



## Baltic Marine Environment Protection Commission

Working Group on the State of the Environment and Nature  
Conservation

STATE & CONSERVATION  
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<b>Document title</b>	Proposed approach amendments for incorporating important habitats into the continuous noise assessment for HOLAS III
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<b>Submitted by</b>	Germany

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### Background

Germany holds a study reservation on the proposal on the assessment methodology for low frequency underwater noise in HOLAS III presented to STATE&CONSERVATION 14-2021.

For resolving the study reservation by Germany regarding the proposal on the assessment methodology for low frequency underwater noise in HOLAS III presented to STATE&CONSERVATION 14-2021, amendments to the document [4J-78](#) were proposed by German experts. An amended document was distributed to the network of EN-Noise for review and feedback, with the aim to resolve the study reservation by Germany on the previous version of the assessment proposal submitted to STATE&CONSERVATION 14-2021.

The majority of these amendments found consensus within the network, while the approach proposed regarding the incorporation of important habitats for noise sensitive species into the continuous noise assessment was not yet resolved.

This document outlines the proposal for an amendment to the assessment approach, incorporating important habitats for noise sensitive species into the continuous noise assessment and threshold values setting for HOLAS III, including a step-wise approach to consider these important habitats in the assessment in practice.

### Action requested

The Meeting is invited to take note of the information and to decide on the amendment of the continuous noise assessment as proposed in this document.

## Assessment methodology background and proposed amendment for low frequency underwater noise in HOLAS III

Background information on current considerations within the assessment methodology and threshold values scope

For the HELCOM region information has been gathered on important habitats that are available for the purpose of assessment of impacts of impulsive and continuous noise on the marine ecosystem and presented in BSEP, 167 (Fig 1). The knowledge on sensitive species and sensitive areas may have improved since then, so that the most recent information should be used in HOLAS III. Guidance on this should be obtained from appropriate expert networks, in particular EN-MAMA and EN-FISH.

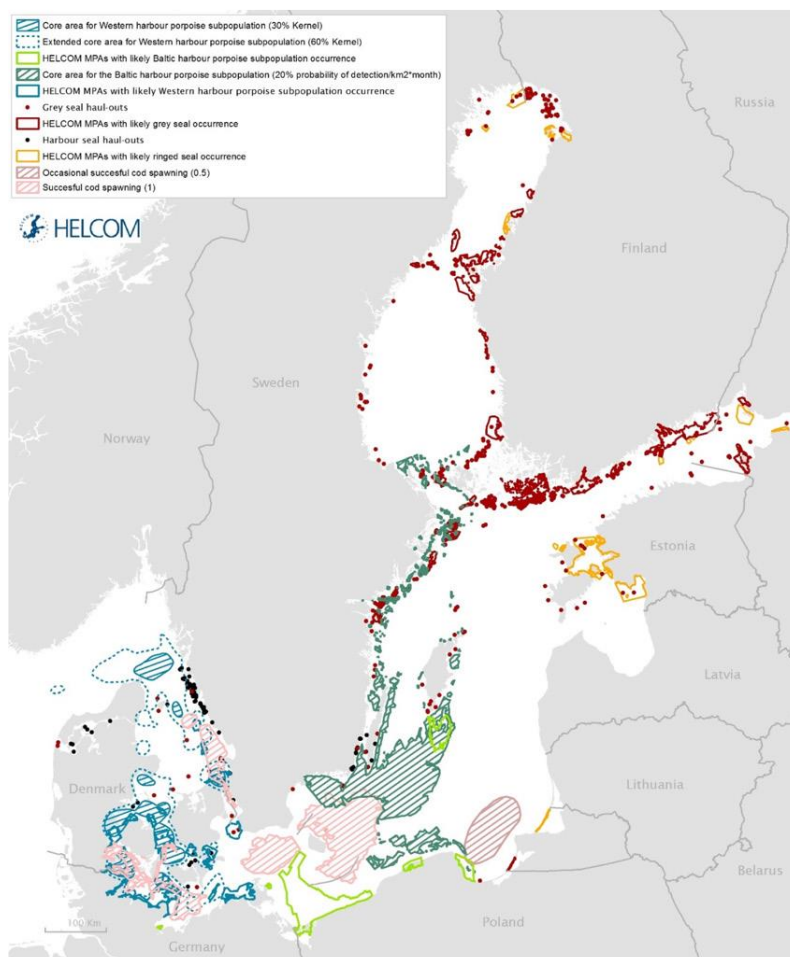


Fig 1. Noise sensitive areas in the Baltic Sea derived from biological data on species sensitive to underwater noise so far identified. (Source: [HELCOM 2019. Noise sensitivity of animals in the Baltic Sea. Baltic Sea Environment Proceedings N° 167](#)).

For the assessment of the anthropogenic sound emission, absolute sound pressure levels above the natural background noise are applied, as schematically shown in Figure 2. This offers the possibility to verify the acoustic conditions also by measurement campaigns, which would be necessary for the proof of success of

measures to be applied in further steps to reduce the impact on the marine environment. Furthermore, it offers the possibility to directly compare the results of the evaluation of HOLAS II with HOLAS III.

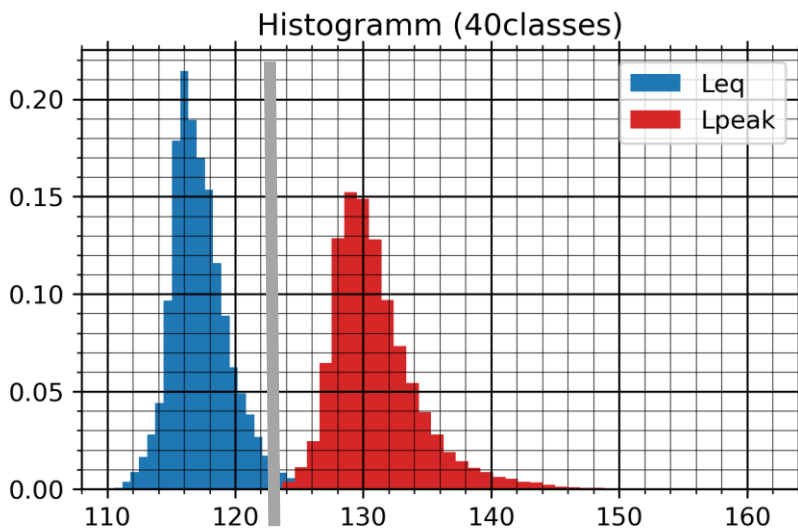


Figure 2: Histogram of the sound pressure level (10-20kHz, green line symbolises a limit value that must not be exceeded, this is above the maximum achievable natural background noise in this area, e.g. +6 (10) dB)

The assessment can be conducted for the entire HELCOM region, since noise pressure and impact may affect species anywhere in the region, on sub-basin level (MRUs), but also on the level of sensitive habitat areas for sound-sensitive species. An exemplary illustration of the combination of noise data and noise sensitive habitat areas is shown in Figure 3, using an Exceedance Level map from 2014 (BIAS calculation). In comparison to HOLAS II, an annual but also monthly analysis can be conducted in order to be able to assess sensitive periods.

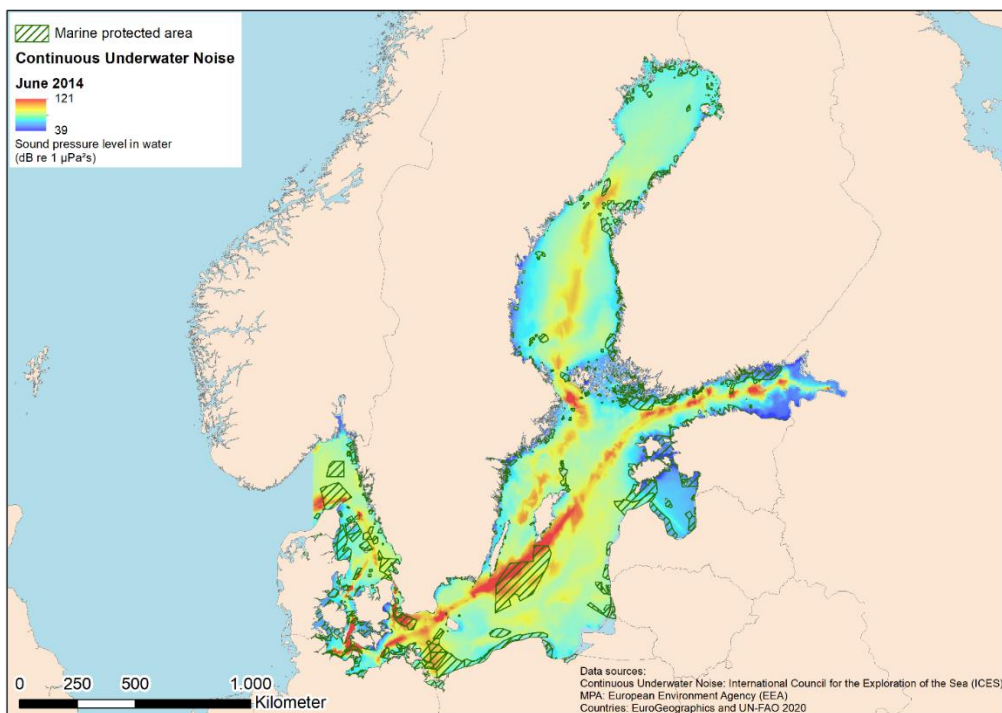


Figure 3: Example of an assessment taking protected areas into account, BIAS 2014, 50%-Percentile Exceedance Level for 125 Hz in June 2014.

## Proposed five-step approach amendment regarding the use of important habitats in the assessment methodology and threshold values scope

The assessment is proposed to be performed according to the following steps in order to compare the pressure among sub-regions (subareas) and selected habitats:

1. Identify and agree on areas that should be assessed as a whole or separately based on current knowledge. The selection of areas should encompass areas like spawning grounds or designated areas for the protection of species known to be sensitive to sound impact. Since the soundscape modelling of noise in coastal areas is not robust enough due to missing data and hydrographic characteristics, coastal areas and impacts like those linked to recreational vessels might be excluded from HOLAS III assessment.
2. Use total sound pressure levels derived in the soundscape modelling of natural and anthropogenic noise (Fig. 3) to describe the pressure with respect to frequencies assessed, including the two frequency bands 63 Hz and 125 Hz, in accordance with guidance from the European Commission, and further frequency bands of interest (e.g., 2,000 Hz, as suggested by the BIAS project).
3. Set a dual criterion for assessing sound pressure on the entire sub-basin or selected areas based on a) percentage of area and b) percentage of time, that sound pressure levels in the selected area exceed natural noise.
4. Determine the percentage of the area ensounded with noise that exceeds sound pressure levels which are 6 or (10) dB above the maximum of the natural noise dB re 1 $\mu$ Pa X % of the time.
5. Compare against the threshold level for GES. It is proposed that the defined SPL under 3 should not be exceeded in X % or more of the selected area and Z% of the total area. Long-term habitat loss should not exceed Y% whereas temporal habitat loss (e. g., by disturbance) should not exceed X % of an area.

### Ongoing discussions

The assessment could be conducted for the entire HELCOM area but also for sub-regions, which should be agreed on between EN-Noise and EN-MAMA and if necessary further expert groups. Input from these expert groups should be considered. Further, the development of guidance of TG Noise should be considered for the practical implementation of the assessment in HOLAS III.