

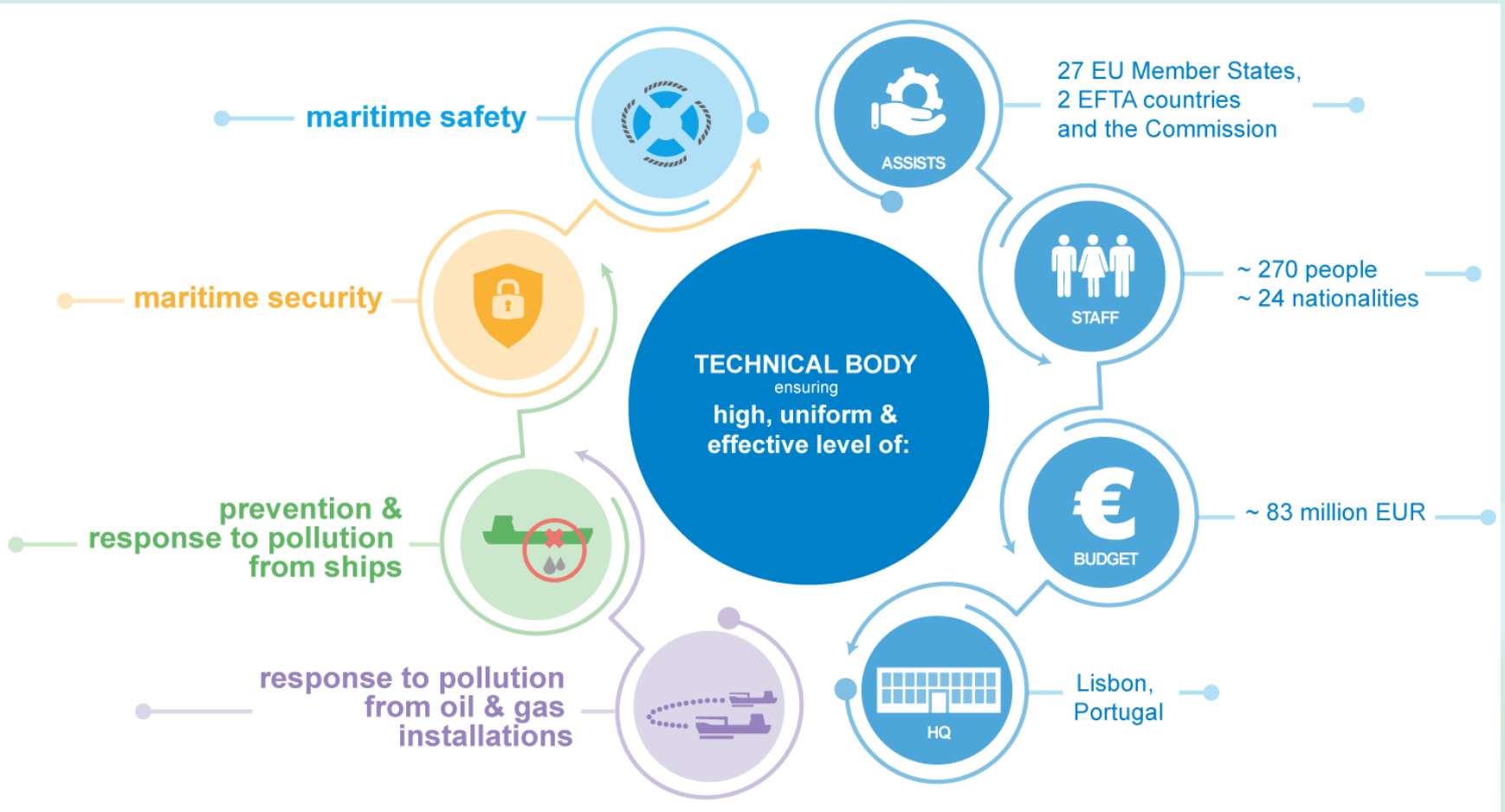


SOUNDS: A report on the Status of Underwater Noise from Shipping

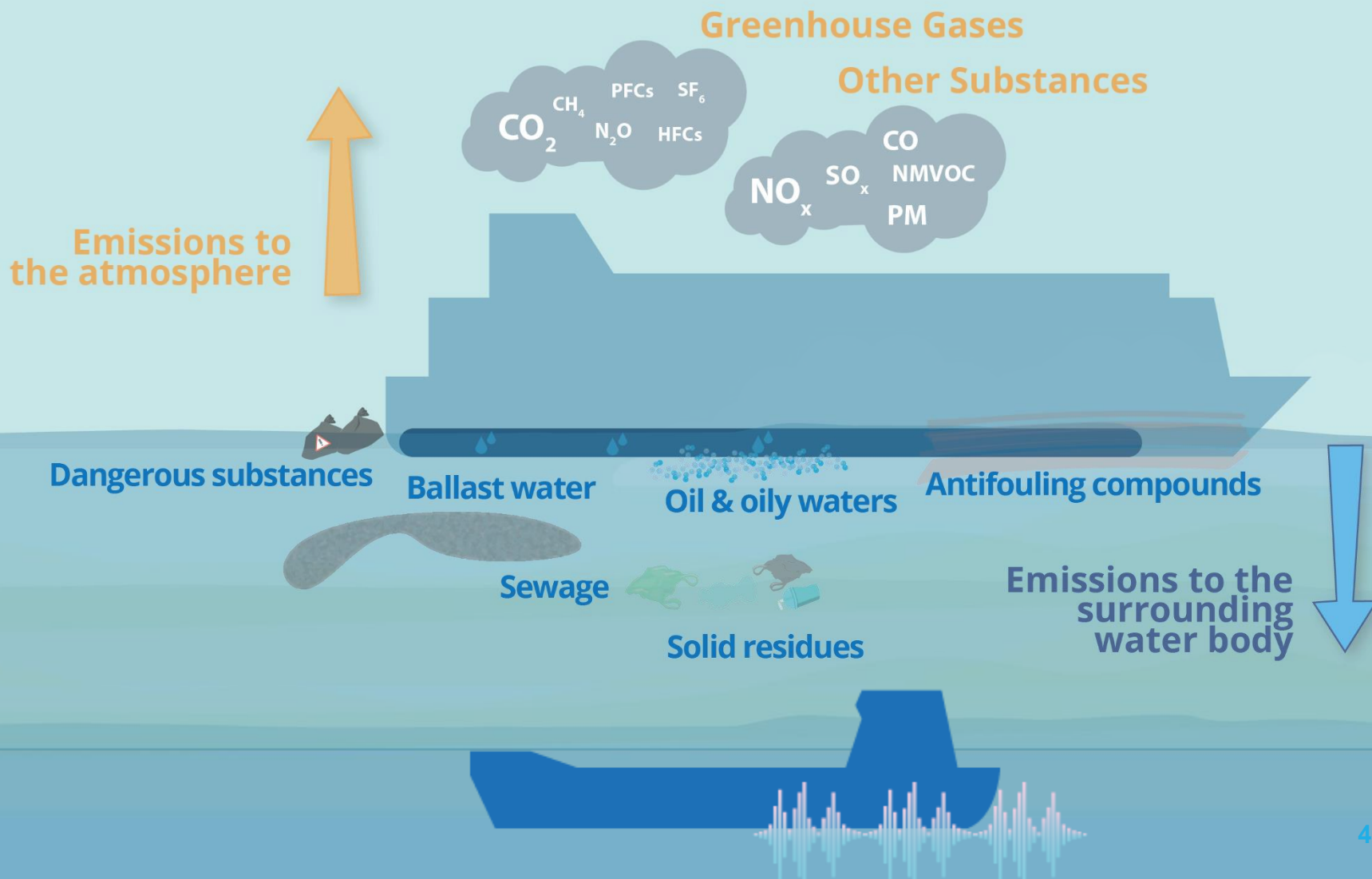
Samy Djavidnia

Lisbon, jUMP Workshop, 24 November 2021

EMSA in a nutshell







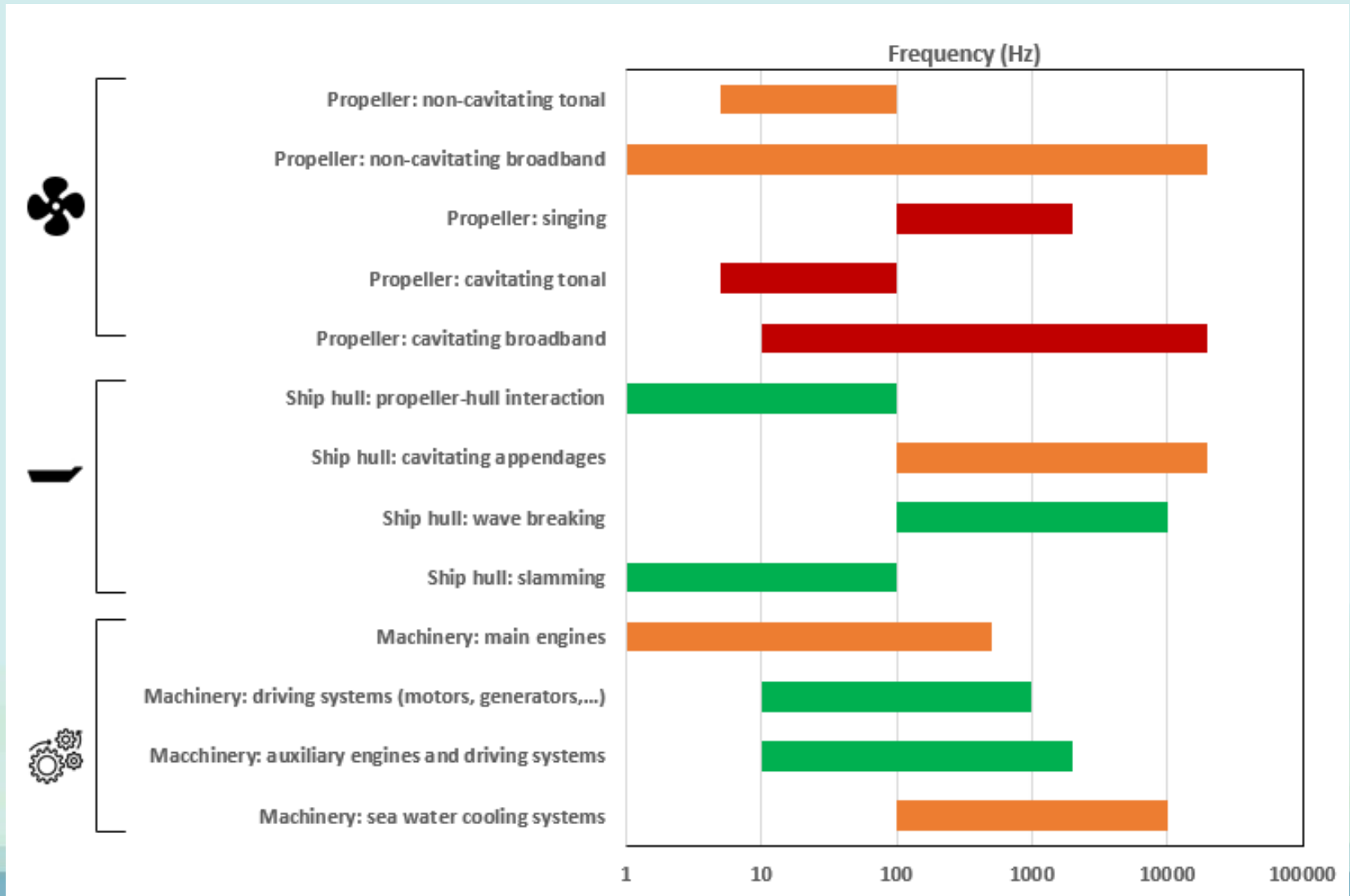
- SOUNDS: Study on inventory of existing policy, research and impacts of continuous underwater noise in Europe.

- Four main tasks:
 - T#1: *Addressing the contribution of the existing guidelines in reducing URN from commercial shipping and mitigating the adverse impacts on marine life in EU waters;*

 - T#2: *Analysing the impact of URN on all trophic levels of the marine environment and in particular in EU waters through a review and a critical analysis of existing published research projects;*

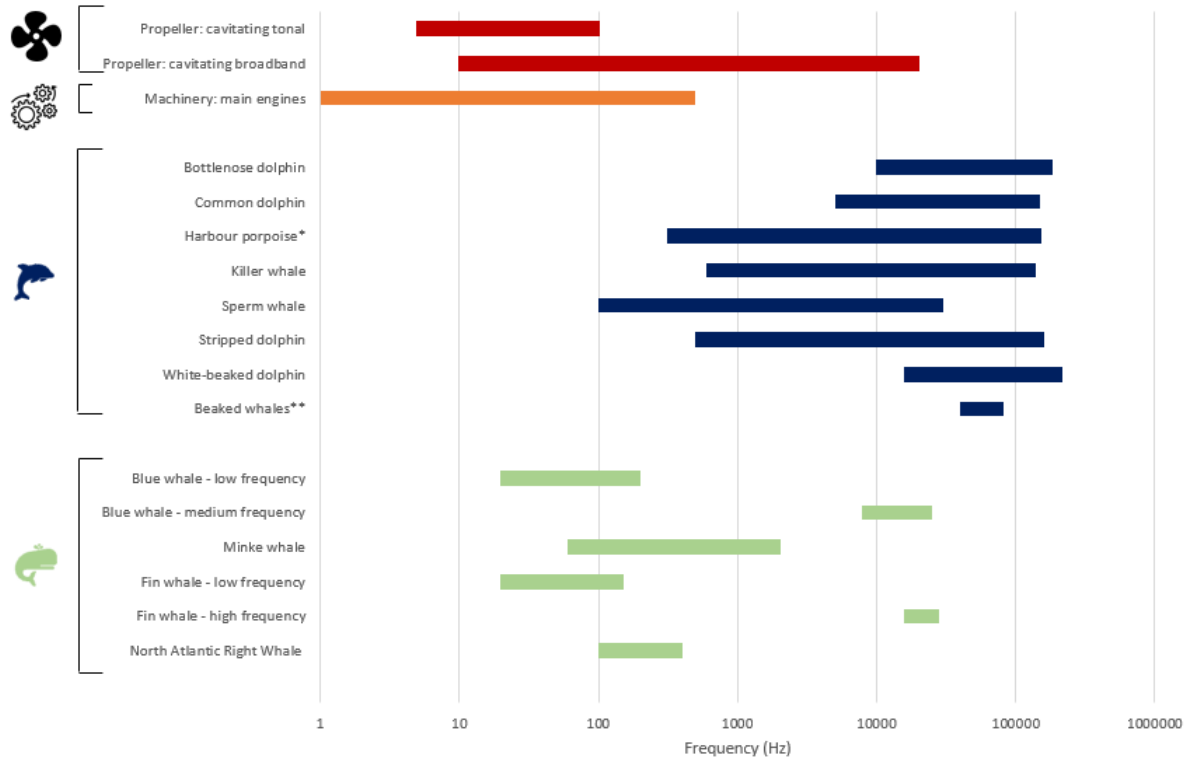
 - T#3: *Establishing an inventory of sources of URN from shipping;*

 - T#4: *Identify the existing technological solutions that have been developed in reducing URN for new and existing ships.*

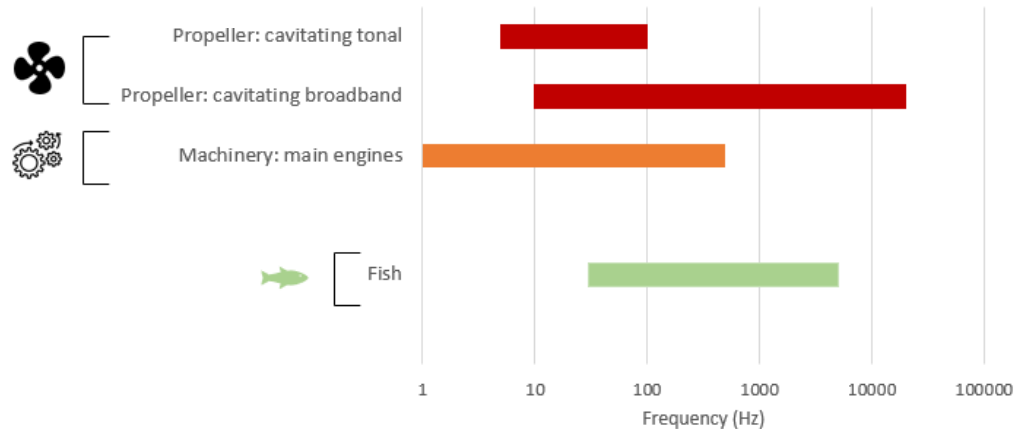


Environmental impacts

Source of URN and hearing range of cetacean species



Sources of URN and hearing range of Fish



1. Biological diversity 	2. Non-indigenous species 	3. Population of commercial fish/shellfish 	4. Elements of marine food webs
5. Eutrophication 	6. Sea floor integrity 	7. Alteration of hydrographical conditions 	8. Concentrations of contaminants
Good Environmental Status	9. Contaminants in fish/seafood for human consumption 	10. Marine litter 	11. Introduction of energy including underwater noise



Technical measures



- Related to technical i.e., design aspects
 - Propeller e.g., design
 - Machinery e.g., isolation
 - Miscellaneous e.g., air injection system

Operational measures



- Related to how the ship is operated
- Operator/Master ("Onboard" measures):
 - Acting in reducing cavitation noise e.g., optimising vessel trim
 - Reducing resistance e.g., cleaning the hull
- Authorities ("Offboard" measures):
 - Rules e.g., speed limits, traffic routing, class notations

Management support tools



- Monitoring (observation and modelling)
- Geo-visualisation tools
- Mitigation scenario simulation
- Trade-off analyses: (socio-)economic, air emissions,...

Recommendations

■ Noise sources:

- Develop a standardised method for performing and evaluating ship noise measurements.
- Develop an EU-wide modelling programme.

■ Environmental impact:

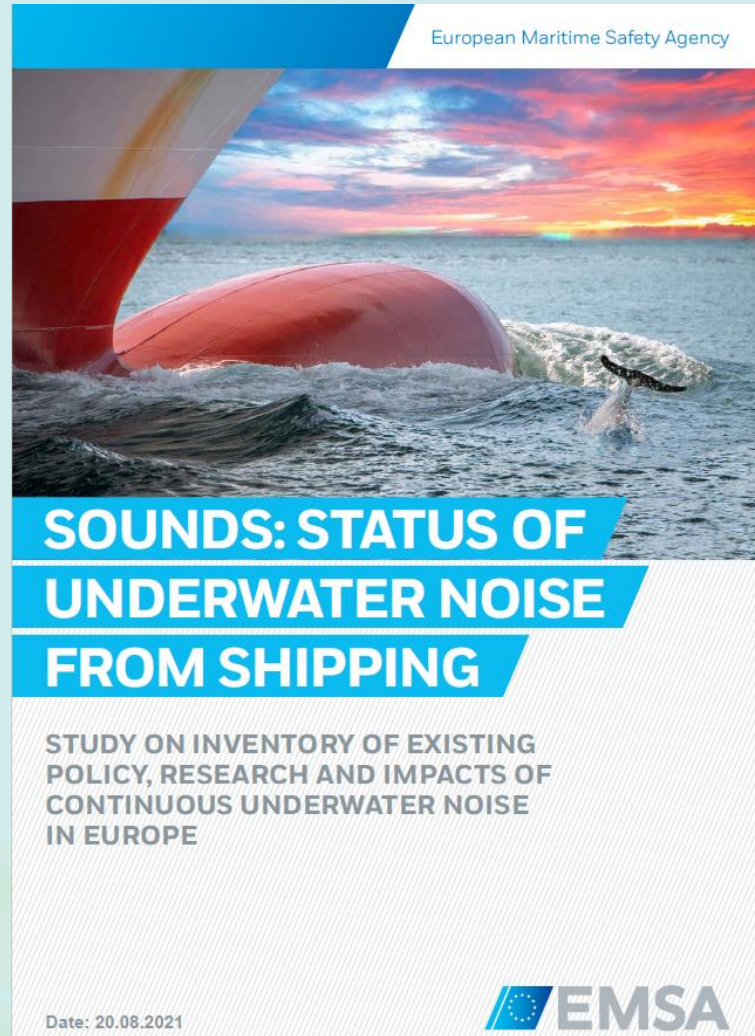
- Promote long-term monitoring programmes
- Promote a consistent reporting procedure and use of the tools

■ Policy:

- Initiate activities to raise awareness of URN
- Promote the participation of shipping industry stakeholders in URN working groups
- Promote ships adopting Quiet Class notations
- Work on the establishment of Underwater Noise Emissions Control

■ Mitigation:

- Support the development of a quiet ship “demonstrator.
- Develop geo-visualisation and noise management tools.



European Maritime Transport Environmental Report (EMTER)

About EMTER:

The European Maritime Transport Environmental Report (EMTER) provides a factual analysis of the environmental pressures exerted by the maritime transport sector, presents up-to-date information on the relevant EU and international environmental standards and describes current and future actions to reduce the sector's impact on our environment. It highlights both the challenges and the opportunities facing the shipping sector, which are of relevance to fostering cooperation at European level.

The EMTER report is a joint project of EMSA and the European Environment Agency (EEA).



Full Report

 [Download EMTER report \(>50Mb\)](#)



Facts & Figures

 [Highlights in 24 EU languages](#)



Press Release

 [Press Release in 24 languages](#)

<http://emsa.europa.eu/emter.html>



Samy.Djavidnia@emsa.europa.eu

 twitter.com/emsa_lisbon

 facebook.com/emsa.lisbon

 **EMSA**
European Maritime Safety Agency