



Document title	Progress in implementing the underwater noise roadmap
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Background

HELCOM 37-2016 adopted the 'Regional Baltic Underwater Noise Roadmap 2015-2017' as included in Annex 3 to the [Outcome of HELCOM 37-2016](#). The Roadmap is based on five steps aiming to prepare a knowledge base towards a regional action plan on underwater noise in 2017/2018 to meet the objectives of the 2013 Ministerial Meeting, and of the EU MSFD for HELCOM countries being EU Member States.

This document provides an update on HELCOM activities on these five steps.

Action requested

The Meeting is invited to note progress in the implementation of the regional underwater noise roadmap, and provide their views on future steps and associated timetable to continue HELCOM work on underwater noise.

Progress in implementing the underwater noise roadmap

HELCOM 37-2016 adopted the 'Regional Baltic Underwater Noise Roadmap 2015-2017' as included in Annex 3 to the [Outcome of HELCOM 37-2016](#). The Roadmap is based on five steps aiming to prepare a knowledge base towards a regional action plan on underwater noise in 2017/2018 to meet the objectives of the 2013 Ministerial Meeting, and of the EU MSFD for HELCOM countries being EU Member States. HELCOM activity is currently focused on Steps 1 to 4, since Step 5 refers to the working timetable which has already evolved.

Step 1 - Knowledge gathering

Following a long and fruitful commenting process with contribution from experts from EN-Noise, SEAL EG, as well as GEAR and State & Conservation WGs a report presenting the rationale for identifying Baltic species which have the potential to be impacted by noise together with a preliminary identification of biologically sensitive areas was prepared ([document 6-6](#) from Heads of Delegation 51-2016; to be published as a BSEP)¹. The report also supplies a prioritized list of noise sensitive species based on the following criteria: hearing sensitivity, known (or suspected) noise impact on the species, threat status, commercial value, and data availability. Harbour porpoise, harbour seal, ringed seal, grey seal, cod, herring and sprat have been identified as priority species. Diving birds are covered by the report as well, however, the lack of knowledge regarding diving birds prevented them from being included in the list at present. With new knowledge constantly emerging, new species may be added in the future. For each of the prioritized species the distribution of species and biologically sensitive areas is presented based on available data. Finally, a map compiling noise sensitive areas derived from biological data on noise sensitive species so far identified is presented. The document is pending its finalization on a final revision to address comments received after HELCOM 38-2017 as well as HODs decision on the map since it is included in the HELCOM Input to the process of establishing environmental targets for underwater noise (document to be considered at HOD 52A-2017).

Also a report compiling the internationally available reviews on underwater noise mitigation measures and country specific information (Denmark, Finland, Germany, Lithuania, Russia and Sweden) was prepared (with support of the EU co-financed [BalticBOOST project](#), theme 4 on Underwater noise) and commented by PRESSURE 4-2016 and MARITIME 16-2016. Based on the feedback received, the content and presentation of the [report](#) has been improved and finalized to serve as background report for future analyses.

Step 2 - Indicators

Regarding indicators, the work is progressing on two indicators, continuous low frequency anthropogenic sound, and distribution in time and space of loud low- and mid- frequency impulsive sounds, under the Lead and co-Lead Countries and with involvement of the Contracting Parties through the HELCOM EN-Noise.

¹A draft report was presented to STATE & CONSERVATION 4-2016 (document 6J-1). Based on the feedback received ([Outcome of STATE & CONSERVATION 4-2016](#), para. 6J.2-6J.5), the document was revised. On 29 August 2016 the State and Conservation contacts were invited to provide comments to the revised document by 23 September, after which the document would be considered tacitly approved. Additional comments as provided by Denmark and Poland were incorporated into the document.

Based on comments received at GEAR 15-2016 ([Outcome of GEAR 15-2016](#), para. 4.12) additional sensitive areas for harbour porpoises in the Western Baltic Sea (Pomeranian Bay and protected areas east of Rügen as well as Puck Bay) were included in the map of noise sensitive species. Finnish feedback provided after HOD 51-2016 also improved the map, as well as input provided by STATE & CONSERVATION 6-2017 ([Outcome of document STATE & CONSERVATION 6-2017](#), para. 4J.5 and document 4J-14-Rev.1).

HELCOM 38-2017 agreed that comments to the report considered at HOD 51-2016 could be submitted to the Secretariat by 22 March and invited the HELCOM SEAL EG to review the report by the same deadline. The Secretariat sent feedback requests to national experts (Danish and Swedish experts for harbour porpoise data) and networks (HELCOM EN-Noise and SEAL EG). Feedback was provided by Denmark, Finland, Germany, Lithuania, Sweden and the Chair of SEAL EG.

The work conducted on indicators has enabled the inclusion of [underwater noise](#) as a descriptive section of the State of the Baltic Sea report.

Continuous sound

Work on the continuous sound pre-core indicator has been led by Poland, with Denmark, Finland, Germany and Sweden as co-lead countries. The indicator concept has been defined, although further discussions are to continue in the frame of the HELCOM EN-Noise to address German recommendations to monitor higher frequencies (for instance, 2kHz and 10 kHz). The assessment protocol has been described; further work is envisaged to ensure that it only considers those areas where specific sound sensitive species occur.

Further work is needed to finalize and operationalize this indicator ([current version](#) of the indicator report).

There is a proposal for regional monitoring programme of ambient noise that would combine a yearly minor assessment in a few prioritized locations (11 stations) and a major assessment every e.g. six years (38 locations) (STATE & CONSERVATION 4-2016, [doc 6J-2 Rev1](#)). Further work on the regional monitoring programme is envisaged for 2017-2018 including i.e. final agreement on location of stations, as part of the Work Plan for State and Conservation for 2017-2018.

It is envisaged that monitoring guidelines as well as a proposal for a regional monitoring programme for continuous noise are submitted to the upcoming State and Conservation meeting in October for consideration.

Impulsive sound

Work on the impulsive sounds pre-core indicator has been led by Germany, with Denmark, Finland and Sweden as co-lead countries.

The indicator concept is defined as sound events which effective time duration of individual sound pulses is less than ten seconds (i.e. impulsive). Good status has not been defined, however could be further developed by considering the frequency and distribution of the impulsive noise events that will not have an adverse impact on elements of the marine environment that are to reach good status (occurrence and seasonal sensitivity level of target species along with an ecosystem approach of impacts).

Further work is needed to finalize and operationalize this indicator ([current version](#) of the indicator report).

The regional [registry](#) of licenced events such as pile driving, controlled explosions from naval operations and other activities that release energy has been established and countries are reporting their national data. The registry currently contains data reported by Denmark (2015), Estonia, Finland (2008 and 2010-2011), Germany (2013-2016), Lithuania (2013 and 2016) and Sweden (2015), whereas Poland has informed of being in the submission process. The reporting deadline to the registry for new data to be included in the updated version of 'State of the Baltic Sea' report was 8 September 2017 ([Outcome of PRESURE 6-2017](#), para. 4.2). Improvement of the procedure to assess the data in the registry is foreseen. Moreover, PRESURE 6-2017 ([Outcome of PRESURE 6-2017](#), para. 4.4) agreed on reporting annually to the registry of impulsive events, taking into account a later clarification by Russia, which has not been provided yet.

Step 3 - Explore the possibility to determine acceptable levels of underwater noise for marine species

Following a long and fruitful commenting process with contribution from experts from EN-Noise, SEAL EG, GEAR and PRESURE WGs², HOD 52-2017 agreed on the "HELCOM input to the process of establishing

²HELCOM 38-2017 considered a first document on regional input and established a procedure for its commenting mandating the EN-Noise to address the open issues raised by the Contracting Parties and elaborate the document further for submission to HOD 52-2017 ([Outcome of HELCOM 38-2017](#), para. 4.28 - 4.35 and [document 4-7](#)). This further elaboration took place during a parallel session of the EN-Noise established at PRESURE 6-2017 where considering further comments provided by Finland, Germany, Lithuania and Sweden as well as the Chair of SEAL EG the network reported an improved document to the meeting. PRESURE 6-2017 agreed on further steps to address remaining open

environmental targets for underwater noise” ([Outcome of HOD 52-2017](#), para. 3.18-3.19 and [document 3-6](#)) pending the clarification of the study reservation by Germany and Russia to be clarified through written procedure by 21 July 2017 and that it could serve as regional input to other fora, including other Regional Sea Conventions as well as European processes.

No information has been received from Russia regarding their study reservation yet.

Germany provided specific proposals to the document which were discussed during the on-line meeting of the HELCOM EN-Noise held 16 August 2017 reaching an expert agreement on the document ([Memo of the working meeting of the HELCOM EN-Noise](#)). The revised document is to be considered at the online meeting of the Heads of Delegation 26 September 2017.

Step 4 - Evaluation and follow-up of the Roadmap

In relation to the HELCOM Input to the process of establishing environmental targets for underwater noise, HOD 52-2017 agreed that Russian considerations to, e.g., provide examples for how the decision support trees can be applied and to compare the natural and anthropogenic noise level, will be prepared by relevant HELCOM groups in the future development of the subject on underwater noise. HOD 52-2017 agreed that the approach will be further developed in the future once more experience is gained through testing of the decision support trees and more data becomes available and that the HELCOM Fish Group and SEAL EG will be engaged, and cooperation with ASCOBANS on this topic will be established. Finally, the proposal of GEAR to complement the document with future steps and associated timetable and to continue HELCOM work on underwater noise towards the HELCOM Ministerial Meeting 2018 was supported, as well as the national testing of decision support trees for establishing environmental targets for impulsive and continuous noise, to be followed up by the EN-Noise in coordination with OSPAR and the European work as proposed by GEAR.

Also in preparation of the upcoming HELCOM work on underwater noise in close cooperation with OSPAR, a [Joint Session of OSPAR ICG-Noise and HELCOM EN-Noise](#) will be held on 5 October 2017 in Gothenburg, Sweden. The Joint Session will focus on current and future activities of joint interest including a possible joint input to the European level discussions, further development of the Impulsive Noise Registry and the development of impact indicators and monitoring of continuous noise.

issues and agreed on the document but decided that countries could provide written comments based on national consultations by 5 May 2017 ([Outcome PRESSURE 6-2017](#), para. 4.6-4.9 and Annex 6). Russia was to decide on their position on the revised document by 23 May.

The Secretariat sent feedback requests to EN-Noise and SEAL EG according to the agreed further steps. Based on the feedback received an improved version of the document was submitted to GEAR (GEAR 16-2017, [document 5.1-Rev.1](#)), including Danish proposals of amendments (Annex 1 to the document). GEAR 16-2017 considered the document and discussed alternative titles for it. Based on the comments by Denmark and discussion at GEAR 16-2017 the document was further revised in the meeting by the Secretariat (Annex 4 of the [Outcome of GEAR 16-2017](#)). GEAR 16-2017 recommended the document in principle for agreement in HOD 52-2017, noting that Germany needed more time to check if the comments by the State and Conservation WG have been implemented. Germany reserved its position on the map of sensitive areas for underwater noise ([Outcome of GEAR 16-2017](#), para. 5.1-5.6) with the agreement on the need to complement the HELCOM Input with steps needed for its operationalisation and a timetable for further work to be prepared with involvement of relevant HELCOM groups.