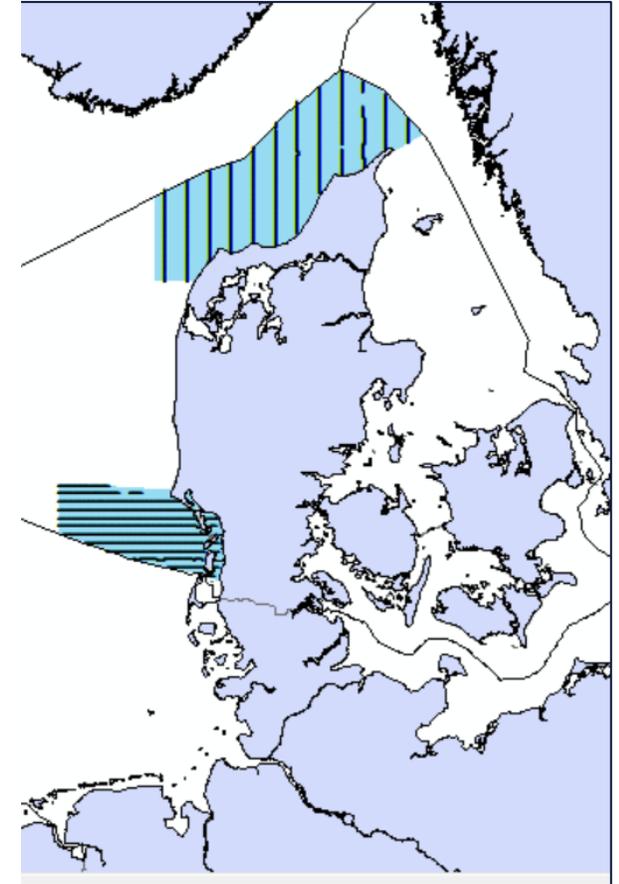
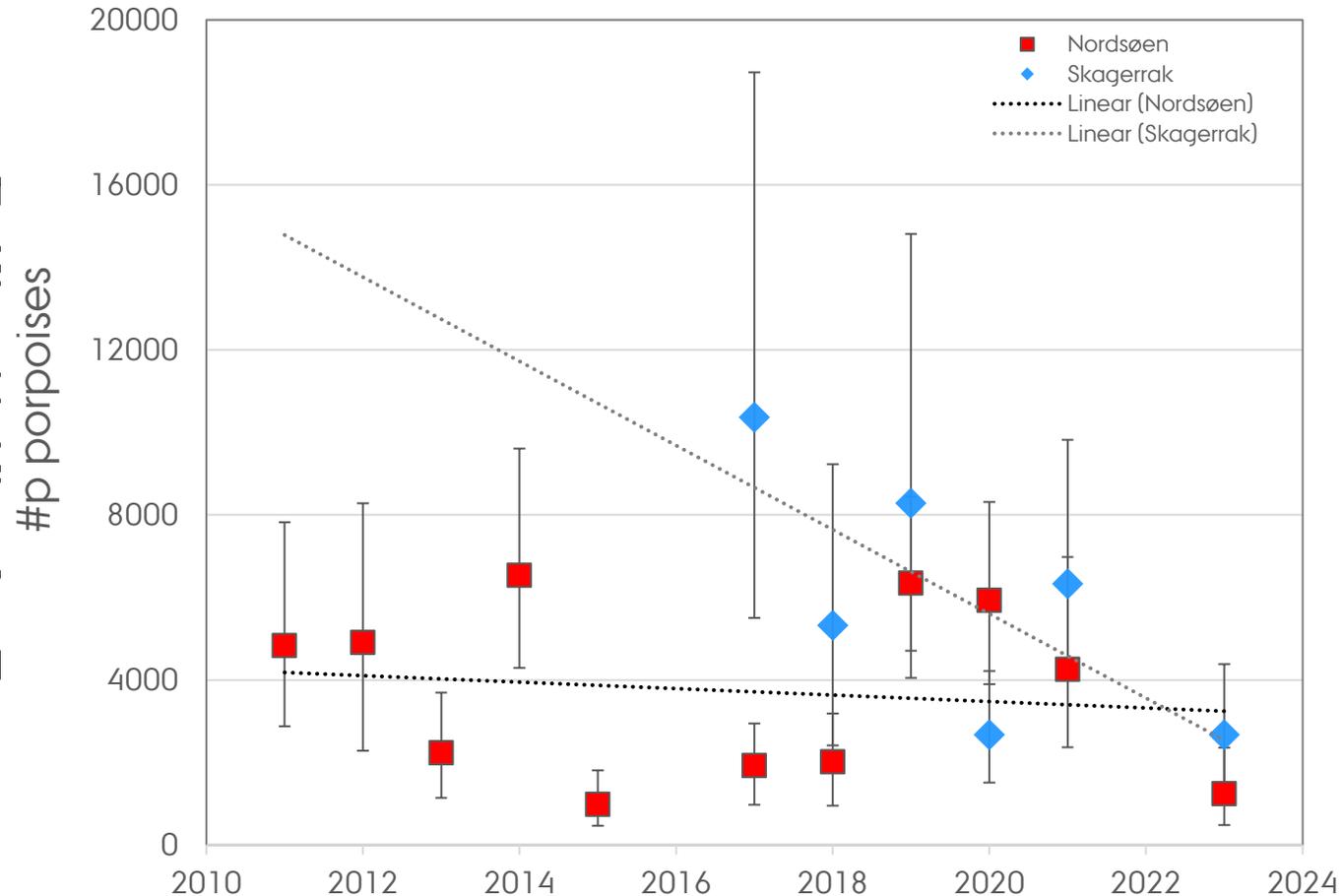


NORTH SEA GROUP MEETING

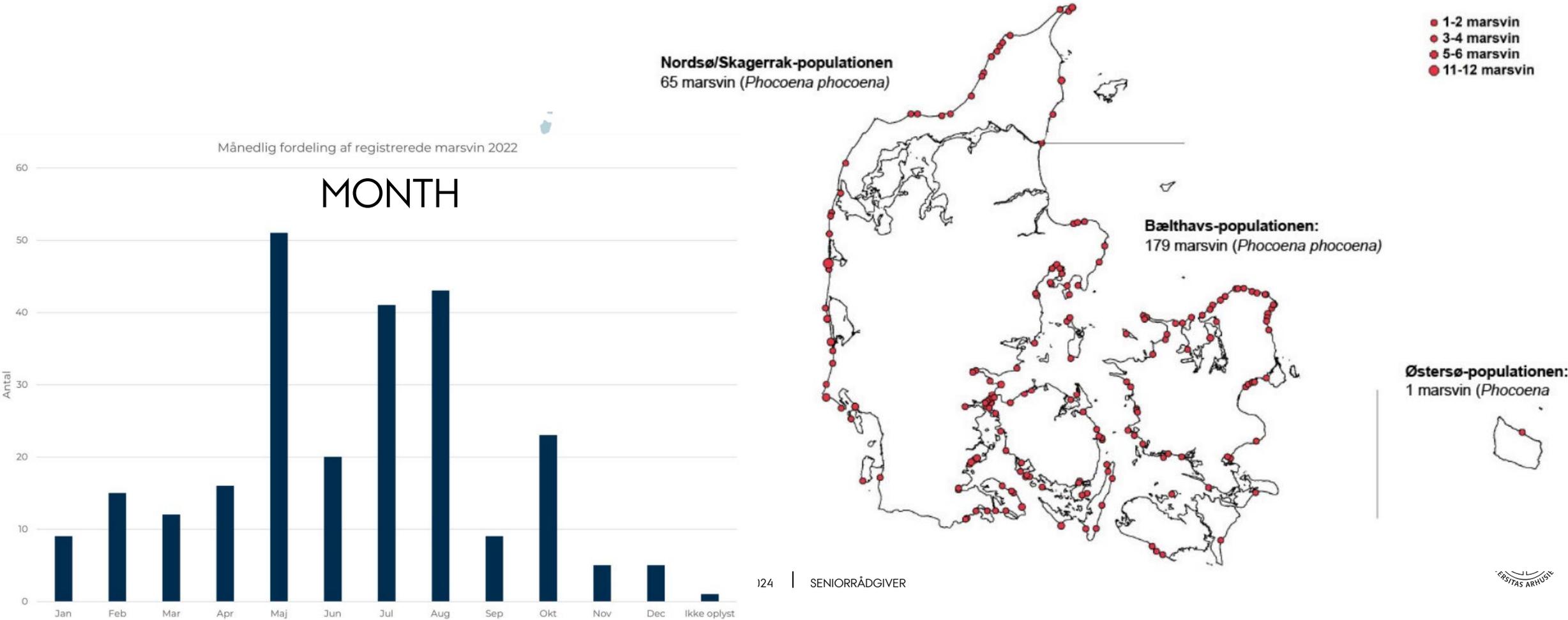
3.1. MONITORING TRENDS IN DISTRIBUTION AND ABUNDANCE OF HARBOUR PORPOISES IN THE REGION (ACTION 7)

- SCANS-IV
- Danish North coverage 202
- Several seas areas 2022 -2
- NOVANA sur Sea + Skageri



3.3. COLLECTION OF INCIDENTAL PORPOISE CATCH DATA THROUGH STRANDING NETWORKS (ACTION 9)

All strandings reported in annual report: https://fimus.dk/wp-content/uploads/2023/10/Beredskabsrapport-2022_Final_2.pdf

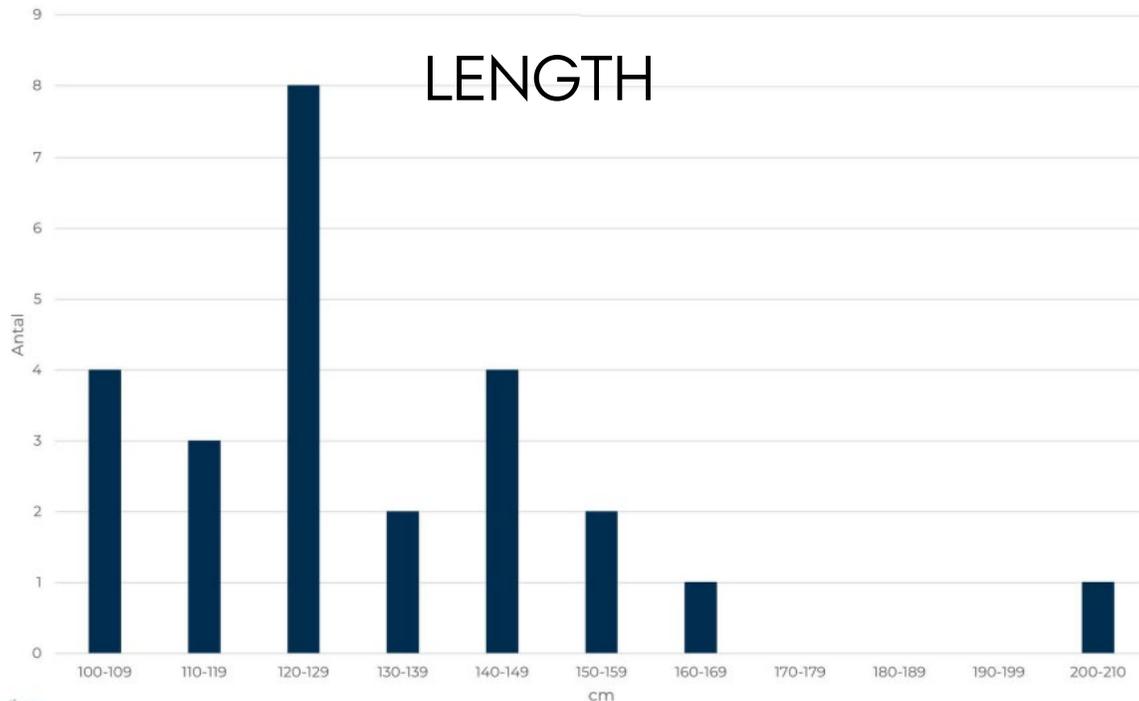


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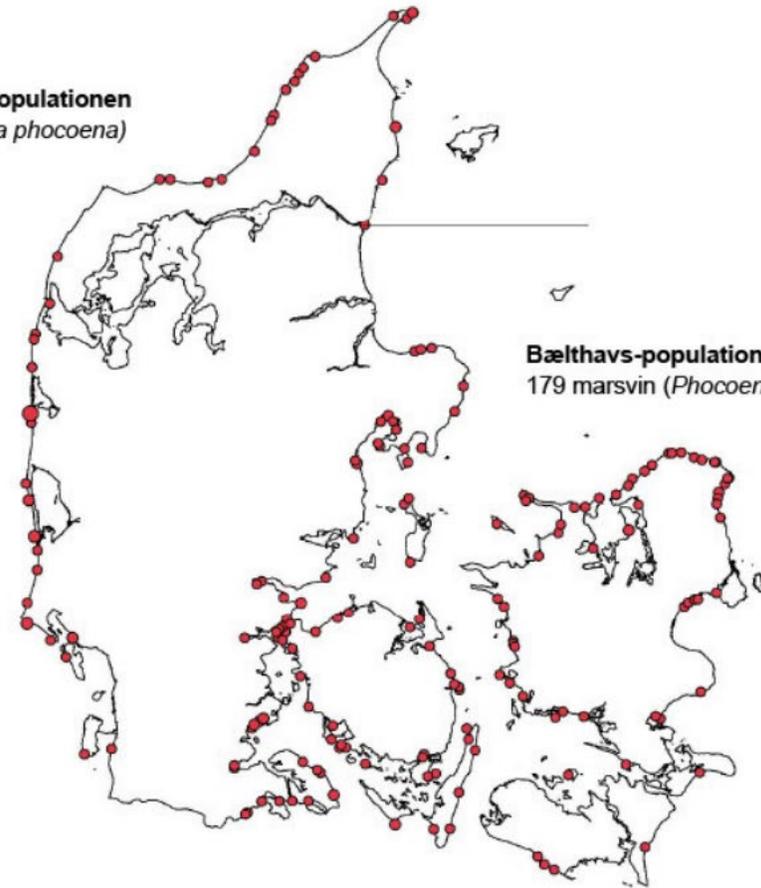
All strandings reported in annual report: https://fimus.dk/wp-content/uploads/2023/10/Beredskabsrapport-2022_Final_2.pdf

In 2022: 30 porpoises necropsied
– 53% assumed bycaught

Længdefordeling blandt indberettede marsvin 2022



Nordsø/Skagerrak-populationen
65 marsvin (*Phocoena phocoena*)



- 1-2 marsvin
- 3-4 marsvin
- 5-6 marsvin
- 11-12 marsvin

Bæltshavs-populationen:
179 marsvin (*Phocoena phocoena*)

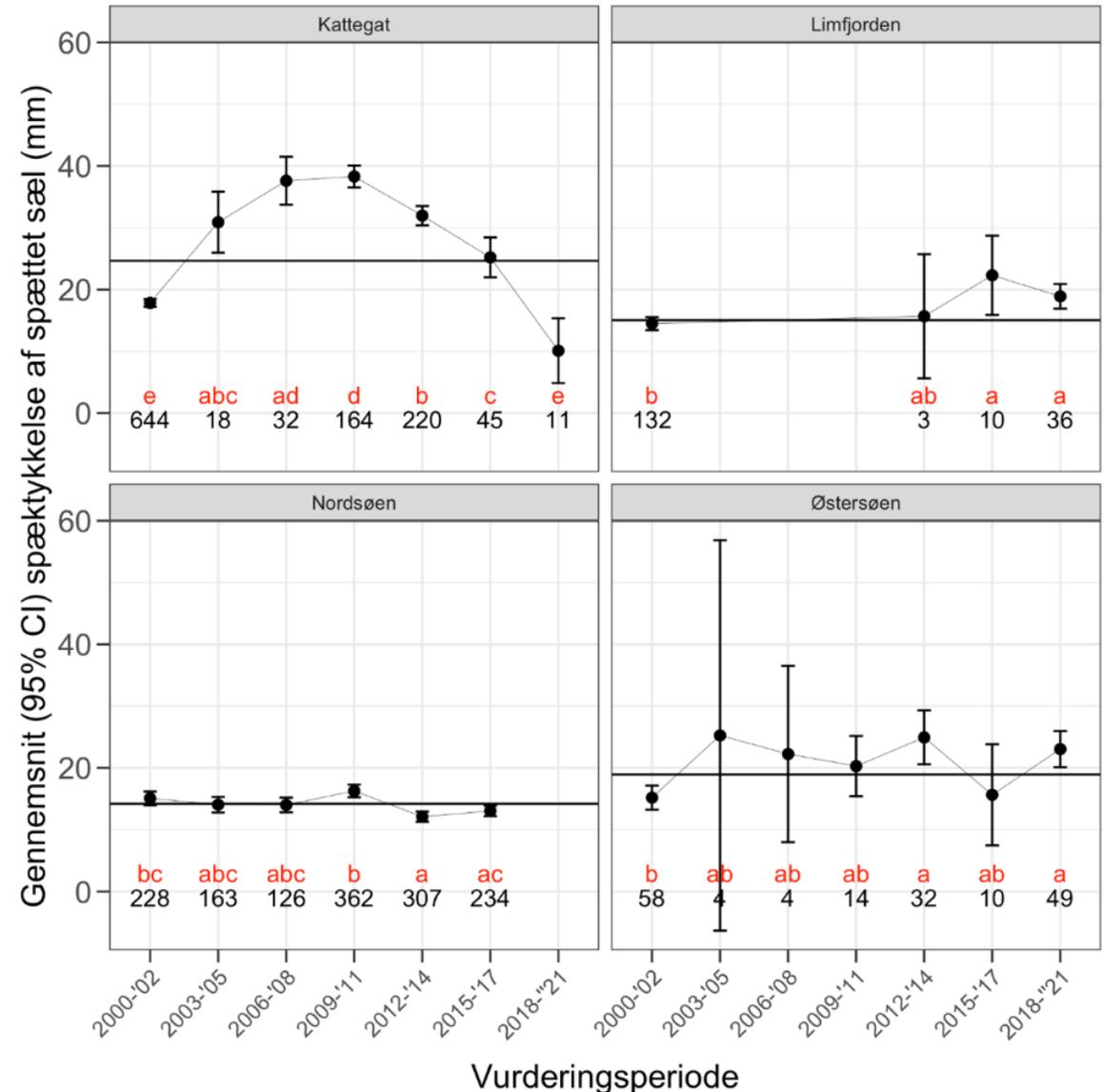
Østersø-populationen:
1 marsvin (*Phocoena*)



3.4. INVESTIGATION OF THE HEALTH, NUTRITIONAL STATUS AND DIET OF HARBOUR PORPOISES (ACTION 10)

All strandings reported in annual report

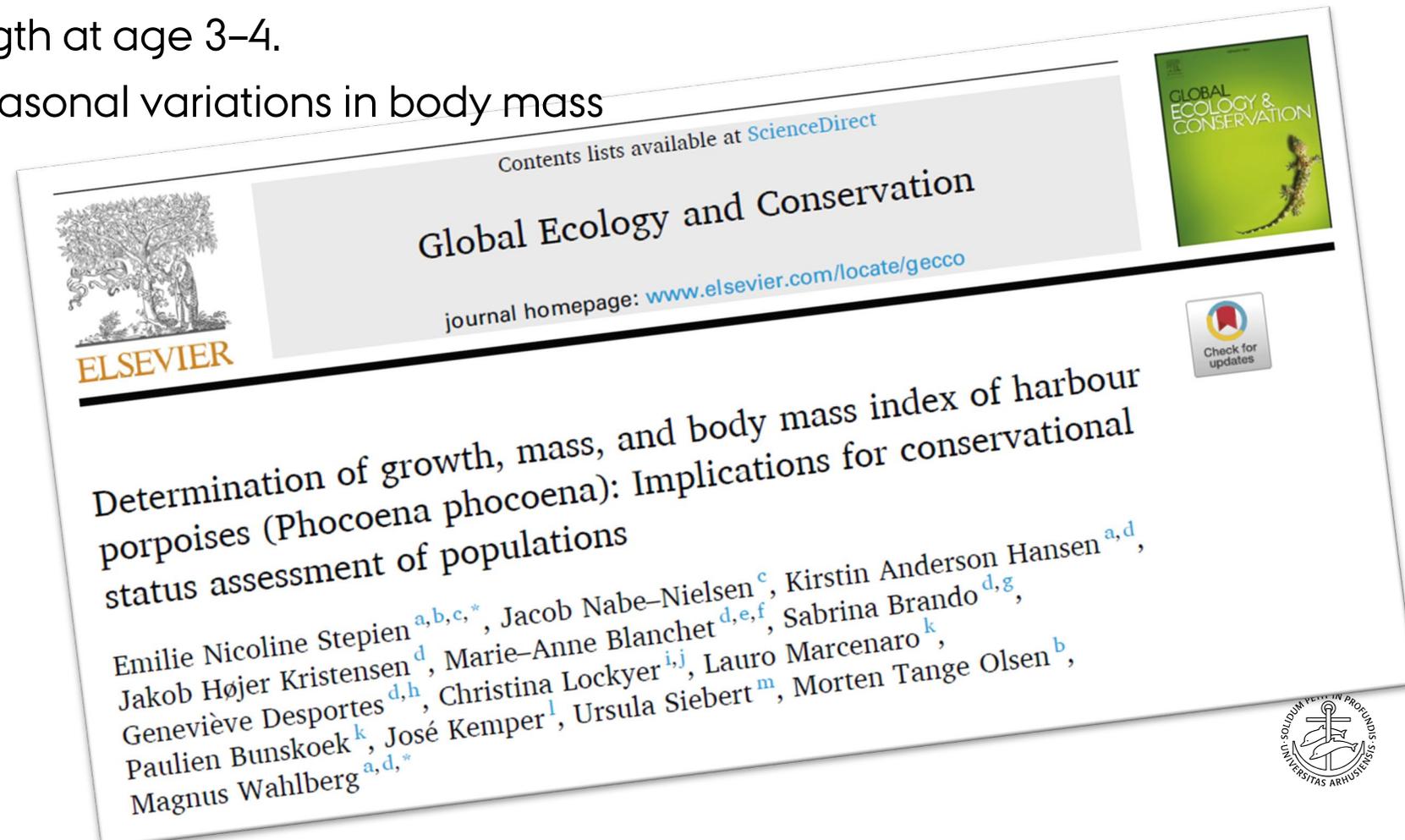
2022	Marsvin <i>Phocoena phocoena</i>
Limfjorden	na
Vestlige Østersø	na
Kattegat	na
Nordsøen	3
Bælthavet	11
Østersøen	0
	14



3.4. INVESTIGATION OF THE HEALTH, NUTRITIONAL STATUS AND DIET OF HARBOUR PORPOISES (ACTION 10)

Results:

- Calves grew 66%, attaining 84% of their adult length in the first year
- Reached asymptotic length at age 3–4.
- For adults: large (28%) seasonal variations in body mass



3.4. INVESTIGATION OF THE HEALTH, NUTRITIONAL STATUS AND DIET OF HARBOUR PORPOISES (ACTION 10)

Results:

- Energy budget model for simulating effects of seismic surveys on porpoise populations
- The largest effects => late summer and fall => related to lactation costs, water temperature, and body fat.

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Movement and Seasonal Energetics Mediate Vulnerability to Disturbance in Marine Mammal Populations

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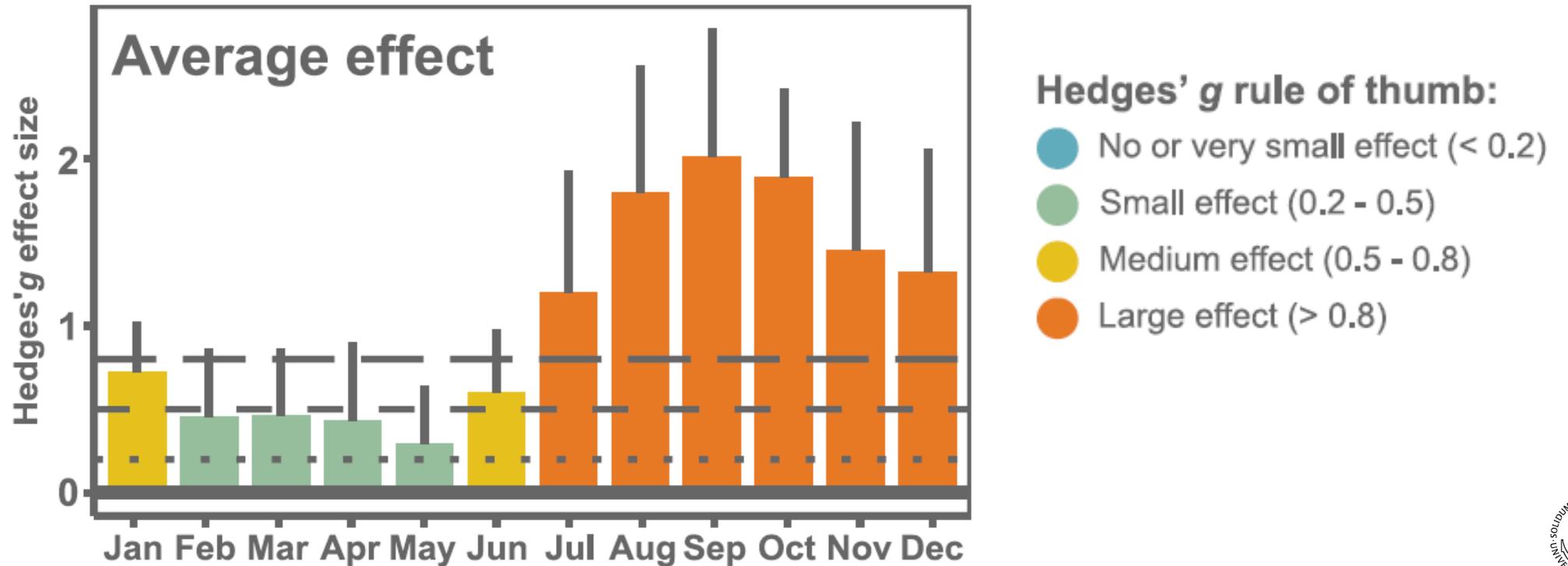
Submitted June 15, 2020; Accepted November 16, 2020; Electronically published February 5, 2021

Online enhancements: supplemental PDF. Dryad data: <https://doi.org/10.5061/dryad.80gb5mkpn>.

3.4. INVESTIGATION OF THE HEALTH, NUTRITIONAL STATUS AND DIET OF HARBOUR PORPOISES (ACTION 10)

Results:

- Energy budget model for simulating effects of seismic surveys on porpoise populations
- The largest effects => late summer and fall => related to lactation costs, water temperature, and body fat.



3.5. INVESTIGATION OF THE EFFECTS OF ANTHROPOGENIC SOUNDS ON HARBOUR PORPOISES (ACTION 11)

Projects in Denmark or with Danish participation:

- **SATURN:** Ends 2024. Effects of ship noise on seals and porpoises studied by on-animal tags (D-tags).
- **A sound marin environment:** Monitoring of noise from ships and recreational vessels in Aarhus Bay, including effects on porpoises. To begin in 2024.
- **Energy Island North Sea/North Sea lot1:** Baseline monitoring of underwater noise in relation to offshore wind farm projects. – Including estimation of effect of geophysical surveys on baseline data
- **ENS screening project:** Soundscape mapping of Danish waters, with focus on contribution from wind farms.

3.5. INVESTIGATION OF THE EFFECTS OF ANTHROPOGENIC SOUNDS ON HARBOUR PORPOISES (ACTION 11)

Guidelines:

- ENS **guidelines for pile driving** includes limits for exposures to noise and methods for assessment of projects. Use of noise abatement systems is de facto mandatory for pile driving.
- ENS **guidelines for seismic surveys** with air guns, including requirements for soft starts
- Some guidelines for use of **detering sounds** prior to underwater explosions
- Development of **method for assessing impact** on porpoise from anthropogenic effects:

https://dce.au.dk/fileadmin/dce.au.dk/Udgivelser/Notater_2024/N2024_07.pdf

3.5. INVESTIGATION OF THE EFFECTS OF ANTHROPOGENIC SOUNDS ON HARBOUR PORPOISES (ACTION 11)

- Development of **method for assessing impact** on porpoise from anthropogenic effects:

<https://dce.au.dk/filead>

Assessment category **Criteria for assessing the sensitivity for marine mammals**

Table 2.1. Methodology to evaluate

Impact significance		High	Low
Sensitivity of the species	Low	Moderate	<p>The population is increasing.</p> <p>The impact area does not include nationally or regionally important areas (used for breeding, feeding or migration).</p> <p>Marine mammals only occur in low density.</p>
	Medium	Major	<p>The marine mammal species is not sensitive to the impact, i.e., the species' biology (physiology or behaviour) is not or only temporarily affected by the impact.</p> <p>The population is stable or increasing.</p> <p>The impact area includes parts of nationally or regionally important areas (used for breeding, feeding or migration).</p> <p>Marine mammals occur regularly (= medium density).</p> <p>The biology of the marine mammal species is moderately affected by the impact.</p>
	High	Major	
			<p>The population is decreasing and/or the population abundance is low.</p> <p>The impact area includes nationally or regionally important areas (used for breeding, feeding or migration).</p> <p>Marine mammals occur in high densities within the impact area.</p> <p>The marine mammal species is highly sensitive to environmental changes, i.e. their biology (physiology or behavior) is severely affected or damaged by the impact.</p>

DK UNDERWATER NOISE

Guidelines:

- ENS **guidelines for pile driving** includes limits for exposures to noise and methods for assessment of projects. Use of noise abatement systems is de facto mandatory for pile driving.

https://ens.dk/sites/ens.dk/files/Vindenergi/guidelines_for_underwater_noise_energistyrelsen_maj_2022_0.pdf

https://ens.dk/sites/ens.dk/files/Vindenergi/guidelines_for_underwater_noise_prognosis_for_eia_and_sea_assessments_energistyrelsen_maj_2022.pdf

- ENS **guidelines for seismic surveys** with air guns, including requirements for soft starts
- Guidelines for use of **detering sounds** prior to underwater explosions
- **Thresholds hearing loss:**

https://ens.dk/sites/ens.dk/files/Vindenergi/thresholds_for_noise_induced_hearing_loss_in_marine_mammals_dce_march_2021.pdf

Thresholds for **behaviour impacts:**

https://ens.dk/sites/ens.dk/files/Vindenergi/thresholds_for_behavioral_responses_to_noise_in_marine_mammals_dce_december_2021.pdf



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