

**Memo of the First Informal Consultation Session of the HELCOM Expert Group on
Underwater Noise and the OSPAR Interseasonal Correspondence Group on Underwater
Noise
(IC EG NOISE and ICG NOISE 1-2023)**

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Introduction

- 0.1 The First Informal Consultation Session of the HELCOM Expert Group on Underwater Noise and the OSPAR Intersessional Correspondence Group on Underwater Noise was held in Copenhagen, Denmark on 4-5 October 2023.
- 0.2 The Session was attended by Delegations from Belgium, Denmark, Estonia, Finland, France, Germany, the Netherlands, Poland, Portugal, Sweden and UK, as well as HELCOM Observer from Coalition Clean Baltic, OSPAR Observer from the International Chamber of Shipping and IOGP. ABSH external expert advisor JASCO also attended the Session. The list of participants is contained as **Annex 1**.
- 0.3 Mr. Jakob Tougaard, Chair of EG Noise together with Mr. Nathan Merchant and Mr. Niels Kinneging, Co-Convenors of ICG Noise, acted as Co-Chairs of the Session.
- 0.4 Mr. Philip Stamp, OSPAR Deputy Secretary, Ms. Franziska Bils, OSPAR Assistant and Ms. Marta Ruiz, HELCOM Associate Professional Secretary, acted as Secretaries of the Session.
- 0.5 The Session was welcomed by the Co-Chairs.

Agenda Item 1 Adoption of the Agenda

- 1.1 The Session adopted the Agenda as contained in **document 1-1**.

Agenda Item 2 Update on HELCOM activities

- 2.1 The Session took note of an update on the latest activities on underwater noise in the HELCOM framework which focus on the implementation of the Regional Action Plan on Underwater Noise (RAP Noise) and noise related actions in the Baltic Sea Action Plan (BSAP), as well as on monitoring and assessment both on impulsive noise and continuous noise (**document 2-1**, and **Presentation 1** and **2**).
- 2.2 The Session took note that, in relation to the impulsive noise events included in HOLAS 3, the reporting is not complete, however it is not possible to quantify such lack of reporting.
- 2.3 The Session discussed the issue of the value file codes which were not consistent in the reporting of impulsive noise events. The Session took note of a proposal to improve the quality of available data with the monitoring of biological effects.
- 2.4 The Session took note that further developments of the registry are connected to guidance on the further development of the indicator from EU TG Noise. This may happen in one year's time, once experience from the current process is evaluated (e.g., HOLAS 3 and QSR 2023).
- 2.5 The Session took note of the relevance to clearly indicate in the metadata in the noise registry what are the contents of the data reported, so that the difference from the output of the regional assessment is understood.
- 2.6 The Session took note that an evaluation of the HOLAS 3 process and lessons learnt is happening in HELCOM lead by the GEAR Working Group, and that input from experts is foreseen in this process.
- 2.7 When considering the monitoring and assessment on continuous noise, the Session took note that the report from the HELCOM BLUES project is available [here](#).

2.8 The Session discussed the results of the HELCOM continuous noise assessment and took note that the assessed marine mammals are more sensitive to high frequencies than lower frequencies. Based on this fact, the criteria used for the threshold value shows that the status is good.

2.9 The Session took note that a quantitative assessment using preliminary threshold values according to the EU TV Guidance was successfully tested for impulsive and continuous noise in HOLAS 3. However, further work on the selection of indicator species and LOBE is required.

2.10 In this regard, the Session took note that there are parameters that need to be further analysed to ensure that the assessment is done properly, and that impacts are not missed. These parameters would be the accuracy of the sound model, the appropriateness of the frequencies, LOBE value and threshold values, as well as the geographical areas used (habitat).

2.11 The Session took note that low frequency sound does not propagate well in shallow waters which implies that spawning grounds of Baltic herring are not affected, however feeding grounds are. Given the fact that feeding grounds are dynamic, this issue is still unresolved.

2.12 The Session took note that soundscape maps were verified in spawning areas in certain locations confirming that low frequency sound does not propagate well in shallow waters less than 10m depth. It is to be noted that previous measurements from other shallow waters areas have not come up with the same conclusions. Further research on this matter is needed.

2.13 The Session took note of a suggestion to use several percentage values in connection with threshold values setting to indicate when certain percentage of the population of a species is affected.

2.14 The Session took note of a list of ongoing national projects in the Baltic Sea as kindly provided by Danish, Finnish, Polish and Swedish experts of EG Noise (**document 2-2 Rev.1**).

Agenda Item 3 Update on OSPAR activities

3.1 The Session took note of the state of play on noise-related work in OSPAR. ICG-Noise was co-convened by Germany, Netherlands and the United Kingdom. Its last full meeting was in January 2023 when it mapped out a challenging agenda for the group. The main result from the last few years was the Quality Status Report 2023, published in September 2023, and including 3 noise-related indicator assessments (pressure from continuous noise, pressure from impulsive noise and risk of impact from impulsive noise) as well as a thematic assessment which pulled together the main results in an accessible form. For the future there would be opportunities for improvement in the assessments, for example on effects ranges or on improving information on noise categories. A sub-group of ICG-Noise had been established in order to further develop OSPAR's noise monitoring programme for OSPAR regions; it would meet again directly following the joint session. The sub-group was planning an additional workshop on validation of noise data. ICG-Noise would prepare advice on threshold values for the meeting of EIHA in April 2024. It was also continuing with its work on an inventory of mitigation measures.

3.2 The Session took note of the information on the work done until now and the ongoing work on the OSPAR RAP Noise which is to be developed by 2025 (**document 3-1**). A first workshop had been held in December 2022 to discuss potential priority areas. This had been followed by a stakeholder questionnaire issued over summer 2023. An ICG-Noise "Extra" meeting would be held in November 2023 in order to work on concept actions for the RAP with the aim of adoption by the OSPAR Commission in 2025.

3.3 The Session took note of the results of the [OSPAR Common indicator assessment 'Risk of Impact from Anthropogenic Impulsive Sound'](#) (**Presentation 3**), further noting that the assessment did not use the EU Threshold framework fully but assessed the exposure of porpoise instead of excess levels. The EU threshold values were not available at that time.

Agenda Item 4 Discussion on topics of joint interest

4.1 The Session identified the following topics of joint interest:

- threshold values/LOBE/indicator species impulsive noise;
- threshold values/LOBE/indicator species continuous noise;
- ongoing (national) projects with relevance for regional level;
- monitoring activities;
- respective RAPs Noise; and
- harmonization between sea areas, and in particular on monitoring methods, including calibration of hardware and software and modelling and implementation of the respective RAPs Noise.

4.2 The Session initiated discussion on advancing on threshold values using **Presentation 4** as starting point and took note of the following views:

- **on the target species:** the definition of habitat is crucial in relation to this matter, as it is a key variable affecting the outcome of assessments. Another issue to consider is whether it is only the actual distribution areas what the focus should be made or also on potential distribution areas; the Baltic porpoise would be a special case in the Baltic Sea. The choice of indicator species is an additional important issue to discuss. HELCOM has previously identified the criteria for defining noise-sensitive species as included in the Baltic Sea Environment Proceedings "[Noise sensitivity of animals in the Baltic Sea](#)". The Session took note of the suggestion of not discriminating impulsive noise from continuous noise in relation to disturbance of noise sensitive species as there is no empirical data supporting such a distinction. There is also the possibility to use the same LOBE, but there is also the possibility to use a different temporal threshold. Given the data availability different approaches for different species might be needed;
- **on the type and quality of the sound (continuous or impulsive sound):** there will be limitations on the type of information to be obtained on sound levels. It should be about disturbance rather than injury using the data available; and
- **on the effect (displacement, masking, etc.):** the end point is not behaviour, but it is just the current status of knowledge. There are advances on certain species, like harbour porpoise species, where a lot of knowledge has accumulated, and where knowledge is available on the metabolism effects of noise. If it is possible to identify the sounds level when this starts to occur, then sound level can be used as a proxy. Otherwise, there is a need to use impact range as a proxy. It was further noted that harbour porpoise as a very noise sensitive and threatened species with quite a good data availability compared to other species, might not be the most sensitive species regarding masking effects from low frequency noise.

4.3 The Session discussed the need for increased cooperation between HELCOM and OSPAR experts on noise on certain topics in particular, such as the setting up of LOBE values. The Session invited the Secretariats and Convenors to further investigate the possibilities of increasing such cooperation.

4.4 The Session took note of the example from the background report for the Danish Basis analysis on the threshold values/LOBE/indicator species for continuous noise (**Presentation 5**). The Session further took note that information contained in the presentation is a report, which is to be distinguished from the national reporting under the MSFD.

4.5 The Session recalled information on ongoing national projects in the Baltic Sea as contained in document 2-2 Rev. 1, and took note of additional information as follows:

- work is ongoing in Germany on the development of an inventory of mitigation measures on shipping noise activities. It is foreseen to link this work with the RAP Noise;

- HORIZON project, where UK is involved, AquaPLAN (“Aquatic Pollution from Light and Anthropogenic Noise: management of impacts on biodiversity”), to begin in January 2024. It will focus on artificial light and noise as well as on underwater noise in relation to further development of the D11 indicator in the EU MSFD;
- five projects on underwater noise within the [JPI Oceans programme](#); and
- an Estonian project on effects of offshore wind turbine noise on Baltic herring with the University of Tartu (marine biology) and Tallinn University of Technology (acoustics). The project aims at using a robotic boat to map fish distribution around low-frequency sound source; the boat is equipped with hydrogen batteries for extended reproduction of low-frequency noise as well as with a particle motion sensor.

4.6 The Session took note that there is information available in the OSPAR sharepoint in relation to ongoing projects available for sharing with HELCOM colleagues.

4.7 The Session took note that the [Informal Consultation Workshop on implementation of BSAP actions related to recreational craft/leisure boats](#) (information also available in [CCB’s website](#)) held on 27-28 September 2023 also considered underwater noise issues in connection with recreational craft.

4.8 In relation to monitoring activities, the Session recalled information from the HELCOM area as contained in document 2-1 and took note of current status of uploads and development as contained in **Presentation 6**.

4.9 The Session took note that in the OSPAR area there is a subgroup on monitoring created after the JOMOPANS project finished in 2022. Monitoring of continuous noise is currently operational for the parts of the OSPAR region, and information of national activities is being collected to ensure an appropriate regional coverage. JOMOPANS data have been uploaded to the HELCOM database hosted by ICES. The workshop held on 3-4 October 2023 is very welcomed to support countries on the uploading of data. There are five OSPAR regions, being not all covered by the JOMOPANS project, which was focussed on the North Sea, thus discussions to ensure coordination have extended to other regions. Discussions on the OSPAR RAP Noise have also been initiated, including modelling considerations. A workshop on modelling validation is to be held at the end of November-beginning of December organised by CEFAS. Priorities in relation to monitoring are also to be analysed (e.g. use for assessments, evaluation of measures).

4.10 The Session took note that recreational craft is not included in the monitoring nor modelling in the OSPAR nor HELCOM area. However, it is a topic of relevance and it is part of the DEMASK project which covers the OSPAR area, specifically in relation to coastal areas. In the HELCOM RAP Noise, there are actions aiming at addressing this matter, although there is not a lead country to implement them. There is also experience from a national project in Sweden, however it is to be further discussed how to include recreational boating in regional monitoring.

4.11 When considering the respective RAPs Noise, the Session took note of the information on the framework to identify concept actions, based on the DAPSIR structure used in OSPAR’s QSR 2023 which could ultimately be included in the OSPAR RAP Noise and in the implementation plan of the North-East Atlantic Environment Strategy (NEAES) 2030 (**document 4-1**). The concept actions will be further developed into fuller proposals (using a standard task template) and agreed by the Committee on Environmental Impacts of Human Activities and the OSPAR Commission itself.

4.12 The Session took note of the information on the HELCOM RAP Noise drafting process as well as its status of implementation as contained in **Presentation 7**. The Session took note that additional information on the RAP Noise and its status of implementation is available on the [HELCOM website](#), and that this information is regularly updated.

4.13 The Session took note that in the HELCOM experience, it is important to keep a high level of ambition when drafting the RAP Noise. The Session took note that there is also a need of having countries leading the implementation of actions, and that for assisting countries in the selection process a prioritization of actions has been conducted. The Session took note that an estimation of the resource effort required for each action was not conducted during the drafting process, but it was considered as part of the prioritisation exercise.

4.14 The Session took note of an initial summary of the results from a questionnaire shared with a large group of stakeholders as part of the developments of the OSPAR RAP Noise (**document 4-2** and **Excel attached**). The results (58 responses) will be considered at an upcoming stakeholder workshop to be held online on **20 October 2023**.

4.15 The Session reflected on the initial summary and indicated that the HELCOM and OSPAR expert groups should continue to share information on the two RAPs and that the outline table presented by the OSPAR Secretariat could be used as a vehicle to identify and implement collaborative actions.

4.16 The Session welcomed the involvement of stakeholders in the drafting process from the very beginning. The Session further took note that other OSPAR groups such as ICG-ORED would be involved in the RAP development process. The Session further took note that in HELCOM the shipping industry is involved as part of the Maritime Working Group members and observers, which ensured their contribution to the process of drafting the RAP Noise. The Session took note that HELCOM Observers can also take the lead on actions if there is backing from countries.

4.17 The Session took note of the information from the OSPAR Secretariat on ideas on how the actions suggestions by stakeholders could be grouped into a manageable set of actions for an OSPAR RAP, bearing in mind that the RAP actions should have national leads in place by the time it is adopted by OSPAR 2025. There were opportunities to link up to relevant actions in the HELCOM RAP, either to work collaboratively or to be able to take up an adapt products from either Regional Sea Convention.

4.18 In discussion, the Session took note of the following points:

- there are definite synergies between the HELCOM RAP and the emerging OSPAR RAP. Thus, there would be benefits for example from joint information gathering exercises from both HELCOM and OSPAR countries and ideas on best practice would be very similar between the two regions;
- potential valuable areas of cooperation could include best practices, LOBE related actions, measures, national projects that contribute to collective actions; and
- the list of ideas presented by the OSPAR Secretariat would be a good starting point for further analysis of cooperation areas; so far this list had only been discussed between the OSPAR Secretariat and the ICG-Noise co-convenors but it could be more widely shared once it had been reviewed and further developed by the meeting of ICG-Noise Extra to be held on 2-3 November. 2023; the updated table could be submitted to the upcoming informal consultation workshop on the implementation of the HELCOM RAP Noise to be held on **20 November 2023**.

4.19 The Session welcomed the work done in OSPAR towards the drafting of the RAP Noise and encouraged harmonisation of implementation of the respective RAPs Noise, once the OSPAR RAP Noise is adopted.

4.20 The Session considered how to improve harmonisation of monitoring activities and suggested compiling information on national experience on how data are uploaded. The Session suggested creating a benchmark dataset with validated sound pressure values and wav files to calibrate individual software against. This dataset is to be made available at the database hosted by ICES. In this regard, there was a suggestion to hold several intercalibration workshops, to ensure inter-comparability and quality of data. These workshops could occur in different areas to help reach groups in financial need. The Session took note of the financing support needed to conduct such events and

if necessary, support participation from all countries and took note of the possibility of exploring applying for a COST action for this matter.

4.21 The Session took note of the need for avoiding overlapping with other activities, such as a similar workshop held in the UK on seismic sources, from which the report will be available soon. The Session took note that further work on additional standards is ongoing and encouraged experts to contribute to this drafting process, such as on the [ISO standards available for monitoring ambient noise](#) and for [measurements of ship signatures in shallow waters](#).

4.22 The Session took note that there are both [HELCOM monitoring guidelines for continuous noise](#) and [OSPAR guidelines](#), and that they include standards for calibration which can be updated when the need arises.

4.23 The Session took note that work is envisaged to take place within the sub-group on modelling as part of the EU TG Noise, which is to hold its kick off meeting on 16 October 2023.

Agenda Item 5 Memo of the informal consultation workshop on data upload to both the HELCOM/OSPAR impulsive noise registry and continuous noise database hosted by ICES

5.1 The Session took note that the informal consultation workshop on data upload to both the HELCOM/OSPAR impulsive noise registry and continuous noise database hosted by ICES was held on 3-4 October 2023 in Copenhagen, Denmark. The Session took note of the main points considered at the workshop as contained in **Presentation 8**.

5.2 The Session took note that the workshop identified joint development needs (e.g. reporting guidelines and additional data sources) to further improve national data reporting to both the continuous noise database and the impulsive noise registry. In addition, the need of financing supporting this work was pointed out.

5.3 The Session considered the possibility of hosting additional data to the databases that do not come from national monitoring activities. The Session emphasized the need to be able to differentiate this additional data from national monitoring activities in the databases, to design effective gateway mechanisms.

5.4 The Session took note of the clarification by ICES that the addition of these data would have economical implications.

5.5 The Session took note of the clarification that data uploaded to the impulsive noise registry should be from actual/real events and not from predicted activities.

5.6 The Session took note that there are other technical issues which need to be addressed and which may need to be resolved in EU TG Noise such as on clearer specification of sound pressure level and magnitude classes.

5.7 The Session took note that there are modelling standards from the JOMOPANS project which could contribute to improve data calibration.

Agenda Item 6 Any other business

6.1 The Session discussed how to improve coordination with the ICES Secretariat on the operation of the noise databases, and proposed that a joint contact group made up of representatives from both HELCOM and OSPAR together with ICES could be an efficient way of discussing issues of common interest. The Session took note that Denmark, Germany, the Netherlands and Sweden volunteered to participate in such a group.

Agenda Item 7 Follow up

7.1 The Session emphasized the usefulness of regularly holding joint meetings of EG Noise and ICG Noise to increase cooperation on underwater noise issues of relevance for both sea areas.

7.2 The Session invited the Co-Chairs of the Session together with the Secretariats to investigate the dates of the next joint session in autumn 2024 and inform experts accordingly. The Session summarised the following topics to be included in the agenda of the next meeting:

- further development of the registry and database;
- calibration standards for hardware and software;
- further development of indicator and threshold values; and
- RAP Noise

7.3 The Session supported including the above identified topics (§7.2) for further cooperation in future updates of the Terms of Reference of both EG Noise and ICG Noise.

Agenda Item 8 Memo of the Session

8.1 The Session approved the draft Memo of IC EG NOISE and ICG NOISE 1-2023. The final Memo, incorporating corrections by the Session, will be prepared by the Secretariats in consultation with the Co-Chairs of the Session.

Annex 1 List of participants

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