

Factsheet: Future Science Brief N° 7

Mitigating the effects of anthropogenic underwater noise in Europe

Background

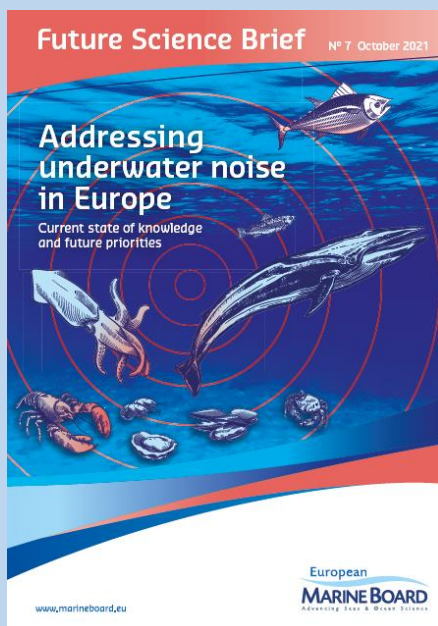
The Ocean is filled with natural and anthropogenic sounds. Marine organisms rely heavily on sound to understand the world around them, and could therefore be negatively impacted by anthropogenic noise.

Over the last decade, underwater noise research and management has made significant progress on:

- Characterization and mapping of impulsive and continuous sources of anthropogenic sound, as well as ambient sound;
- Knowledge on hearing abilities and sound usage of marine organisms;
- Understanding behavioural responses to noise;
- Development of new technologies to support research on the impacts of noise;
- Adoption of international standards for measuring and reporting underwater noise; and
- Development of regulation, management & mitigation measures tailored to specific noise sources or species of concern.

Recommendations

Underwater noise can be unavoidable in our Blue Economy, and further understanding of the issue is integral in develop proportionate mitigation strategies and effective regulations. Therefore, EMB recommends to:



- Develop internationally agreed standards to cover all aspects related to underwater noise measurement, impact and mitigation;
- Conduct comprehensive monitoring combined with spatial ecological modelling to establish baselines;
- Conduct studies to increase understanding of hearing, as well as masking, behavioural responses, hearing impairment and stress, at individual and population level;
- Foster comprehensive monitoring and data collection of current soundscapes / ambient noise, including via joint monitoring programs, and perform further source characterization studies; and
- Conduct dedicated studies to improve understanding on effectiveness, safety and cost-effectiveness of noise mitigation devices, mitigation measures and management options.

For more information, download the EMB Future Science Brief N° 7 “Addressing underwater noise in Europe: Current state of knowledge and future priorities”, for free at:

<https://www.marineboard.eu/publication/future-science-brief>

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