

PROGRESS REPORT ON NOISE ISSUES

Issue: noise issues

1. Action requested

The Scientific Committee is invited to:

- a. **consider** progress report on noise issues,
- b. **provide recommendations** to the Parties on this issue.

2. Background

Since the last Scientific Committee Meeting (SC15, May 2023, Tunis, Tunisia), several initiatives regarding noise monitoring have been implemented by ACCOBAMS:

- the assessment of underwater noise pollution in the Mediterranean Sea as part of the 2023 Quality Status Report of the Barcelona Convention;
- the collaboration with the TG-Noise for the development of new EU guidelines on underwater noise monitoring and assessment;
- the participation to the SeaSounds project;
- a joint ACCOBAMS/ASCOBANS Workshop with national navies on the impact of military activities on cetaceans.

PROGRESS REPORT ON NOISE ISSUES

Four main initiatives regarding noise monitoring are currently being implemented by ACCOBAMS: the assessment of underwater noise pollution in the Mediterranean Sea as part of the 2023 Quality Status Report of the Barcelona Convention; the collaboration with the TG-Noise for the development of new EU guidelines on underwater noise monitoring and assessment; the participation to the SeaSounds project; the joint ACCOBAMS/ASCOBANS Workshop with national navies on the impact of military activities on cetaceans.

a- 2023 Quality Status Report of the Mediterranean Sea:

- ACCOBAMS is cooperating with the Barcelona Convention to publish the Chapters dedicated to underwater noise in the 2023 Quality Status Report of the Mediterranean Sea (2023 MED QSR) which is a report containing the assessment findings related to the quality of the Mediterranean coastal and marine ecosystems as described by several indicators. The MED-QSR is one of the products of the implementation of the Ecosystem Approach in the Mediterranean Sea, a process initiated and led by the Barcelona Convention.
- In the framework of a formal agreement signed between UNEP/MAP and ACCOBAMS, ACCOBAMS has contributed to the preparation of 2023 MED QSR through the preparation of the initial assessments for:
 - IMAP Candidate Common Indicators 26 (cCI26): Proportion of days and geographical distribution where loud, low, and mid-frequency impulsive sounds exceed levels that are likely to entail significant impact on marine animal,
 - IMAP Candidate Common Indicator 27 (cCI27): Levels of continuous low frequency sounds with the use of models as appropriate.
- The activities related to this initiative have been done:
 - Listing the available data presenting suitable characteristics so to be included in the assessment
 - Implementing the assessment methodology following the new guidance document produced by TG-Noise, approved by EU-MSCG in November 2022, and published by the JRC in 2023 (Borsani et al., 2023; Sigray et al., 2023).
 - Drafting the noise chapter of the 2023 MED QSR
 - Following the review and approval process
- The 2023 MED QSR was adopted by Contracting Parties to the Barcelona Convention in December 2023 (COP23 in Portoroz, Slovenia) through Decision **IG.26**. The information document presented at COP23 containing the QSR, including the noise chapters, is the following: **UNEP/MED IG.26/Inf.10**. It can be downloaded from the dedicated INFO-RAC website: <https://medqsr2023.info-rac.org/>.
- **The publication of a technical ACCOBAMS report containing uniquely the Underwater Noise part is scheduled in the coming days/weeks, along with the publication of the full QSR technical report**
- The key findings (taken from UNEP/MED IG.26/Inf.10) are summarized through the pictures hereafter, showing an exceedance of ecological thresholds used in the report for both impulsive and continuous noise in certain areas and periods.

Proportion of fin whale habitat affected by shipping noise in July 2020

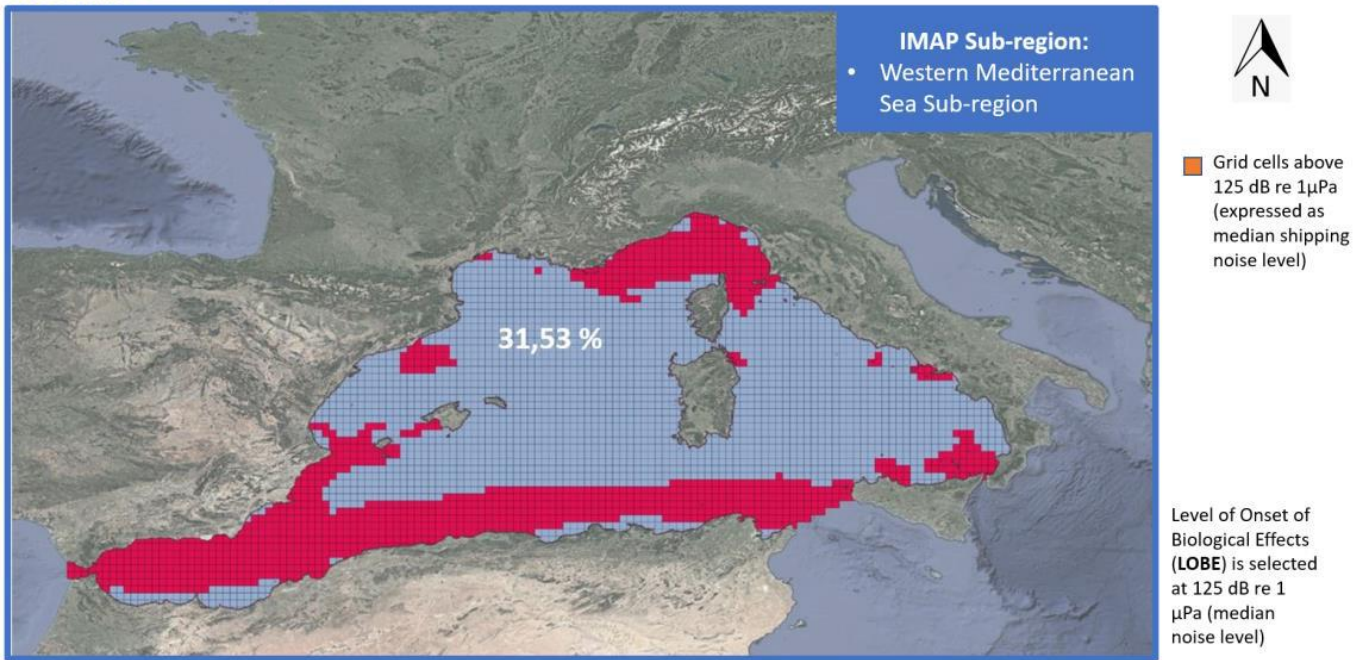


Figure 1. Proportion of fin whale habitat affected by shipping noise. **DO NOT QUOTE OR PUBLISH WITHOUT ACCOBAMS WRITTEN PERMISSION**

Proportion of bottlenose dolphin habitat affected by shipping noise in July 2020

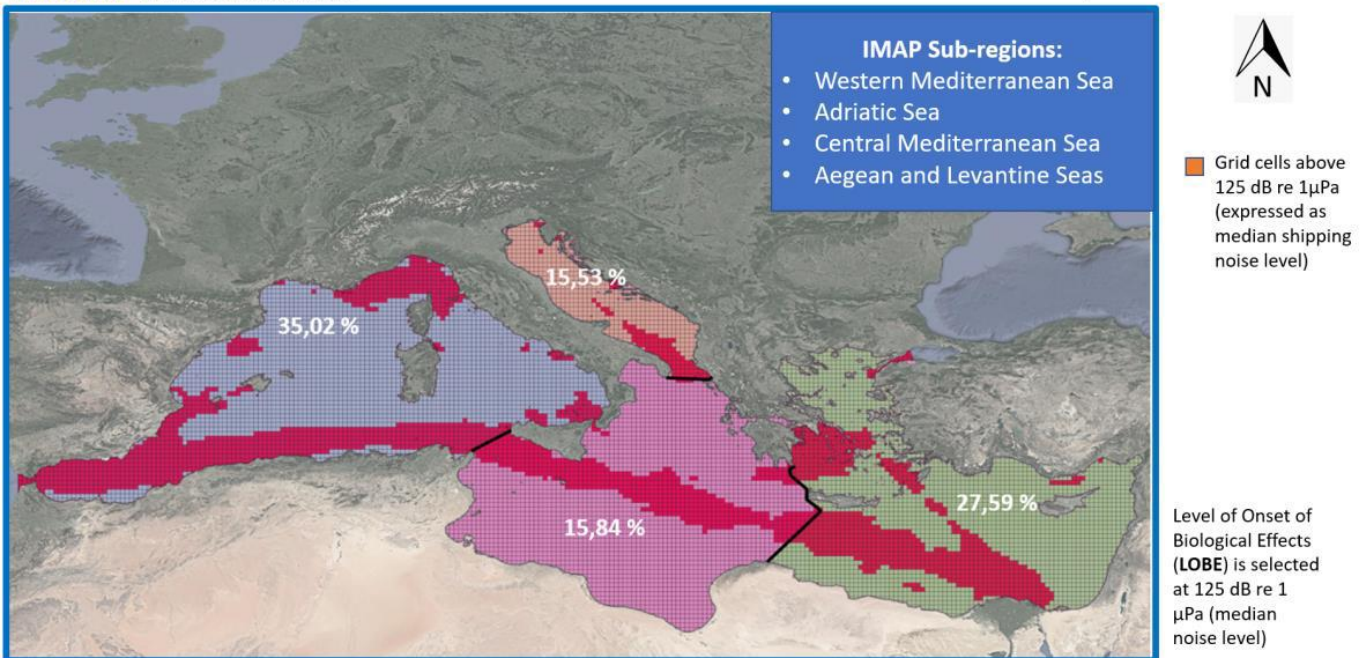


Figure 2. Proportion of bottlenose dolphin habitat affected by shipping noise. **DO NOT QUOTE OR PUBLISH WITHOUT ACCOBAMS WRITTEN PERMISSION**

Proportion of sperm whale habitat affected by impulsive noise in 2018

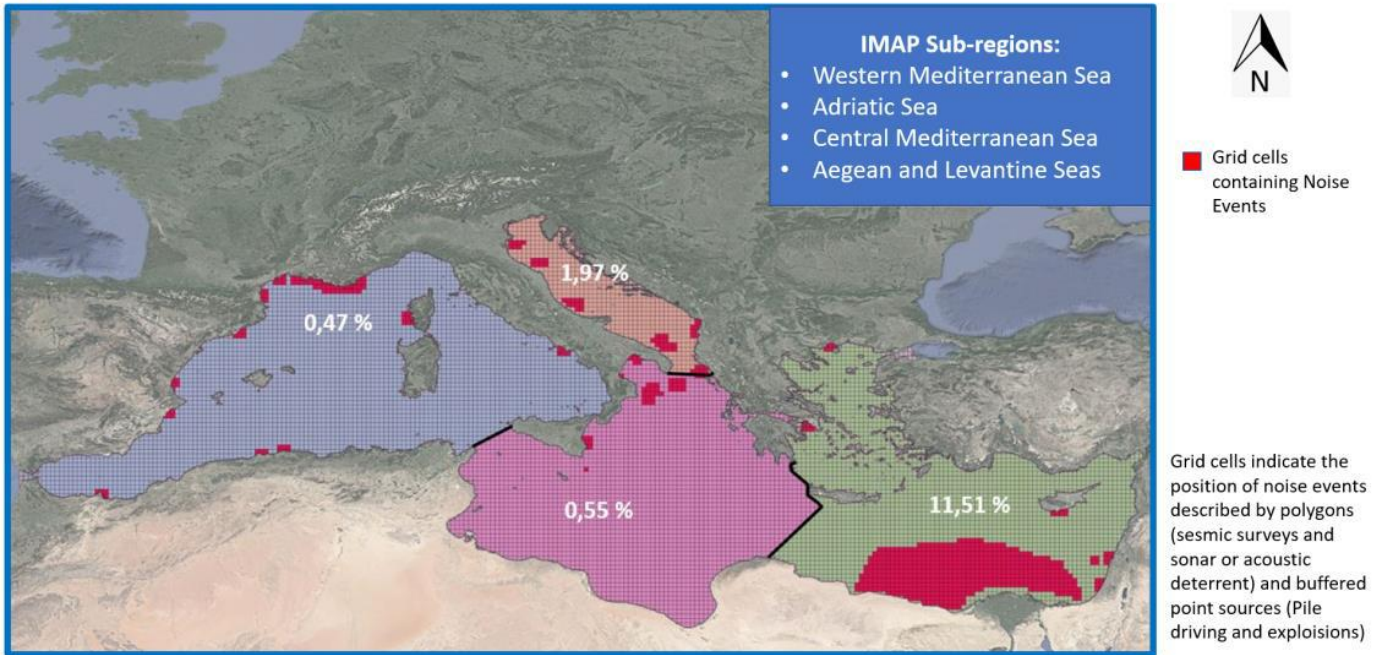


Figure 3 Proportion of sperm whale habitat affected by shipping noise; **DO NOT QUOTE OR PUBLISH WITHOUT ACCOBAMS WRITTEN PERMISSION**

Proportion of Cuvier's beaked whale habitat affected by impulsive noise in 2018

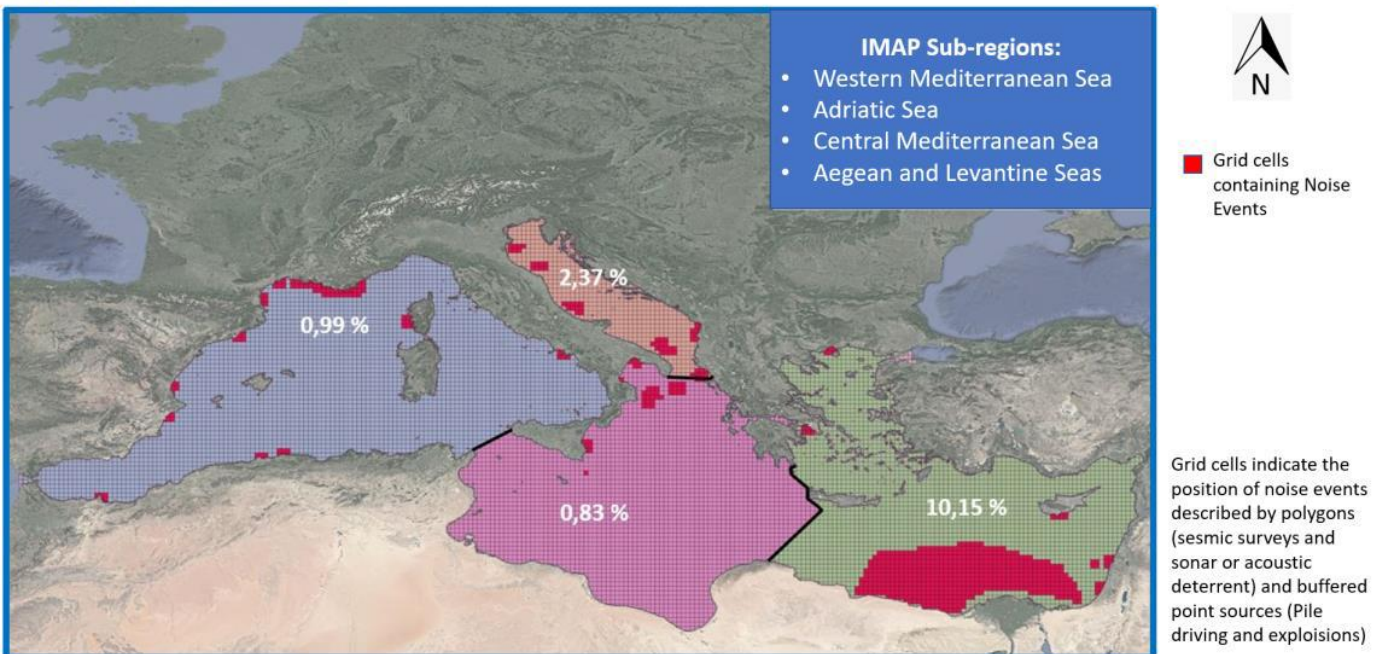


Figure 4. Proportion of beaked whale habitat affected by shipping noise; **DO NOT QUOTE OR PUBLISH WITHOUT ACCOBAMS WRITTEN PERMISSION**

b- Development of new EU TG-NOISE Guidelines on underwater noise monitoring

Since 2015, ACCOBAMS is participating to the efforts undertaken by the Technical Group on Underwater Noise (TG-Noise), established by the European Commission to guide the implementation of the MSFD with regards to underwater noise. The role of ACCOBAMS has been about developing relevant technical guidance on monitoring and assessment of underwater noise and making such guidance applicable to the Mediterranean and Black Sea areas; promoting and facilitating the coordination of underwater noise monitoring in the Mediterranean Sea with third countries of the region (MSFD Article 6), in particular through building capacities of non-EU member States whilst taking advantage of the ACCOBAMS-UNEP/MAP cooperation related to the implementation of the Ecosystem Approach Process (EcAp process) on underwater noise monitoring.

The last milestone achieved thanks to the participation of ACCOBAMS to TG-Noise activities was the development of technical guidance establishing thresholds for underwater noise in EU marine waters (Borsani et al., 2023; Sigray et al., 2023). Following the adoption of EU threshold values for underwater noise, TG Noise work programme has been updated to take into account new priorities related to the implementation of these threshold values (Document "NOISE_24-2023-02" prepared by European Commission, based on TG Noise discussions at TG NOISE 23 and written comments from TG Noise members). The work programme for 2024-2025 include the revision of the Monitoring Guidance for Underwater Noise in EU waters.

This work is currently ongoing. The first part of the new guidance (Impulsive Noise) has been presented at the TG-Noise plenary meeting early November 2024 and is undergoing a review process. The finalisation of the work and publication is scheduled in 2025 (but still subject to changes).

c- SEASOUNDS project

SEASOUNDS is designed to bridge existing knowledge gaps concerning the understanding, characterization and modeling of the entire underwater noise propagation chain, from the noise source (e.g., offshore foundation installation, UXO disposal, shipping) to the marine animal (e.g., marine mammals, fish, invertebrates). Its methodological approach relies on concepts, models, and tools from various scientific disciplines (e.g., acoustics, seismology, mechanics, marine biology). The main goal of SEASOUNDS is to better characterize and predict marine soundscapes, in order to develop optimal underwater noise mitigation solutions, and improve the decision-making and standards setting for a sustainable Blue Growth limiting the impact on marine wildlife.

SEASOUNDS will train 10 Doctoral Candidates with high multidisciplinary, inter-sectoral and transverse skills, who will comprehend noise pollution issues in a holistic way, and hence be highly valuable for public organizations, policy makers, and stakeholders who have to take science-based decisions.

SEASOUNDS started on 01.01.2024 and runs for 4 years, until 31.12.2027. The network is coordinated by Dr. N. Favretto-Cristini (nathalie.favretto-cristini@cnr.fr) at CNRS, Laboratory of Mechanics and Acoustics.

The consortium gathers 16 partners. ACCOBAMS is an associated Partner

<https://seasounds-dn.cnr.fr/>



Figure 5; Consortium of the SeaSound Project.

d- WORKSHOP WITH NATIONAL NAVIES

The **Joint ACCOBAMS-ASCOBANS Workshop with Navies on Underwater Noise and Cetaceans** held on **26-27 November 2024** focused on mitigating the impact of underwater noise—particularly from sonar and unexploded ordnance (UXO) blasts—on cetaceans. A summary of the workshop is presented below focusing on the objectives, and participants:

Objectives

1. **Reviewing current knowledge on the Impacts of Underwater Noise, especially from sonar and UXOs:** Presentations and discussions highlighted the effects of sonar and other sources of underwater noise on cetaceans, particularly focusing on sensitive species like beaked whales.
2. **Improving Mitigation Measures:** Evaluation of current mitigation techniques used by navies, including sonar and UXO management. Navies were encouraged to share best practices and assess their effectiveness.
3. **Promoting Collaboration:** Facilitation of dialogue between navies, scientists, and conservationists aimed to improve understanding and find practical solutions for noise management in marine ecosystems.
4. **Exploring Acoustic Monitoring and Deterrence:** Discussions covered new methods for acoustic monitoring and the use of deterrent devices that could also mitigate bycatch and reduce environmental impacts.
5. **Identifying and Protecting Critical Habitats:** Emphasis on sharing and updating maps of critical habitats such as Important Marine Mammal Areas (IMMAs) and Marine Protected Areas (MPAs) to ensure naval activities consider ecological sensitivities.
6. **Setting Recommendations and Next Steps:** Establishing a collaborative action plan, defining next steps, and agreeing on recommendations to enhance efforts for noise mitigation.

Participants

The workshop brought together a diverse group of stakeholders:

- **Naval Representatives:**
 - Officers from various navies (8 countries and a representative of NATO Maritime Command) and representatives from navy-adjacent research agencies shared their experiences and current mitigation strategies.

- **Scientific Community :**
 - Members of the Joint Noise Working Group (JNWG), Chair of the ASCOBANS Advisory Committee and Vice-Chair of the ACCOBAMS Scientific Committee, NATO STO CMRE representative provided insights into the biological and ecological impacts of underwater noise and mitigation science.
- **Facilitators and Secretariats:**
 - Captain Frédéric Sanoner (French Navy) and Prof. Peter G.H. Evans guided discussions and structured outcomes.

Report of the workshop and recommendations will be available in due course.



Figure 6; Participants to Joint ACCOBAMS-ASCOBANS Workshop with Navies on Underwater Noise and Cetaceans