



Document title	Implementing the Work Plan for future work on HELCOM indicators on underwater noise
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Background

HOD 57-2019 took note of [document 4-20](#) on future work on HELCOM Indicators, considered the indicators identified to be of high priority by the first indicator workshop (outlined in table 2 with dark grey color), considered the topic specific workplans and associated resource requirements (also outlined in table 2), and agreed on the areas of priority where development work is to be carried out for HOLAS III. HOD 57-2019 approved the work outlined in Step 5 of the future work on HELCOM indicators process, in line with the agreed prioritization and plans outlined under each topic ([Outcome of HOD 57-2019](#), paras. 4.46-4.47 and 4.51).

This document contains the [Work Plan for future work on HELCOM indicators on underwater noise](#) where questions and issues for consideration by the Meeting are included with track changes.

Action requested

The Meeting is invited to consider each of the questions raised in the document, discuss them and agree on a common position so that the outcome of the discussion can be shared with PRESSURE Working Group for consideration.

Implementing the Work Plan for future work on HELCOM indicators on underwater noise

What is the optimal assessment?

A [Topic Summary](#) has been prepared as part of the preparatory work in the future work on HELCOM Indicators process. An optimal assessment should be tied to suitable species that are affected by these noise-generating activities during periods of biological significance of their lifetime and be assessed against suitable threshold values. Cooperation with relevant institutions (e.g. OSPAR and EU TG Noise) should take place, and the specific feasibility of stages of the development work should be clarified and detailed (e.g. in EN Noise). There is a need to ensure that regionally harmonized monitoring and methodologies are applied, and that relevant quality assurance is in place. The optimal assessment is not yet fully established and needs further work, needing the involvement of experts within EN Noise. Short-term assessments should consider an evaluation of pressures, with longer-term developments to address the link with biota.

What will be achieved by HOLAS III (e.g. operational indicators by autumn 2021), and how?

Impulsive noise:

Impulsive noise was not included in HOLAS II as an operational indicator, however for HOLAS III there seems a reasonable chance that the indicator can be further developed and potentially fully operationalised.

Steps in 2020

- An assessment based on the registry can be included in the HOLAS III, which will benefit from experience gained by the assessment made in OSPAR. This will require an analysis of the sufficiency of available data in the registry.

[Is it possible to apply the assessment made in OSPAR?](#)

[A document will be prepared and submitted to PRESSURE 12-2020 to compile information on available and envisaged data in the registry.](#)

- It is proposed to send a questionnaire out to get feedback from Contracting Parties on the present situation related to reporting completeness and the corresponding perspective for improvement (see proposed questionnaire to assess completeness of data at end of document).

[Already done. See statement above.](#)

- It will be important to maintain the awareness that a need for reporting of data to the registry is critical in achieving a high-quality spatial assessment. Maintaining this awareness at all levels within HELCOM structure (e.g. Working Groups and EN Noise) will be important in achieving the best possible outcome by HOLAS III.

[It is suggested to regularly inform PRESSURE of the request to countries to provide annual data to the registry by September.](#)

[Is there any other step to be implemented in 2020?](#)

Steps in 2021

- Adoption of initial operational indicator (inclusive of threshold values is targeted) at State and Conservation (also sent jointly to PRESSURE) in autumn 2021.

[There is a need to initiate discussion on threshold values as soon as possible in the process.](#)

Further work is needed on the expert level (in EN Noise) to update the workplan with additional details and to ensure the timeline is viable and any foreseen obstacles can be uncovered. There is potential for an operational indicator by HOLAS III and as a minimum a strong overview to supplement the thematic discussion in HOLAS III will be possible.

[What are the main obstacles to achieve an operational indicator by HOLAS III? How can they be sorted out? Please note that in order for an indicator to be included in HOLAS III it has to be approved, at the latest in the fall Working Group meeting 2021.](#)

Continuous noise:

Steps in 2020

- New soundscape maps, based on modelling, for the new relevant assessment period are not yet available and need to be produced. This requires a solution as it will be a significant resource requirement.

The continuous noise database is currently testing the upload of data. The next step is the discussion on setting up the modelling tool. What are the requirements?

- A further developed and improved assessment compared to HOLAS II would then be achievable. The necessary experience and knowledge is available within EN Noise and the group needs to be involved at an early stage and throughout the process.

What are the proposals of EN-Noise in this regard?

Steps in 2021

- Adoption of initial operational indicator (inclusive of threshold values is targeted) at State and Conservation (also sent jointly to PRESSURE) in autumn 2021.

What are the main obstacles to achieve an operational indicator by HOLAS III? How can they be sorted out? Please note that in order for an indicator to be included in HOLAS III it has to be approved, at the latest in the fall Working Group meeting 2021.

What aspects of the identified work represent the highest priority?

Impulsive noise:

- The highest priority is maintaining awareness of the need to ensure improved and complete reporting to the underwater noise registry. Completeness of reporting will be a critical factor in the outcome of the proposed work.
- Further development of the HELCOM register of impulsive events (established in 2015 and hosted by ICES, where countries are reporting data on an annual basis), including:

- a. currently the registry only compiles information based on information required as part of the Marine Strategy Framework Directive (MSFD) commitments by HELCOM Contracting parties that are also EU Member States. HELCOM countries may agree on reporting additional detailed information (e.g. position of the sources, number of pulses, date and time, source level, frequency spectrum) to increase the accuracy and usefulness of the registry, and in such a scenario the registry would need updating to support this information.

Is there a need to provide additional information for the assessment? If that is the case, there is a need to agree on the specific information for countries to provide and inform them accordingly.

- b. clarify minimum levels for activities below which reporting to the registry is not required, and clarify also how mitigation measures, such as bubble curtains, are dealt with.

Please be ready to provide suggestions in this regard.

- An assessment of the availability and quality of data to evaluate its sufficiency for the planned assessment for HOLAS III will also be an important priority in the early stages of the ongoing work.

Please be ready to provide your views in this regard.

- Discuss possibilities for, and potential added value of, developing a common monitoring programme involving measurements of impulsive noise.

So far all the work has focussed on the development of the registry, but there is also a need to translate this work to the HELCOM Monitoring Manual work so that all countries are on the same page.

- In terms of threshold values, further work on the issue is needed, building on the HELCOM input to the process of establishing environmental targets for underwater noise, agreed by HOD 54-2018, and

in alignment with relevant EU (the document has already been shared with TG Noise) and OSPAR processes.

It is expected that TG-Noise provides guidance on thresholds by the end of 2021. However, this timeframe is not aligned with HOLAS III requirements. There is a need to ensure that the two processes are aligned.

Continuous noise:

- How to include higher frequency bands (tentative proposals 2 and 5 kHz third octave bands).
Please be ready to provide suggestions in this regard.
- The assessment protocol, which has been described - although further work is needed to ensure that it only considers those areas where specific sound sensitive species occur (the BSEP on noise sensitivity of animals in the Baltic Sea is to be used for that purpose).
Please be ready to provide suggestions in this regard.
- Statistical power in the monitoring data, i.e. determining how the ability to detect statistically significant trends in the indicators depends on the number of years of monitoring data available.
Please be ready to provide your views in this regard.
- Guidelines for monitoring as well as a monitoring sub-programme for continuous noise are available. Work is on-going together with ICES to set up a continuous noise database to host the indicator data, which is foreseen to be ready by the end of 2019, at which point countries could start reporting data on an annual basis.
- Subsequently, the focus will be on setting up the soundscape planning tool, which is planned to be ready by mid-2020.

Is the proposed assessment policy relevant and ecologically relevant?

Both indicators are needed to provide a policy and ecologically relevant assessment. In particular, the work related to linking noise effects to relevant biota is of clear ecological relevance.

What are the resource needs (and period) to 1) carry out the work by HOLAS III (autumn 2021), and 2) for longer-term development issues (post-HOLAS III)?

The process of indicator development is well integrated within the existing structure (e.g. within EN Noise). However, additional resources are reflected on below.

Impulsive noise

- There may be national resource issues to consider to ensure effective and full reporting to the noise registry.

Continuous Noise

- Resource implications exist for ensuring the planned work is completed.
- There may also be considerations needed regarding national resources to ensure data is fully reported and available.
- The resource aspects needed to produce modelled soundscape maps will be needed. A previous estimate has been presented to State and Conservation 8-2018 ([document 3MA-5, table 4](#)).
- HOD-55 agreed on the suggested infrastructure for hosting a soundscape planning tool and a database. This should now be fulfilled to make it operational.
- The soundscape planning tool should be continuously updated with new soundscape maps. Currently the soundscape planning tool is using soundscape maps produced in 2014.

What integration of the indicators (i.e. those defined in question 2) is foreseen in HOLAS III?

- A more detailed answer is needed from EN Noise with input from relevant groups. For policy requirements under the MSFD there is no requirement to carry out an integration of the two proposed indicators, though the following questions could be discussed further at EN Noise in the future:
 - Would the information and indicators available by HOLAS III support the development of an additional thematic assessment (i.e. an independent detailed report to complement the summary report) on underwater noise in HOLAS III?
 - If the above is considered valuable, could some form of summary related to underwater noise and the Baltic Sea Action Plan (BSAP), as summarised in a thematic assessment at HOLAS III be valid?

Please be ready to brainstorm on these questions.

- It is important that the work is aligned with relevant biological layers. This will require ongoing cross-theme development work in the future and should be continued so that progress can be reflected in HOLAS III.

Please be ready to brainstorm on these questions.

What cross-theme issues exist (e.g. links between biodiversity and noise) and how will these be considered in future assessments?

- Links exist with EG-MAMA and Maritime WG, whereas it is important to further develop them with relevant fish groups.
- There is a need for joint discussion between these groups.

It is important that the work is carried out jointly and not completed as separate assessments for noise and biota.

Something specific to point out?