

Minutes

Subject: DEMASK Stakeholder Advisory Board
Date: Monday 10 November 2025
Minutes by: Niels Kinneging with support of DEMASK team

1. Welcome and agenda

Meeting was opened and the agenda agreed. The major focus will be on the progress with the scenarios. Niels mentions that the DEMASK project team will come together for their Mid Term Event on Friday. This SAB meeting will provide input for the event.

2. Progress of DEMASK

Presentation of project and work packages

- slides to be shared
- IMR (Institute of Marine Research) has joined DEMASK. They have complementary knowledge on marine species and noise and they will make the connection to the Norwegian authorities.
- next meeting in April 2026

3. DEMASK Scenarios

Presentation by Katharina, Thierry and Christ.

- Metrics workshop, report to be shared when ready
- Large scale scenarios to be done in 2026
- Options to implement slow steaming
- Synthetic AIS data to be modelled by ABL (2022 real, 2035 synthetic)
- Choice for focus areas in North Sea
- Behavior of service vessels at monopiles

Chris:

- Q: Paper by Jasco, NPL and St.Andrews on global soundscapes
A: Paper is known and link will be shared
Q: Fishing boats: slow steaming means trawling, means more noise
A: Correct. At this moment no information of source levels of trawling vessels. To be considered.
Q: Avoid term 'silent technology', use 'low-noise technology' instead.
A: Noted
Q: Question on dominant ship type (Navison versus DEMASK)
A: DEMASK used ship type densities as observed North of The Netherlands, Navison used global distribution.
Q: Class notation. Main problem is lack of measurement facilities. These should avoid too much detours.
A: This problem is acknowledged and needs to be tackled in the future. Will be recommended, but implementation is out-of-scope for DEMASK

Q: Take into consideration the effects of bio-fouling on URN and EE and the role of anti-fouling systems (acoustic). See reference Martin et al, 2024.

A: Noted

Samy:

Q: EE-URN relations are complex. Route optimisation is simplification. Likes to have more detailed discussion with DEMASK in the coming period. They have identified 6 relations between EE and URN.

A: Route optimization shows that equalizing speed over a trip can be beneficial to both EE and URN

Q: How is recreational boat density determined.

A: In the example by satellite images, but other methods are possible. These images are combined with measurements.

Q: Cargo ships are dominant at 63 Hz band; Cargo and RoRo are dominant in 125 Hz band.

A: Question on choice between URN (of noisiest ships) versus a combined effect on all ship contributions.

A: The aim of the MSFD is to achieve or maintain Good Environmental Status, which reflects the combined effect. Measures should strive to lower the URN. A noise limit could especially lower the URN of the most noisy ships. We have shown how effective that is.

Eric:

Q: Agrees to the focus of measures on noise production and sound exposure.

Q: Speed reduction will automatically lead to acceleration, this reducing the effects

A: Speed reduction should be considered at a local or regional scale. It also depends on the chosen parameters for studies. The Japanese study submitted to IMO took the total travel time as a constant.

Q: Is there of source model for SOVs and CTVs pushing to a monopole?

A: Not at this moment. To be considered.

Q: The ISO standard for shallow water is limited to 20 kHz and misses acoustic anti-fouling systems.

A: The choice was made on practical ground. We should be aware of developments in the shipping industry. See reference Hannay et al, 2023 for measurement procedure up to 50 kHz.

Q: How were the focus areas in the North Sea chosen?

A: On various grounds. Some official MPAs (under MSFD), N2000 areas (Doggerbank for DE, NL and UK), some German sensitive areas as well as 3 Norwegian sensitive areas. Will be documented.

Q: Refer to PIAQUO project for recreational vessels using image tracking (find reference).

4. Impact of underwater noise

Presentation by Jeff.

- TG Noise threshold values report was the basis.
- For WP3 steps 1 (scoring system) and step 2 (identification of indicator species) have been completed and published.
- Step 3 (distribution and habitats) is almost finished.
- Step 4 (LOBE) is being discussed. Definition is problematic, as also observed by Helcom.

Marta:

Q: Definition of LOBE: It would be good if we could have TG Noise on board

A: TG Noise report says that they will follow the SATURN definition.

2.3. Level of Onset of Biologically Adverse Effects

2.3.1. TG Noise Definition

The level of onset of biologically adverse effects¹ (LOBE) is a concept introduced by TG Noise 2023, which defines LOBE as “noise level at which individual animals start to have adverse effects that could affect their fitness”.

Recognising that the TG Noise definition of LOBE is the outcome of multiple viewpoints, SATURN has identified and discussed the following questions:

- What is “noise level”?
- What is meant by “start to have”?
- What is meant by “adverse effects”?
- What is meant by “could affect their fitness”?

2.3.2. What is “Noise Level”?

The definition of LOBE from TG Noise 2023 includes the clarifying remark “For continuous noise D11C2, noise level that can be spatially averaged sound pressure level or excess level”. SATURN interprets the term “noise level” to mean “underwater noise metric” in the sense of Table 5.

2.3.3. What is Meant by “Start to Have”?

In the phrase “individual animals start to have adverse effects”, the word “have” is interpreted as meaning “experience”. Further, interpretations of the phrase “[level] at which individual animals start to [experience] adverse effects” that were considered include “[level] at which the probability of an adverse effect of noise exceeds some value” and “[level] at which an adverse effect is considered to occur with some probability”.

2.3.4. What is Meant by “Adverse Effects”?

The definition of LOBE from TG Noise 2023 includes the clarifying remark: “Examples of adverse effect include behavioural disturbance, stress, reduced communication space, and temporary or permanent habitat loss.”

- Proposal to follow Saturn in ‘Underwater noise limit value’

underwater sound metric	specified quantitative characteristic of underwater sound
abbreviation: USM	
underwater noise metric	specified quantitative characteristic of underwater sound that is related to a potential adverse effect on marine life
abbreviation: UNM	
underwater noise limit value	value of a specified UNM, as determined by an appropriate authority, above which management action is considered
abbreviation: UNLV	remarks: UNLV may be different for different types of noise, different surroundings, and different noise sensitiveness of marine life. UNLV may also be different for existing situations and for new situations. UNLV is not presently used by TG Noise in the advice about the threshold values.

- Step 5 (Assessment). Idea to assess for all species at the same time by overlaying distribution maps and combining sensitivities. Will be elaborated.

Eric:

Q: Is time line for species (life cycle) included in comparison to ships time line.

A: The life cycle was included in the species selection system.

Samy:

Q: Are reporting authorities represented in DEMASK.

A: Yes, authorities are also included in the Stakeholder Advisory Board and we discuss DEMASK with them in various meetings.

5. Presentation of information briefs and future work

Presentation of the [first information brief](#) outlook on the second information brief by René.
Preliminary take-away messages are presented for discussion

- EE and URN to be viewed simultaneously. There is a trade-off.
- Technology improvements are needed to make the next steps in reducing URN.
- Industry is looking at new fuels and other options.

Chris

Q: How can class notations work?

A: Measurement facilities are needed for simple check on the notations.

A: Measurements on board ships would be nice.

A: Should already be viewed and applied for at design stage of ships.

Chris:

Q: Note that the Navison report has been updated in July.

A: We are aware of that. Some figures in the first policy brief (from the previous version of the report) need to be updated. We will look into this.

Eric:

Q: Alternative fuels are a key pathway for EE: an action for engine manufacturers is to measure their effect on URN

Q: What more could we do to convince ship owners to apply for class notations?

Carolin:

Q: A holistic approach is necessary, in particular also biofouling management needs to be considered, as mentioned earlier.

Michael:

Q: A study finds that sound levels decrease globally due partly to rising sea surface temperatures.

A: This is a type of 'measure' influencing the propagation path.

Samy:

Q: Will you share the draft policy recommendations so that we can provide feedback?

A: Preliminary take-away messages are in the presentation, which will be shared

6. Closure

- A meeting report will be made and distributed.
- Presentations will be made available
- The next meeting will be held in April 2026.
- Thanks for the interesting meeting and good discussions.

Meeting closed.

Chat:

Martin, S. B., MacGillivray, A. O., Wood, J. D., Trounce, K. B., Tollit, D. J., & Angadi, K. (2024). Sound Emissions from Ultrasonic Antifouling Equipment. In *The Effects of Noise on Aquatic Life: Principles and Practical Considerations* (pp. 261-276). Cham: Springer International Publishing.

<https://static1.squarespace.com/static/52aa2773e4b0f29916f46675/t/6740a9a3c022670af5b9dcda/17322909...>

URN measurement procedure up to 50 kHz: [Recommended Procedures for Measuring URN Noise Emissions of Ships](#)

	Country	Name	Organisation
	BE	Ingrid van Aken	SPF Santé Publique – FOD Volksgezondheid
	BE	Senne Aertbeliën	SPF Santé Publique – FOD Volksgezondheid
X	DE	Susanne Schorcht	Skyborn renewables
	DE	Bettina Taylor	BUND für Umwelt und Naturschutz
X	DE	Carolin Abromeit	Federal Maritime and Hydrographic Agency
X	DE	Jörg Mehldau	VSM, also CESA
	DE	Manfred Lebmeier	Hamburg Port Authority
	DK	Jakob Tougaard	Aarhus University
	DK	Kim Lundgreen	Danish Ministry of Environment
X	EU	Peter Racz	Interreg North Sea
X	EU	Samy Djavidnia	EMSA
X	FR	Eric Baudin	Bureau Veritas
X	HELCOM	Marta Ruiz	HELCOM
	IE	Gerry Sutton	MarEI
X	INT	Chris Waddington	ICS, International Chamber of Shipping
	INT	Kateryna Urbanovych	NSAC, North Sea Advisory Council
X	INT	Zaan Olivier	IFAW International Fund for Animal Welfare
X	NL	Diede Streng	RVO
	NL	Frans Hendrik Lafeber	Marin
	NL	Ilse van de Velde	Ministerie van Infrastructuur en Waterstaat
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X	OSPAR	Maude Jolly	OSPAR
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	SE	Lars Åkesson	SWAM
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