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Background

This document contains the first draft of the segment specific introduction for biodiversity, 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. DG BSAP 1-2020 agreed that the segment teams will start their work by reviewing the drafts of the segment-specific preambles in the autumn 2020, concomitantly with their submission to the GEAR 23-2020 meeting. The segment specific preamble was submitted to STATE&CONSERVATION 13-2020, held 5-9 October 2020.

The following comments were received by STATE&CONSERVATION 13-2020:

- The introduction to the segment could benefit from being more concise, e.g. assume that the reader has a general knowledge on marine ecosystems or can acquire such knowledge from the State of the Baltic report.
- The introduction should strive to present the content from the Baltic Sea context.
- There might be some information currently presented in the segment introductions that is relevant for all segments and should thus be moved to the general introduction of the BSAP to avoid redundancy (e.g. on page 4).
- It is relevant to point out that the most important actions to improve the status of biodiversity might be found under other segments of the BSAP and this aspect should be highlighted.
- There should be more emphasis on the effects of climate change on biodiversity.
- When referring to connection to other treaties, in addition to including HELCOM Recommendations, also the updated Baltic Sea Action Plan should be mentioned to make it clear that the updated BSAP is very relevant in connection to international treaties (page 4).
- In the description of current state, it needs to be clarified whether MPAs is referring to all MPAs or HELCOM MPAs.
- The bullet points in the start of the operative section are considered a useful approach and could be further improved (page 5).

In addition, specific comments were provided by Sweden in writing.

Please note that due to the limited time between the end of the STATE&CONSERVATION 13-2020 meeting and submission to the DG BSAP BIO-1, comments have not yet been implemented in the version of the introduction contained in this document. A first revision will be made prior to submission to GEAR 23-2020, either at the DG BSAP BIO meeting or intersessionally, incorporating comments from DG BSAP BIO.

The segment team will continue working on the preamble text in spring 2021 based on the guidance from HOD.

Action requested

The Meeting is invited to take note of and comment the segment preamble for biodiversity noting the comments given by STATE&CONSERVATION 13-2020.

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 before¹. 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 decades². 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 areas³, and here effects are already visible. The impact of these effects present a growing risk to biodiversity in the 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.

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

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.

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.

