



Notes from HELCOM Science Agenda Task Group 5-2020

The 5th Meeting of the HELCOM Science Agenda Task Group was held 13 October 2020 as an online meeting.

The Meeting was attended by representatives from Denmark, Finland, Germany, Latvia and Sweden. Ulla Li Zweifel and Jannica Haldin participated from the HELCOM Secretariat.

The aim of the Meeting was to come to an agreement on the content of the Science Agenda and agree on next steps towards submitting the Science Agenda report to HOD 59-2020 by 13 November 2020.

Agenda item 1 Adoption of the Agenda

The Meeting adopted the agenda of the provisional annotated agenda (document 1-1).

Agenda item 2 Science Agenda report version 28 September 2020

The Meeting discussed the outstanding issues as indicated in the Science Agenda report (document 2-1 rev 1) and agreed on the following:

- to include a glossary in the Science Agenda containing abbreviations and explanations to key HELCOM agreements. The Secretariat will prepare a proposal.
- to indicate the knowledge that preferably should be in place by 2025 to support HOLAS IV and upcoming PLC assessments. The Secretariat will prepare a draft indication focusing on the comprehensive HELCOM survey on knowledge needs since the highlights in the main Science Agenda report are likely too broadly formulated to serve as basis for such indication.
- to include reference to 'dynamic' models in the section on 'Food webs' but to otherwise leave the highlighted science needs related to food web models open and not specify prioritized models. Lead country Latvia will provide a rewrite proposal.
- under the section on 'Eutrophication' to 1) remove the word 'societal' from the highlight starting "Investigate the obstacles..." 2) to move the highlight related to attitudes towards nutrient reduction to the comprehensive HELCOM survey on knowledge needs and 3) to formulate one or two more general highlights related to social science in the ESA section. The Secretariat will come up with a proposal for a more general formulation on social science needs in communication with the Swedish Agency on Marine and Water Management that has already proposed that social sciences should be addressed in the ESA section.
- to rewrite one of the highlights in the NIS sections, related to impacts of NIS on economic and social issues, so that it does not refer to development of an indicator but is formulated more open. The Secretariat will provide an initial proposal in the next update of the report.
- to keep the highlight related to BAT and BEP in the Shipping section focused on underwater noise as proposed by Lead country Germany.
- to continue to use 'Ecosystem approach' as the main term in the EA section since there is a joint definition in HELCOM on this term. The link between the 'Ecosystem approach' and 'Ecosystem based management' has been outlined in the text.
- to include a list indicating proposed 'Further reading' at the end of document but not to include in-text-references in the Science Agenda and to overall use a limited approach also to the 'Further reading' list. The Secretariat will include key HELCOM reports to the list and authors are invited to proposed key articles that they find relevant to include.

The Meeting discussed the mentioning of development of indicators in the Science Agenda report. The Meeting agreed that mentioning of the need to develop indicators should as such not be part of the Science Agenda but that it would be relevant to formulate knowledge needs for the development of indicators. The Secretariat will take the initiative and together with authors on texts that refer to indicators explore if there is existing information available on knowledge needs, e.g. through ongoing discussions on indicator developments in HELCOM.

The Meeting took note that new or substantially updated texts of the following topics are included in document 2-1 rev 1.

- Habitats; the text has been revised by the Secretariat to also address pelagic habitats.
- Marine litter; an updated text has been provided by Lead-country Russia and comments have been received from Finland and Germany. It was noted that additional comments have been received from Germany that are not yet included in document 2-1 rev 1., including a number of proposals on new highlights. These comments will be included in the next update of the report (see also AI4, Next steps).
- Underwater noise; new text has been provided by Denmark based on initial proposals by co-Lead countries Finland and Germany. The text has been substantially rewritten to align the Science Agenda with the ongoing development of a HELCOM roadmap on underwater noise and actions to be included in the updated BSAP.
- Non-indigenous species; there is no Lead country on this section and the text has been revised by the Secretariat to avoid overlaps with the Shipping section and to respond to comments to the report by the Science Agenda Task Group and national experts.
- Spatial pressures and impacts assessment; there is no Lead country on this section and the text has been revised by the Secretariat to reflect recent discussions in HELCOM related to the use of and needs for this type of assessment in HELCOM. The title has also been changed (previous title 'Cumulative impacts').

The Meeting agreed to pay particular attention to the above mentioned texts in the final review round of the report. For marine litter and underwater noise, the Meeting furthermore agreed to provide immediate comments by **Friday 16 October** (see also AI4, Next steps).

The Meeting took note of document 2-3 and the five cases of overlap between the Science Agenda and the BSAP. The Meeting agreed that the Task Group representatives will provide views on the proposals on how to resolve the identified overlaps by **Tuesday 20 October**.

[Agenda item 3 New contributions to the science agenda](#)

The Meeting discussed that proposed new highlights for the Science Agenda (document 3-1 rev 1). The outcome of the discussion is sorted by the country that made the proposal and to which version of the report.

Proposals from Germany (to the version of the Science Agenda submitted to HOD 58, doc 4-8 Att 1.):

Habitats:

- Develop methods for the restoration of seagrass beds and reefs

The Meeting agreed on the proposed rewrite and merging of two previous highlights as indicated in document 2-1 rev 1 i.e. "Identify areas, as well as develop and improve methods, for the restoration of benthic habitats/biotopes, e.g. habitat-forming species such as seagrass beds, macrophyte stands and reefs, along with improving the understanding of the wider synergistic effects of habitat restoration efforts, to support the effectiveness of measures to improve biodiversity and nature based-solutions for tackling climate change and its impacts".

Climate change:

- Development of ecologically sustainable adaptations to sea level rise and increase of extreme weather patterns
- Develop sediment management concepts for coastal areas with the goal to minimize impacts of coastal protection measures against climate change on natural and dynamic systems
- Investigate the impact of climate change on protected areas in the coastal zones and identify possible spatial shifts of habitats

With regard to the first two points, the Meeting took note that the issue of climate change is progressing in HELCOM and that as a first step there will be an agreement on so called Climate Fact Sheets that will be approved in association to the updated BSAP. When the Climate Fact Sheets have been approved, HELCOM will work further to identify priorities related to Climate Change impacts. The Meeting agreed that for the time being it would be more suitable to include the two proposals as part of the comprehensive HELCOM survey of knowledge needs since the prioritization process related to climate change is still to come in HELCOM.

With regard to the third point, the Meeting agreed to merge the proposal with a similar highlight under the MPA section as proposed by the Secretariat but with a slight edit so that it reads: "Investigating the impact of climate change on protected areas, including modelling benthic habitats/biotopes and species distribution maps for the entire Baltic Sea region under different climate change scenarios, to use as one basis for planning and optimizing the MPA network and ensure coherence in the long term".

Hazardous substances:

- Improved knowledge on submerged munition and its integrity (e.g. status of corrosion, leakage of the hazardous substances) per location including risk assessment for marine environment.
- Development of monitoring system for contaminants from munition in biota, if applicable sediment and water, Deriving of environmental quality standards for assessing need for remediation

The Meeting agreed that a highlight related to munition should be included in the Science Agenda but proposed to consider if both highlights are needed or if they could be combined¹.

Shipping:

- Development of risk assessment and standards with respect to in-water cleaning (IWC) of commercial ships and leisure boats.

The Meeting supported in general the inclusion of a highlight related to this topic. However, overall the Meeting was of the view that the list of highlights under the Shipping section had become long compared to the indicative maximum number of eight highlights. It was proposed that some of the specific highlights could perhaps be grouped or moved to the comprehensive HELCOM survey of knowledge needs. The Science Agenda representatives will possibly return with more specific proposals.

- Quantification of the amount of oil released to the Baltic Sea from small but continuous emissions of mineral oils and assessment of the environmental effects.

¹ Note to the Task Group: not that the second bullet point has already been proposed to be edited by the Lead country Finland and Sweden as compared to document 3-1 rev1. It now reads: "Development of risk assessment approach for contaminants from munition (in biota, if applicable sediment and water), and development of quality standards for assessing the need for remediation"

The Meeting agreed on the proposal noting that it combines two aspects earlier proposed by Sweden into a more general highlight. The two more specific proposals from Sweden will be included in the comprehensive HELCOM survey on knowledge needs.

Proposals from Secretariat (included in document 2-1 rev 1):

Non-indigenous species:

- Better understanding of the effects of small NIS taxa such as protozoa, bacteria, and viruses. They remain unrecognized, undetected and they have no priority in surveying NIS, and knowledge on their impact is thus limited.
- Development of methodologies to quantify the impact of NIS on the ecosystem functioning, including for communities, biological process and habitats, and on its carrying capacity and resilience. Improved knowledge would support the development of an indicator on adverse effects by NIS.

The Meeting agreed on the two highlights noting that the first proposal aligns with the comment from Sweden regarding the lack of knowledge on parasites and the effect on food webs and that the second proposal will contribute to the development of an indicator on adverse effects of NIS.

Proposal from Sweden (to the version submitted to HOD 58, doc 4-8 Att 1):

EA section

- How could Decision Support tools be used in management of activities in the Baltic Sea area and must existing tools be revised or are new developments necessary?

The Meeting was of the view that the proposal needs to be clarified e.g. what kind of decision support tools that the highlight refers to and what are the specific knowledge needs. It was also noted that a recent BONUS project has provided a review on Decision Support tools. The Meeting agreed that the Swedish and German representatives of the Task Group will propose a revised highlight and communicate the proposal with the Swedish Agency for Marine and Water Management that made the original proposal. The revised highlight will thereafter be shared with the Science Agenda Task Group.

Proposal from Finland (on document 2.1 and included in 2.1 Att 1.rev1, Science Agenda TG 5-2020:

Eutrophication:

- How eutrophication will directly/indirectly affect the oxygen conditions of the Baltic Sea, i.e. by increasing the area of anoxic bottoms and thereafter causing enhanced internal loading.

The Meeting considered that the proposed highlight could be incorporated into one of the existing highlights starting with "Investigate the obstacles...". The Meeting agreed that Lead Country Sweden will make a proposal on how to incorporate the aspect of anoxia in communication with co-Lead country Finland and thereafter share the proposal with the Science Agenda Task Group.

- Studies on new technical practices to decrease nutrient loading (e.g., gypsum treatment of fields) should be developed

The Meeting considered that the proposed highlight could be incorporated into one of the existing highlights. The Meeting also discussed that there are many technical practices to reduce nutrient loading under discussion and that the reference to gypsum treatment was perhaps too specific. The Meeting agreed that Lead Country Sweden will make a proposal on how to incorporate the aspect of practices to

decrease nutrients loads in communication with co-Lead country Finland and thereafter share the proposal with the Science Agenda Task Group.

- Maritime nitrogen emissions to the Baltic Sea should be reduced, for example, by increasing the use of liquefied natural gas (LNG) as ship fuel

The Meeting was of the view that the third proposal is formulated as an action and thus not suitable for the Science Agenda report.

Marine litter

- Studying fragmentation of macroplastics in the environment to better estimate their role and importance in the formation of secondary microplastics.

The Meeting agreed to include the proposed highlight. The Meeting noted that a similar proposal has been made by Germany although these comments have not yet been included in the report. It may thus be necessary to combine the two proposals.

Shipping:

- Future needs of oil combatting capacity should be mapped and operational functionality of oil-combatting operations should be ensured regardless of season

The Meeting took note that the last part of the highlight (operational functionality of oil-combatting operations should be ensured regardless of season) is formulated as a goal, and thus not suitable for the Science Agenda. The Meeting took note that Lead country Germany will consider the proposal further and make a proposal whether to incorporate it in an existing highlight, additional highlight, or as part of the comprehensive HELCOM survey on knowledge needs.

From Germany (on document 2.1 and included in 2.1 Att 1.rev1, Science Agenda TG 5-2020:

Underwater noise:

- Evaluation and feasibility assessment of Best available Technique (BAT) for underwater noise reduction (e.g. silent ships)
- Evaluation and feasibility assessment of Best Environmental Practice (BEP) for underwater noise reduction (re-routing, slow steaming, etc.)

The Meeting re-iterated that these aspects of underwater noise are already addressed under the topic 'Shipping' and agreed and that they should be kept in the current location and with the current formulation.

[Agenda item 4 Next steps](#)

The Meeting took note that the Science Agenda will be circulated intersessionally to HELCOM Working Group representatives by 30 October 2020 with an invitation to amend the comprehensive survey of knowledge needs as found relevant. The Meeting agreed to include a list of national Task Group representatives when the Science Agenda is submitted to the Working groups.

The Meeting took note that the Science Agenda will be submitted for provisional approval by HOD 59-2020 13 November 2020. The Meeting took note that the Science Agenda will be kept open for late inclusion of a few identified key issues, already tentatively identified as expected input from the continued BSAP UP process. This refers in particular to the MSP section since a HELCOM roadmap on MSP is under development and expected to be ready in spring 2021.

The Meeting agreed on the following next steps:

- The Secretariat will update the Science Agenda report based on decisions during the meeting and also add late comments by Germany to the section to marine litter immediately after closure of the meeting (i.e. by **13 October**).
- For marine litter and underwater noise, the Science Agenda Task Group is invited to provide further comments **by 16 October**. The authors will thereafter be requested to update the texts.
- For all other texts the authors are requested to consider the existing edits, accept them or provide reasons to why they are not accepted, and submit updated texts to the Secretariat by **16 October**. No response by this date will be taken as silent approval.
- Any further comments to the report by the Science Agenda Task Group are to be submitted to the Secretariat by **26 October**.
- **Preparedness by the Science Agenda Tasks and authors** on intersessional approval of final amendments **from end of October to mid-November** e.g. to agree on revised versions of highlighted knowledge needs that will be prepared as a result of decisions during the meeting.
- Submission of final draft to HOD; **13 November**.
- Science Agenda Task Group and authors to check and **amend the annexes by 30 November**. This will take place when the BSAP actions have been further developed and authors will get background material information from the Secretariat when it is time to initiate this work.

Submission of documents to be addressed to ullali.zweifel@gu.se

The Meeting agreed to follow-up on the outcome of HOD 59-2020 and tentative feed-back from Working Groups through an online meeting in December. The Secretariat will set up a poll to fix a time and date in the period 14-16 December 2020.

[Agenda item 5 Notes from the meeting](#)

The Notes from the meeting were approved through written procedure.