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Background

In order to facilitate the discussion, Finland would like to provide some comments and proposals to the draft updated BSAP in document 4-3 in writing.

In particular, Finland would like to draw the attention of the meeting to the modifications and new proposals provided with regard to climate change. They are a result of discussions and considerations between policy-makers and Finnish scientists dealing with climate change and the Baltic Sea.

New proposals have an explanation preceding them. The new proposals have been marked in red and with underlining. Any proposed deletions are marked with a strikethrough text.

There may be additional comments to be provided during the meeting in addition to these.

Action requested

The Meeting is invited to consider and, as found suitable, agree on the presented proposals.

Comments by Finland on document 4-3

General

All actions marked green, except HA10 for climate change, and red actions are ok to proceed with as proposed.

It should also be considered that if there are over 20 acronyms that are used in the BSAP, to include a glossary in the end of the document. See e.g. marine litter section.

Preamble

To include in the preamble the adoption of the action documents and to refer to the general, holistic documents, such as the Science Agenda as referred to in document 4-1.

Although mitigating **climate change** per se, and though that, its effects on the Baltic Sea ecosystem, is mentioned in the pre-amble (para 7 and also 11), multiple other pressures need to be addressed even more vigorously and this take-home message needs to be more clear in the BSAP. Hence we propose to add in the end of the sentence of **Para 7**:

"REITERATE, … adaptive management to mitigate the effects, of and strengthen the resilience of the Baltic Sea to climate change by reducing other human pressures on the ecosystem; "

Para 11 bis. should be deleted and the issue maybe explained in the supporting background document on the process of updating the BSAP.

Para 11 ter. We can agree on the paragraph Para 11 ter but would like to see the reference to the unofficial HELCOM BSAP – NDC deleted as it should be clear from the rest of the text what the information should be about. We also slightly question what could be updated every 5 years as the BSAP is updated more seldom.

[**AGREE** to compile all climate mitigation and adaptation measures resulting from the BSAP ~~[in an unofficial HELCOM BSAP - NDC]~~[that contribute to the Paris agreement] to be published on the UNFCCC-NAZCA portal and the HELCOM homepage in 2024 and thereafter updated every 5 years as part of the climate ambition mechanism.]

Furthermore, with regard to climate change, we still would like to open a possibility to address also **acidification** in the preambular text with a short sentence.

Hazardous substances and marine litter segment:

As to the marine litter, the acronyms such as ALDFG should be written at least once in full before using the acronyms.

Horizontal actions

Climate chance:

Along with climate change impacts, the functioning and role of the Baltic Sea in the carbon cycle should be accounted for. Taking into account that "*Greenhouse gas emissions from lakes and reservoirs represent around 1/5th of those from fossil fuel combustion, and 75% of this impact is from methane." (SCOPE Nutrients and Climate Change: (1) – Aquatic Methane Emissions, 2020*) it is necessary to include in the updated BSAP introductory text and measures that assist us in understanding the role of the Baltic ecosystem in the carbon cycle (e.g. is the ecosystem a source or a sink of greenhouse gases like methane, what can be done to improve the capacity of the Baltic Sea to retain carbon) and that address factors such

as the loading of organic carbon from land available for outgassing to the atmosphere through ecosystem functions. There are also links between the carbon cycle and eutrophication which should be better understood to enable measures and actions.

Proposal for an introductory text to be added after the current introductory paragraphs:

Carbon is the currency that links the Baltic ecosystem to climate change. Globally, greenhouse gas emissions such as methane from lakes and reservoirs represent around one fifth of those from fossil fuel combustion. In order to make progress with climate change mitigation measures related to the Baltic Sea, such as increasing "blue carbon", we need to understand the carbon cycle in the Baltic Sea land-sea system and links between carbon dynamics (e.g. land-based input of organic carbon and outgassing of methane), eutrophication legacy (e.g. carbon in sediments, anoxia) and biodiversity (e.g. carbon sequestration).

Proposal for an addition to the end of action HAN10 which currently includes a "short cut" to blue carbon: "…In order to do that, HELCOM will promote understanding of the role of the Baltic Sea land-sea system in the carbon cycle, particularly on ecosystem carbon sink (e.g. sequestration in biomass) or source (e.g. methane outgassing) dynamics and the role of land-based input of organic carbon. The connection of carbon dynamics to eutrophication and biodiversity should be taken into account. Increased understanding should be utilised to enable consideration of additional management measures."

Proposal for changes to HAE01 since the Science Agenda should be an important document driving research and since not only the latest scientific information but most relevant scientific information accounted for, and it has not been specified who the access should be given to:

Using the HELCOM/Baltic Earth Joint Expert Network on Climate Change as a platform and though committed implementation of the HELCOM Science Agenda, improve access by the policy-makers to ~~the latest~~ scientific information on the impacts of climate change together with multiple other pressures on the Baltic Sea marine environment through periodic updates of the HELCOM Climate Change Factsheet, and incorporate the possible effect of climate change into the holistic assessment of status as well as effectiveness of measures by [2030] at latest.

We find it also important that acidification will be addressed. Acidification is a vast trend in the global ocean and eventhough there seem to be buffers counteracting acidification in the Baltic Sea, the long-term trend is increased acidification and decreases in pH are already occurring in areas that have intensified respiration of organic matter and hypoxia. In the global context, Ocean Acidification Alliance has called for development of (regional) ocean acidification action plans https://www.oaalliance.org/actionplans/ to better understand and respond to the threat of ocean acidification and their model could be utilized and adapted to develop an acidification action plan for the Baltic Sea.

For that reason, we propose to include an explanation of the role of acidification in BS in the introduction to CC section after the previous proposed new paragraphs. "Although acidification is not a current major trend in the Baltic Sea ecosystem, it is an advancing and serious trend in the world ocean, it is directly connected to carbon dioxide emissions, and the long-term trend also in the Baltic Sea is increased acidification. Carbon chemistry of the Baltic Sea, nor possible impacts of acidification on biota, are not fully understood and measures have so far not been considered."

We should consider including an action on acidification to the climate change action and we propose the following new action HAN11:

HELCOM will develop an acidification action plan for the Baltic Sea with first steps addressing the knowledge gaps.

Further, with regard to acidification, if not yet included (we did not have a chance to check), an action might be necessary to address acidification effects from ship scrubber emissions by increasing the information on this aspect in the Baltic Sea. But this may need to be further discussed.

Financing section:

FI, SE ja DE proposal 9.3.21 to other CPs sent by email by Rudiger: ”

“In that context, the Baltic Sea Action Plan Fund hosted by NIB/NEFCO ~~shall~~ can be a tool for supporting the implementation of the updated BSAP and Contracting Parties and other possible contributors ~~will6~~ can voluntarily7 contribute to the Fund, with a view to replenishing the Fund so that it can provide funding to all actors interested in contributing to the aims and objectives of the Baltic Sea Action Plan.

Hot spots:

We want to ensure that existing hot spots will remain. FIN is working hard to plan and remove its last hot spot of agricultural emissions in the Archipelago Sea catchment. We would like to see the focus of the updated BSAP being on “reactivation” of hot spot work rather than on “renewal”. There should be a strong call for the Contracting Parties to remedy and delete the existing hot spots. For this purpose, Contracting parties could be invited to develop action and present proposals for deletion of their remaining hotspots.

New hotspots for the existing themes (inputs of nutrients, hazardous substances) could be explored based on existing criteria, and possibly though a consultant study.

Marine litter could be relevant to include as a new theme. If necessary, new criteria for marine litter hot spots could be defined and added, and new marine litter hot spots be designated. But here our view is not clear, isn’t it possible to designate hot spots based on marine litter emissions already now?

We are not in favor of including underwater noise as a theme for hot spots. The theme is not yet developed enough, e.g. harmful impacts of underwater noise on organisms are not as evident in the Baltic Sea as impacts from nutrient, organic matter, hazardous substances or marine litter emissions.