Baltic Marine Environment Protection Commission

Working Group on the State of the Environment and Nature Conservation

Online, 5-9 October 2020

STATE & CONSERVATION 13-2020

Document title	First draft of introduction to the Biodiversity segment of the updated BSAP
Code	3J-3
Category	DEC
Agenda Item	3J – Update of the Baltic Sea Action Plan (BSAP) and associated activities
Submission date	14.9.2020
Submitted by	Secretariat

Background

HOD 57-2019 discussed the style of writing of the updated Baltic Sea Action Plan (BSAP). Accordingly, the updated BSAP should be a relatively short document written in a straightforward way but should at the same time provide sufficient supporting information to facilitate future follow-up of implementation (Outcome, para 3.27-3.28). Overall the updated BSAP should maintain strong links with global processes and commitments, such as the Sustainable Development Goals (SDGs) and the upcoming Convention on Biological Diversity targets and the EU Green Deal, with the aim that HELCOM can function as one of the platforms for ensuring implementation of global commitments. A holistic approach should be used when viewing and addressing the effects of human activities and subsequent pressures affecting the Baltic Sea. Aspirations are to be differentiated from concrete actions and the operative sections more clearly present the plan for action. Detailed information and supporting information on the actions will be made available as annexes to the respective segment.

The Secretariat was tasked to prepare an outline of how the updated BSAP will be structured to facilitate the drafting process. A proposal was shared for information with the Working Group meetings in spring 2020 and later approved by HOD 58-2020 (Outcome, para 4.6-4.16). According to the Work Plan for the BSAP update, the first full draft is to be available at HOD in December 2020.

The updated BSAP will have a layered preamble which will also include segment-specific introductory text. HOD 57-2019 requested the Secretariat to prepare a first draft of the introductory text for the respective segments.

Such text could focus on aspirations and strategic decision for the respective segment and also recall other relevant legislation associated to the respective segment. This introduction should not contain more than 1200 words and will be supported by reference boxes and visualizations. Operative sections, including the agreed actions, will be presented for each segment and associated goal of the updated BSAP. With the more strategic and higher-level ambitions being expressed in introductory passages, the operative sections will focus on the plan for action. Each operative section will be initiated by a brief description (maximum ½ page) of the current state of the Baltic Sea based on the latest HELCOM assessments (Outcome HOD 56-2019, para 2.23 and HOD 58-2020, para 4.8 and document 4-11) . This will be followed by an account of the HELCOM objectives, representing the desired state of the environment or the acceptable level of pressure (maximum ½ page). The agreed actions will then be sorted thematically.

This document contains the first draft of the segment specific introduction for sea-based activities, as prepared by the Secretariat at the request of HOD 57-2019. The first drafts for each segment are presented to the respective Working Groups for comments in autumn 2020 and then to GEAR 22-2020 and HOD 59-2020. Further work on the segment specific text will be undertaken by the Segment Teams under the DG BSAP.

Action requested

The Meeting is invited to:

- review the segment specific preamble text for the biodiversity segment, in line with the guidance provided,
- endorse it for submission to GEAR 22-2020 and to HOD 59-2020 for review, noting that the drafting will continue in the DG BSAP in spring 2021.

Biodiversity segment - The Baltic Sea ecosystem is healthy and resilient

Biodiversity encompasses all the variety and variability of life, ranging in scale from genes, populations, species and communities to food webs and entire ecosystems. The structure and functioning of species and habitats form the basis of the living environment and are fundamental drivers of how ecosystems can contribute to human well-being. As humans, we depend on the complexity of natural systems to supply the food we eat, the water we drink and the air we breathe, but also for our individual mental and physical wellbeing, and for society's ability to cope with global changes, health threats and extreme events.

Biodiversity in the Baltic Sea is unique. It features both freshwater and marine species, all of which have adapted to the sea's exceptional brackish environment, making the Baltic sea important but also vulnerable. Although the number of species is relatively low compared to other sea areas, the species that have adapted to the Baltic Sea conditions often appear in great abundance.

Biodiversity is deteriorating globally today, and human activities threaten more species with extinction than ever before[1]. The ongoing influence of human actions on marine ecosystems is evident. Coastal ecosystems show large historical losses, as well as rapid ongoing declines. Together with climate change, the loss and degradation of biodiversity and ecosystems is recognised as the biggest threat and challenge for humankind in the next decades[2]. Recent assessments for the Baltic Sea confirm and reiterate that biodiversity in the region is deteriorated, and that this is due to pressures from various human activities. Many widely distributed or long-lasting pressures have had far-reaching impacts on both individual species and ecosystems as a whole, and the cumulative and secondary ecological effects of activities are still poorly understood.

The status of species and habitats reflect the combined effectiveness of management of human activities

Human activities have both direct and indirect effects on biodiversity. Depending on the activity and setting, the effect can be small or considerable, and it can affect one aspect of the ecosystem or several. Importantly, the impact can also be a result of the combined effect of historical and currently ongoing pressures. When the total pressure level becomes too large, or if the pressures become too many, structures and functions in the ecosystem deteriorate and eventually collapse.

Because of spatial variability and temporal delays, and since species and populations are connected to each other in the food web, it is often challenging to identify what pressure ultimately caused a certain impact. In many cases, the impact may rather reflect the combined effect of many pressures.

All actions targeting eutrophication, hazardous substances and litter, as well as sea-based activities, are critical enablers and elements for improving the state of biodiversity in the Baltic Sea. However, many species and habitats are in urgent need of protection, and in many cases, it can take time before beneficial effects of pressure reductions show in the living environment. In other cases, a certain amount of continued pressure may be unavoidable. The design of actions to support biodiversity also has to consider that some of the impact on species and habitats seen today are the accumulated result of human activities that happened in the past.

The need for fast action is emphasised by climate change.

The effects of climate change will be more pronounced in areas like the Baltic Sea than in other marine areas[3], and here effects are already visible. The impact of these effects present a growing risk to biodiversity in the

Commented [A1]: *The following information will be include in the same way and order in each segment through the use of reference boxes and visualizations (see **Attachment 1** for an initial idea regarding e.g. reference boxes) and should thus where possible not be included in the introductory text:*
-Visualization of goal, ecological objectives and management objectives for segment
-Visualization of pressures and activities addressed by segment actions and measures.
-Link of segment to relevant climate change parameters and, if possible, key messages.
-Tentative actions areas
-Link to relevant SDG
-Include cross-references with other segments

[1] *[IPBES was cited here (original footnote lost)]*
[2] *[World economic forum was cited here, reference to IPCC may need to be added as well]*
[3] *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*

Baltic Sea, both directly by climate-related changes in abiotic factors, such as salinity and temperature, and through the combined or synergistic effects with other pressures. Meeting the goals and objectives for biodiversity is strongly dependent on actions to mitigate and reduce impacts from climate change.

Dedicated actions of the diversity segment aim to ensure sufficient protection for Baltic Sea species and habitats, and secure the long-term integrity and functionality of its food webs. The management objectives relate to the conservation, maintenance or restoration of the Baltic Sea ecosystems and their associated components.

The biodiversity actions are defined against the background of the other parts of the Baltic Sea Action Plan, and the fact that actions within the segments of eutrophication, hazardous substances and litter, and sea-based activities are critical enablers and needed steps to improve the state of biodiversity and ensure its long-term sustainability. A central overarching aspect in this regard is the ecosystem-perspective, to take into account the existence of multiple pressures and species distribution.

Further, since managing human activities to minimize and mitigate the pressures they are associated with is of key importance, achieving the goals and objectives for the biodiversity is dependent on the contributions from multiple sectors, organisations and individuals. Enhanced international cooperation and linked, regionally relevant measures are needed, as well as to ensure shared learning to develop the biodiversity-related goals and actions based on the best available scientific knowledge. Follow-up on the implementation, and responsive adaptive management, are an important part of this effort. Baltic Sea biodiversity is dynamic in time and variable in space, which needs to be reflected in management and policy.

Connection to other treaties

HELCOM commitments are well aligned with the Sustainable Development Goals of the United Nations Agenda 2030, with the long-term 2050 vision of the Convention on Biological Diversity, and with the EU Biodiversity Strategy, which in turn is an integral part of the EU Green Deal. This holds true even in those cases where HELCOM commitments predate these processes.

Link to relevant SDG

HELCOM is a driver and facilitator for conservation of biodiversity and ecosystem functions in the Baltic Sea and globally. The work of HELCOM supports the achievement of goals and objectives under the United Nations Agenda 2030 and its Sustainable Development Goals (SDGs). The biodiversity segment of the Baltic Sea Action Plan relates particularly, though not exclusively, to SDG 14.

Commented [A2]: Will be supported by a reference box, see Att.1 to this document for initial ideas.

Operative section- Safe space for Baltic Sea wildlife and room for adaptation under climate change

Description of current state

The implementation of policy responses and actions to conserve nature and manage human activities sustainably has progressed during the past decades, but not sufficiently to stem the direct and indirect pressures and halt the deterioration of biodiversity.

In the Baltic Sea, most fish, birds and marine mammals, as well as benthic and pelagic habitats, are currently not in a healthy state. Almost 100 macro-species in the Baltic Sea (approximately 3,5%) are regarded as being in danger of becoming regionally extinct, and signs of deterioration at food web and ecosystem level are becoming more wide-spread and frequent. The inadequate states of species and food webs are closely linked to the productivity of the ecosystems and its resilience. Species and populations are dependent on the availability and suitability of habitats to ensure food, protection and breeding areas. An incremental degradation of various coastal habitats, which are important to most Baltic Sea species during at least some part of the life cycle, and the wide distribution of areas with low oxygen conditions close to the seabed are particular causes for concern. The impacts on biodiversity also extend to limit prospects for socioeconomic benefits from the Baltic Sea ecosystem.

[*Key problem areas of relevance for the biodiversity segment identified, for example*]:

- Current protection of marine environments MPAs covers XX% of the Baltic Sea area (year 2021). However, the MPA network as a whole is not yet coherent and there are gaps in the level and effectiveness of management in several areas.
- Partial and insufficient implementation of actions. Objectives will not be met without dedicated action and results need to be evaluated from an ecosystem-based perspective.
- Cumulative effects may require multiple measures – analyses of pressures on ecosystem components in order to identify complementary measures.
- Land-sea/intra-regional interactions – migrating and mobile species need holistic protection.

Description of desired state

The biodiversity segment of the Baltic Sea Action Plan aims towards a Baltic Sea ecosystem which is healthy and resilient. Reaching the biodiversity goals and objectives in a sustainable way is enabled by the goals of the other segments of the Baltic Sea Action Plan. The healthy and resilient ecosystems have the ability to maintain their species and communities over time and in the face of external stress. Populations have age- and spatial distributions in line with their natural limits. Key ecosystem functions and processes are upheld naturally in an interacting network of species and habitats.

Central aspects for achieving the biodiversity goal are that native species and key populations are proliferous enough to ensure their long-term survival, and that the adequate quality, distribution and occurrence of natural habitats is ensured, thus supporting those communities which are associated with them. These stepping-stones are foreseen to strengthen the functionality, health and resilience of the food webs, ultimately securing the integrity and long-term sustainability of the ecosystem.

The biodiversity loss is halted, and the functioning of ecosystems ensured by limiting the number and intensity of pressures. This is achieved by managing the underlying human activities and by protecting and restoring the environment. Successful outcomes depend on adaptive governance, strong societal engagement, effective and equitable benefit-sharing mechanisms, sustained funding, and monitoring and enforcement of rules. Restored and properly protected marine ecosystems bring substantial health, social and economic benefits to coastal communities and the region as a whole.

Baltic Sea Action Plan
2021 update

Biodiversity

Goal

Baltic Sea ecosystem is healthy and resilient.

Targets

- Natural marine and coastal landscapes
- Thriving and balanced communities of plants and animals
- Viable populations of species

Pressures addressed

Not applicable; human activities and associated pressures are addressed in other segments.

Activities addressed

- Marine Protected Areas
- Restoration of habitats
- Reintroduction of species
- Conservation and management plans.

Segment preamble:

max. 1200 words

Biodiversity refers to the variety and variability of all life on Earth and can be scaled up or down as relevant, from genes to whole ecosystems. These different aspects of biodiversity functions as the building blocks forming the structure of the world as we know it. As humans we are an integ… and fully dependent on this: it gives u… we eat, filters the water we drink, ar… the air we breathe, while also being im… our mental and physical wellbeing as… ciety's ability to cope with global cha… threats and disasters. Each individual … individual species, each community … is a building block. The more different building blocks which are available the more different things can be built, the bigger what can be built can be and the more difficult it will be to knock all of it down at the same time. This is true also for the Baltic Sea, where the building blocks of biodiversity helps build and maintain the ecosystem.

Baltic Sea biodiversity is unique. It features both freshwater and marine species that have adapted to the sea's exceptional brackish environment. The occurrence of species and communities is largely governed by seasonal changes in temperature and the strong gradients in salinity including from north-to-south, coastal-to-offshore, and surface-to-bottom. The Baltic Sea biodiversity is thus dynamic in time and variable in space, something which needs to be reflected in management and policy. Thousands of species, and millions of genes, create the unique underwater biodiversity of the Baltic Sea. While this might sound like a lot, in reality it represented relatively few building blocks compared to most areas around the world, making the Baltic sea important but vulnerable. Although the number of species is relatively low compared to other sea areas, the species that have adapted to the Baltic Sea conditions often appear in great abundance. These species, together with their non-living environment, make up the habitats, biotopes, communities, and food webs of the Baltic Sea ecosystem.

On a global scale biodiversity is deteriorating and …ctivity threatens more species with extinc… than ever before[1]. Biodiversity loss and …m collapse is one of the biggest threats …manity in the next decade[2]. Marine eco… around the world now show the influence … actions, with coastal marine ecosystems … both large historical losses of extent and … as well as rapid ongoing declines.

We put both direct and indirect pressure on the biodiversity of the Baltic Sea through our activities. Every human activity pushes the building blocks further out of place. Depending what the activity is it can push the blocks a little or a lot, and it can be only a few blocks or all of them at once. Push too hard and the structures start to topple. Because the ecosystem is complex, in reality each building block is connected to hundreds of others, making it exceedingly difficult to gage what the impact of a given activity might be. It is however clear that the more activities that take place at the same time the more pressure the system is under. And, like a tower of building blocks, once the blocks start falling, i.e. when genes or species are lost, they can take others with them. Thus, in order to ensure that diversity isn't lost and that the system maintain its functions, the amount and intensity of the pressure needs to be limited. This is achieved through managing human activities and protecting and restoring the environment.

1 IPBES (2019), Summary for policymakers

2 World Economic Forum (2020), The Global Risks Report 2020.

Cross-reference to other segments:

- A healthy and resilient Baltic Sea ecosystem is the ultimate objective of the Baltic Sea Action Plan against which its entire performance is measured
- Achieving the goal of a "Baltic Sea ecosystem is healthy and resilient" requires that the goals of all other segments are met.

SDG targets addressed

- **SDG 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.

Restored and properly protected marine ecosystems bring substantial health, social and economic benefits to coastal communities and the region as a whole. Conservation effort outcomes depend on adaptive governance, strong societal engagement, effective and equitable benefit-sharing mechanisms, sustained funding, and monitoring and enforcement of rules.

While implementation of policy responses and actions to conserve nature and manage human activities sustainably has progressed, the follow up on the Unite Nations Strategic Action Plan for Biodiversity and the reporting for the first intermidiate target year for the UN Sustainable Development Goals, as well as more closely the State of the Baltic Sea report, has highlighted that progress is not sufficient to stem the direct and indirect pressures causing biodiversity deterioration.

In other words, the BSAP vision cannot be achieved without transformative change. The aim of the update of the BSAP is to set out a robust action plan which strives to translate the ambitions of the countries around the Baltic into necessary actions. In the case of biodiversity this ambition is a Baltic Sea ecosystem which is healthy and resilient. This review and renewal of internationally agreed biodiversity related goals and actions, based on the best available scientific knowledge, aims to ensure both enhanced international cooperation and linked, regionally relevant measures. Follow-up on the implementation will be an important part of efforts

Biodiversity and ecosystem functions also directly underpin the achievement of several of the United Nations Sustainable Development Goals, in HELCOMs case particularly SDG 14. HELCOM commitments are well aligned with SDGs, as well as with the CBD long term 2050 vision for biodiversity and the EU biodiversity strategy, which in turn is an integral part of the EU Green Deal.

The need for stronger action is all the more acute as the biodiversity crisis and the climate crisis are intrinsically linked, with marine and coastal ecosystem biodiversity loss severely exacerbated by human induced climate change. Climate change is already having an impact on the marine environment, from genes to ecosystems and it poses a growing risk owing to the accelerated pace of change and interactions with other pressures. Meeting the goals and objective for Biodiversity will depend on taking into account climate change impacts.

Onsed ma volorpo rruntus rem rem que plit pliquas picius suntendis endus. it volorep taestio restia nit endernatus dolupta volor soluptat laceatint volorum, si veliam, nesto cumet verument dit ute evere seque di sin nihiliqui aut velique poris consendunto ducia aboris aborro molo quid qui dolor adi doloreperum anihiciis etur, to ipicipiet qui simpores natis ressimi nveresequodi nes estempo remporrum nullendaepro corem re porerum quatis as adiorrum quas es velento bla ipienetur?

Temoleceat. Hilicto dolorpor andipsunt eruptati dem eos voluptatur aborenda dest, occusdaerio essinie nimporporia sequidi berae eiumquati ius. Me simaxim illita vellaut molupta sperfernam quia sint aut remquia pa con premper aturerfero cum ium volorestis am rem ipitatem. Molenis ium quas quatis audit que laute dolorio necabor eperis aliquid magnat quae di odit, et ut et ius ditisci ature, tent. Il idebit, qui blame a quia as et accabo. Nam quibernam qui sero in nihilitiatis non rae dis dolorepelit estrum dolum enihil iuntia consequ untoris erferspicaes sandunda delia site porepta aut reperae explaut omnissed maxima

Current state of biodiversity

Biodiversity in the Baltic Sea has undergone major changes during the past decades and there is no doubt that various human pressures have contributed to the observed changes in biodiversity. Pressures or[illegible]nming from human activ[illegible]a ecosystem and most of[illegible]ide ranging impacts, cas[illegible]pecies to the ecosystem a[illegible]

Current state:

max. 370 words

At this poi[illegible]rds and marine mamma[illegible]and pelagic habitats, are[illegible]proximately 3,5%, or almost 100, of Baltic Sea macro species are regarded as being in danger of becoming regionally extinct. Inadequate status of species is closely linked to changes in their physical habitat and its possibility ensure food, protections and breeding areas. A gradual deterioration of coastal areas, which are vitally important to most Baltic Sea species at some stage of their lives, is cause for concern. Changes in species and habitats also impact food web dynamics, where a deteriorated status can be seen across different parts of the food web, from species which live in the open water column, to those in coastal areas and those close to the sea floor. By extension the pressures impact how the ecosystem functions, while also negatively affecting resilience, making the ecosystem more sensitive to further environmental changes. All of these changes in turn limits the prospects for socioeconomic benefits from the Baltic Sea ecosystem.

Designation of marine protected areas (MPAs) has been an instrument for protection in the Baltic Sea for more than 30 years and serves as an important measure to meet the commitments of the Contracting Parties. In 2021 the MPA network covered XX% of the Baltic Sea area. However, the MPA network as a whole is not yet coherent and gaps in the level and effectiveness of management as well as spatial data coverage, has been identified.

Desired state of biodiversity

The goal of the Baltic Sea Action Plan with regards to biodiversity is a Baltic Sea ecosystem which is healthy and resilient. Ecosystems are self-regulating (i.e. do not need active management) communities of species[illegible]ther and with the non-liv[illegible]ension a healthy ecosyst[illegible]ime and in the face of e[illegible]ability to maintain its spe[illegible]ncluding their age- and s[illegible]ell as the non-living natu[illegible]also has the capacity to[illegible]through which these species and nonliving elements change and interact.

Desired state:

max. 370 words

Integral aspects to achieve this, as identified in the objective of this segment, is that all native species populations are large enough to ensure the long-term survival of the species, as well as that the quality, distribution and occurrence of habitats is ensured, thus supporting those communities which are associated with them. These are, in turn, necessary stepping stones for ensuring the functionality, health and resilience of the Baltic Sea foodwebs, ultimately securing the integrity of the ecosystem.

Biodiversity is an overarching concept, for which the objectives, targets and actions of the BSAP segments dealing with pressures and human activities are directly relevant. It is the pressures stemming from human activities which are causing the deteriorated status of the environment, hence it is through managing human activities that the status can be improved. In this way the actions taken under the other segments all support the Baltic Sea Action Plan objectives for the biodiversity. With that in mind the focus of the objectives under biodiversity instead relate to the state of the ecosystem and its components, and the management objectives to the conservation, maintenance or restoration of the system and its associated components.

! Baltic Sea biodiversity is unique. It features both freshwater and marine species that have adapted to the sea's exceptional brackish environment.

! Restored and properly protected marine ecosystems bring substantial health, social and economic benefits to coastal communities and the region as a whole.

Baltic Sea Action Plan
2021 update