM holistic assessment (HOLAS 3) provides a wide-ranging update on the environmental status of the Baltic Sea for the time period 2016–2021. The holistic assessment helps us understand which pressures are currently of key importance and what areas will require additional measures, assuming current management measures are effective and are sufficient.

This holistic assessment captures a snapshot in time, reflecting the environmental condition and the role contemporary society plays in the dynamic life history of the Baltic Sea. In producing the assessment, researchers and experts around the Baltic Sea share insights into the various aspects that drive changes in its ecosystem. The task is not trivial. Different pressures often interact within the societal, economic and ecological complexity encompassing the Baltic Sea environment, and the effects on species and habitats may occur with a time lag or may be expressed differently between species or areas. It is crucial to produce an overview of the whole system that is as comprehensive and accurate as possible. Together, we want to understand which activities put pressures on the ecosystem and how they do so, how those pressures affect the state of the environment and biodiversity (in other words the species and habitats of the Baltic Sea), how the ecosystem and its functions are altered, and how such changes influence or can be influenced by societal factors. We want to use these insights to define new actions to renew, update and establish more effective measures to ensure a healthy Baltic Sea.

1.2. Policy use

In HELCOM, the holistic assessment provides a shared basis for following up on progress towards the objectives of the Baltic Sea Action Plan, facilitating the adaptive development of measures for the Baltic Sea environment in alignment with the ecosystem approach (Box 1.1).

The results and evaluations can be used to assess the current environmental status of the Baltic Sea and track the progress and effects of existing measures. This work supports several policies of key importance for the marine environment, helping HELCOM countries to come together and agree on the next steps to curb negative impacts and improve the status of the Baltic Sea.

1.2.1 Baltic Sea Action Plan

The Baltic Sea Action Plan (BSAP) is HELCOM's strategic programme of measures and actions for achieving a good environmental status of the sea (HELCOM 2021). The BSAP provides the concrete basis for work in HELCOM by stimulating goal-oriented cooperation among countries in the Baltic Sea region.

The BSAP is guided by the HELCOM vision of "a healthy Baltic Sea environment with diverse biological components functioning in balance, resulting in a good ecological status and supporting a wide range of sustainable economic and social activities". The 2021 BSAP is divided into four segments, each with specific goals and objectives, which have been jointly agreed amongst the Baltic Sea countries (Figure 1.1).

Each of the four segments contains concrete measures and actions to be implemented by 2030 at the latest.

The *Eutrophication* and *Hazardous substances and litter* segments mainly reflect actions needed to manage pressures stemming from land, while the *Sea-based activities* segment addresses actions needed at sea to curb negative impacts resulting from our marine activities. The segments of the BSAP are intrinsically linked, and accomplishing the goals of these segments has direct importance for securing the status of species and habitats in the Baltic Sea, which is the target of the *Biodiversity* segment. The actions under this segment focus primarily on protection and restoration.

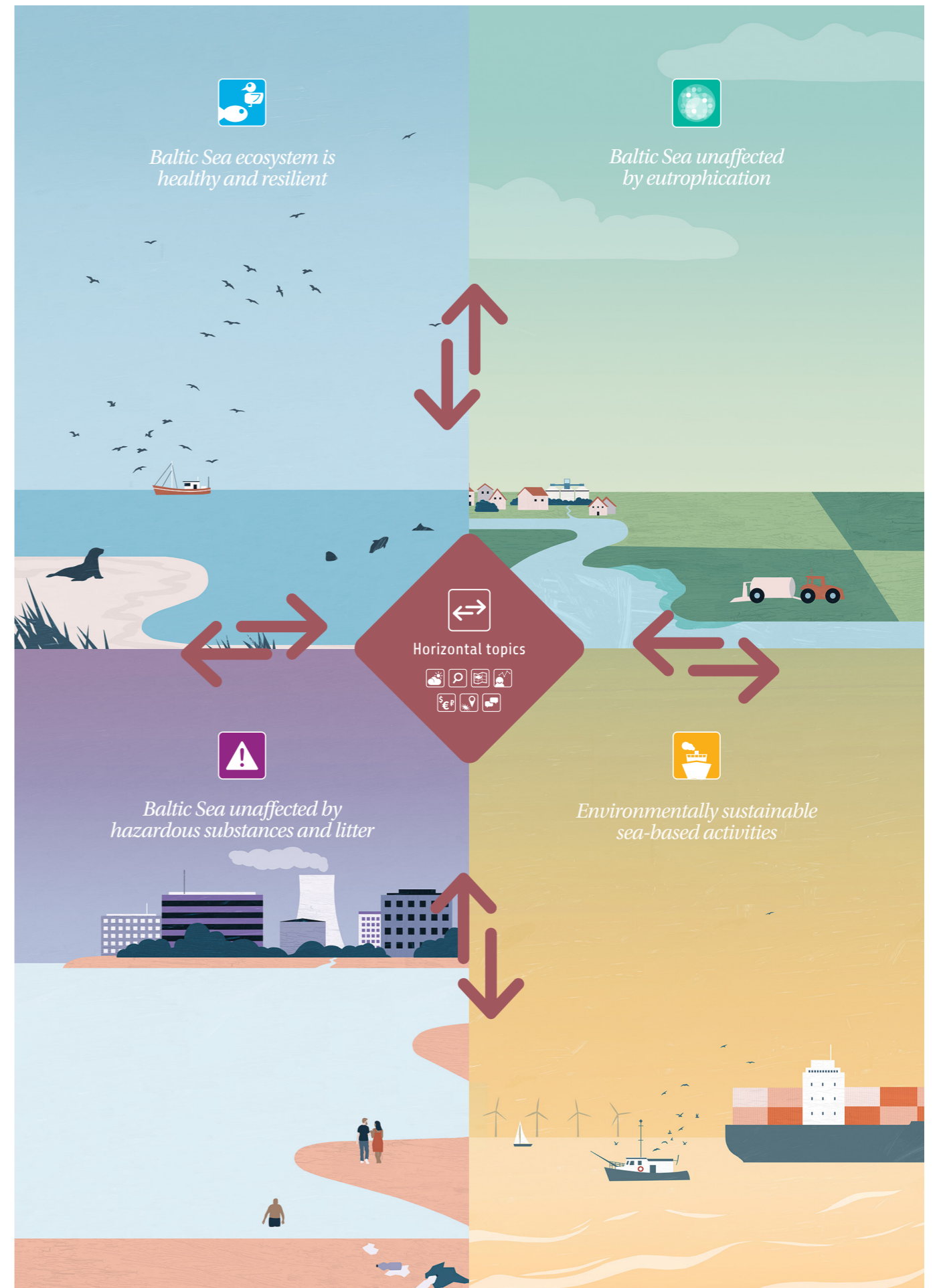


Figure 1.1. The four main segments of the Baltic Sea Action Plan (BSAP) focus on Biodiversity, Eutrophication, Hazardous substances and litter, and Sea-based activities. These segments support each other and share cross-cutting topics. The cross-cutting topic of the BSAP are climate change, monitoring, maritime spatial planning, economic and social analyses, knowledge exchange and awareness raising, hot spots, and financing.

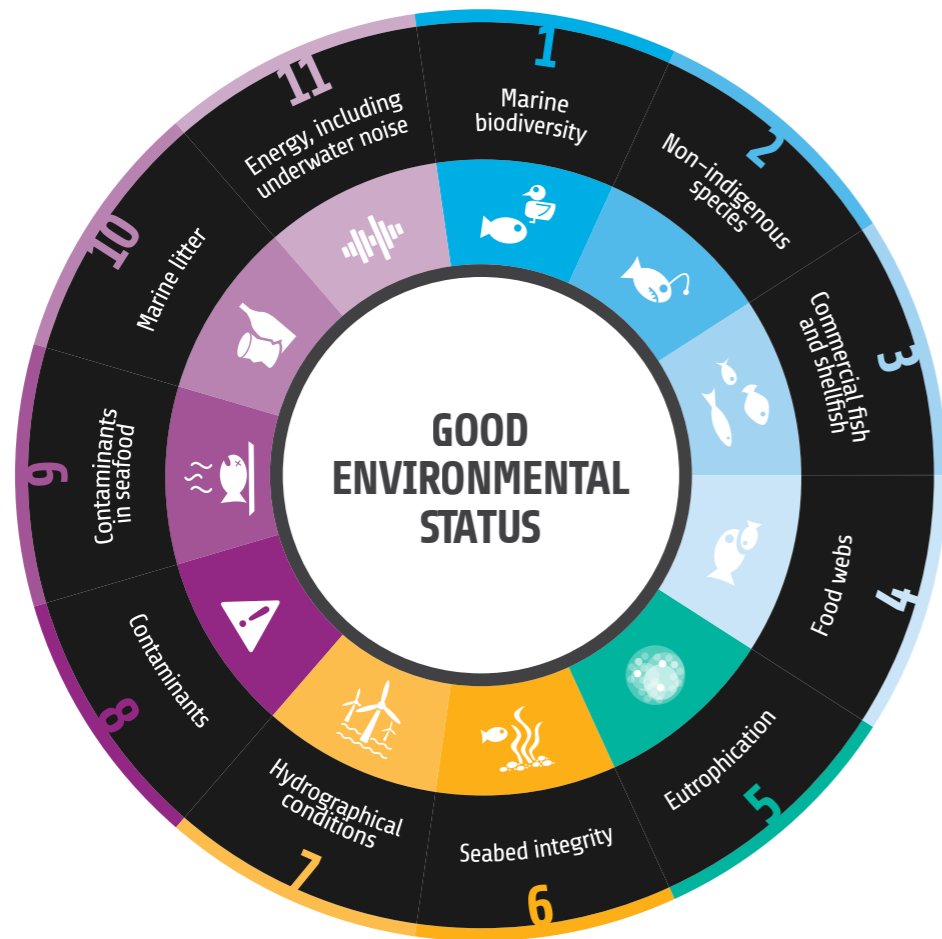


Figure 1.2. The EU Marine Strategy Framework Directive aims for good environmental status based on eleven descriptors covering different aspects of the marine environment

The BSAP also includes a number of horizontal topics. These address cross-cutting issues which have the potential to markedly influence the successful implementation of the BSAP. These include climate change, monitoring, maritime spatial planning, economic and social analyses, knowledge exchange and awareness raising, hot spots and financing.

1.2.2 Marine Strategy Framework Directive and other EU legislation

The Marine Strategy Framework Directive (MSFD) is the legal instrument for the protection of the seas in the European Union. The overarching goal of the MSFD is to achieve a good environmental status of the marine waters within the European Union, which is specified using eleven descriptors (Figure 1.2). EU Member States are required to report on the status of their marine environments (using indicators) in relation to these descriptors in six-year assessment cycles (EC 2017 a,b). While member states define the indicators and their threshold values, they are often required to do so through regional cooperation, and their data collection and assessment approaches need to be as coherent as possible in order to be meaningful, particularly within the same marine region.

The MSFD is an overarching framework that strives to establish an ecosystem-based, adaptive, and integrated approach to the management of all human activities that have an impact on the marine environment. The MSFD does not aim to replace other related EU policies but makes links to them to support harmonised assessment and monitoring. Examples of EU policies of direct relevance for the implementation of the EU MSFD are the Birds and Habitats Directive (EU 1992), the Water Framework Directive (EC 2000), and the EU Common Fisheries Policy (EU 2013).

1.2.3 The Global Sustainable Development Goals

The HELCOM Baltic Sea Action Plan and HELCOM activities are well aligned with the Sustainable Development Goals of the United Nations (Figure 1.3), which provide a global blueprint for peace and prosperity for people and our planet (UN 2015). The seventeen goals were adopted by all United Nations Member States in 2015. Rooted in an urgent call for action by both the Global South and the Global North, the Sustainable Development Goals recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality and spur economic growth while tackling climate change and working to preserve our forests and oceans.

SDG targets addressed

- **2.4** By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.
 - Biodiversity
 - Economic and social analyses
- **6.3** By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.
 - Eutrophication
- **6.5** By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.
 - Eutrophication
- **12.2** By 2030, achieve the sustainable management and efficient use of natural resources.
 - Biodiversity
 - Economic and social analyses
- **12.4** By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.
 - Hazardous substances, marine litter, underwater noise, non-indigenous species
- **12.5** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.
 - Hazardous substances, marine litter, underwater noise, non-indigenous species
- **13.2** Integrate climate change measures into national policies, strategies and planning.
 - Biodiversity
 - Eutrophication
 - Hazardous substances, marine litter, underwater noise, non-indigenous species
 - Economic and social analyses
 - Spatial pressures and impacts
- **14.1** By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.
 - Biodiversity
 - Hazardous substances, marine litter, underwater noise, non-indigenous species
- **14.2** By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.
 - Eutrophication
- **14.c** Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want.
 - Biodiversity
 - Economic and social analyses
- **14.4** By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.
 - Biodiversity
 - Hazardous substances, marine litter, underwater noise, non-indigenous species
- **14.5** By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.
 - Eutrophication
- **15.8** By 2020 introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems, and control or eradicate the priority species.
 - Hazardous substances, marine litter, underwater noise, non-indigenous species

Figure 1.3. Sustainable Development Goals and their links with HOLA 3, based on information in the 2021 HELCOM Baltic Sea Action Plan (BSAP).