

# SCANS-IV

Small Cetaceans in European Atlantic waters and the North Sea 2022



**ASCOBANS AC 28**  
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Small Cetaceans in European Atlantic  
waters and the North Sea 2022



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SCANS-IV



2022

## Denmark



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of Denmark**  
Environmental  
Protection Agency

## France



## Germany



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Nuclear Safety and Consumer Protection



Federal Agency for  
Nature Conservation

## Netherlands



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Natuur en Voedselkwaliteit

## Portugal

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## U.K.



Department  
for Environment  
Food & Rural Affairs



Department for  
Business, Energy  
& Industrial Strategy

# Context

**SCANS-IV** is the fourth SCANS survey (1994, 2005/2007, 2016, **2022**). It is covering shelf and offshore waters of the European Atlantic.

The main objectives are:

**Abundance estimates and trend assessment** of the regularly occurring cetacean species by population-wide surveys

Provide outputs for Member States to report under the **Marine Strategy Framework Directive** (Article 8: due 2024), the **Habitats Directive** (Article 17: 2019 - 2024) and for **OSPAR/HELCOM** assessments.

Provide outputs for **impact assessments** of offshore industries and fisheries.

Development of a **governance framework** for future SCANS surveys conducted in 6-year cycles to ensure long-term implementation.

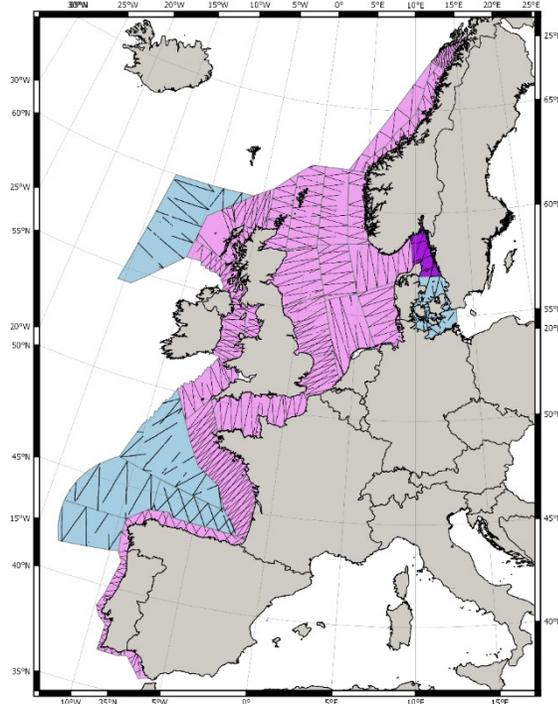
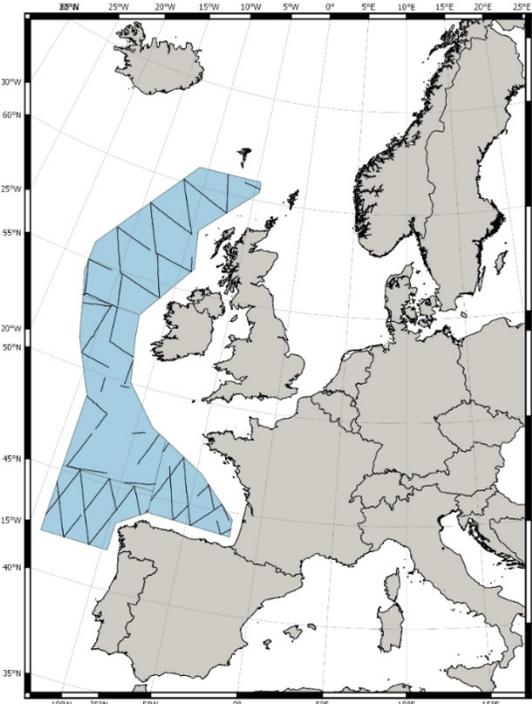
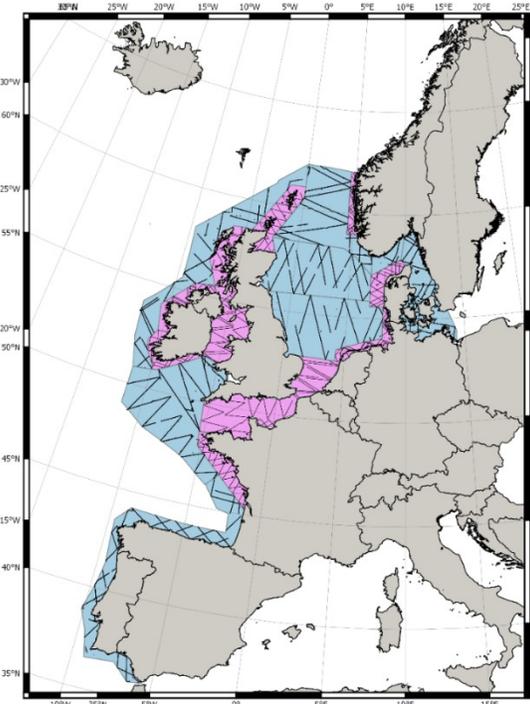
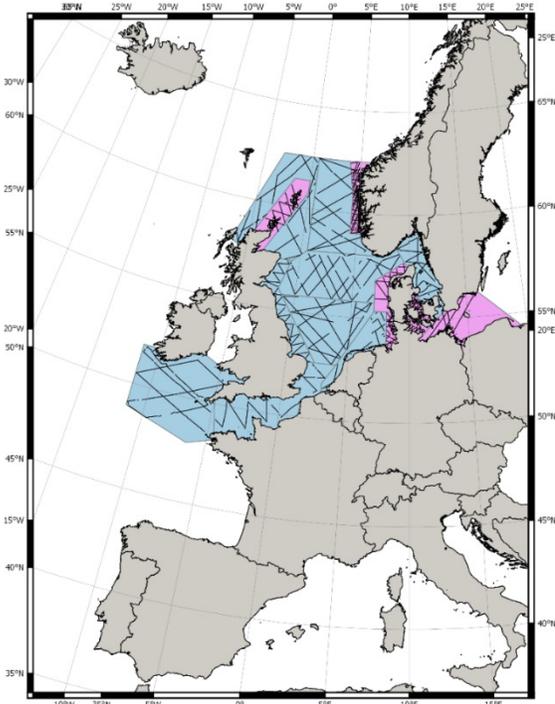
# Context

### SCANS 1994

### SCANS-II 2005

### CODA 2007

### SCANS-III 2016



■ ship ■ aerial

# Survey area

## Aerial surveys

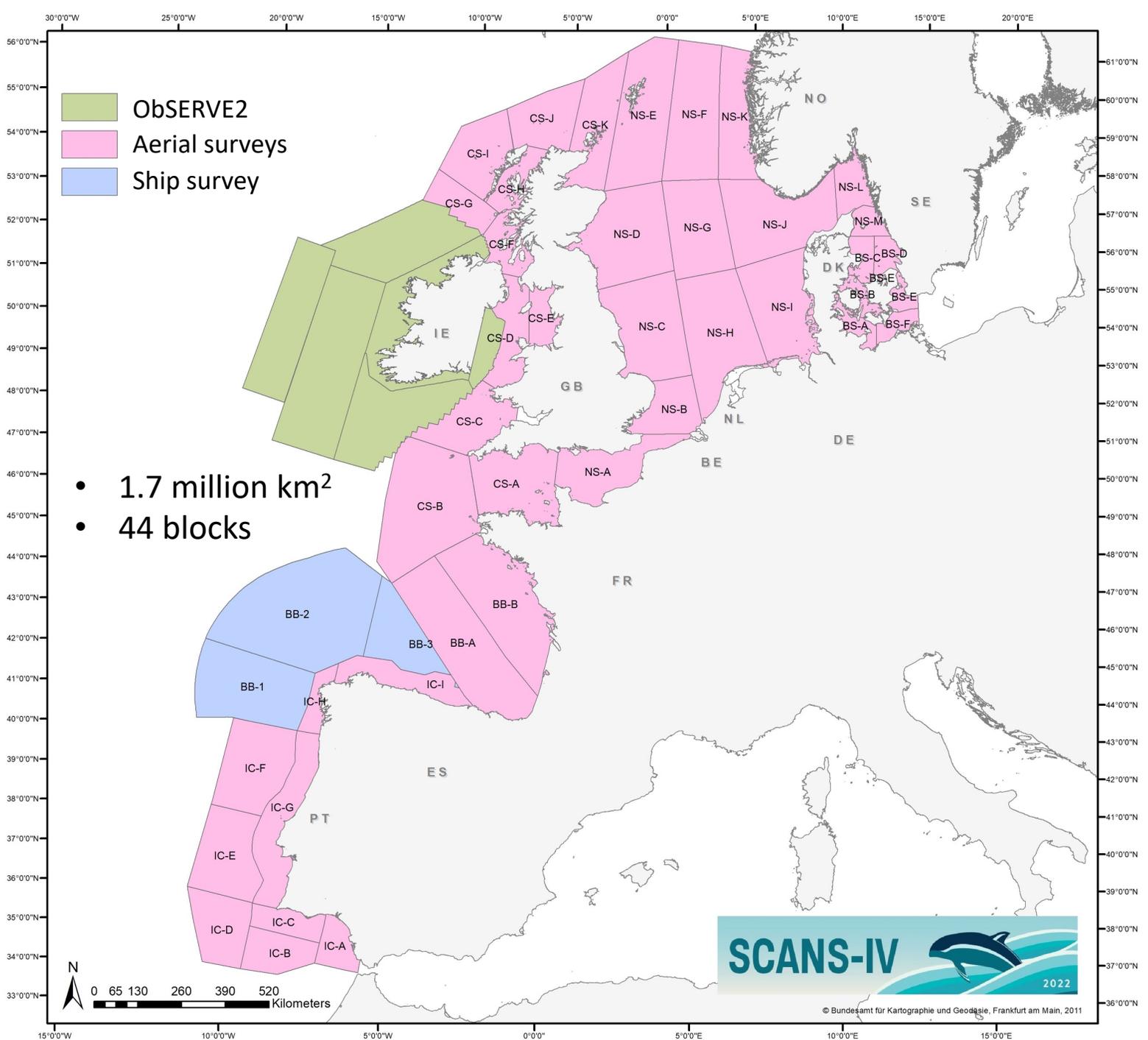
- 8 planes (7 P68s and 1 BN)
- Using regional (existing) survey teams where available
- Portuguese offshore waters covered for 1<sup>st</sup> time in SCANS

## Shipboard survey(s)

- 1 vessel in 2022 (Ramón Margalef)
- Covering primarily offshore waters

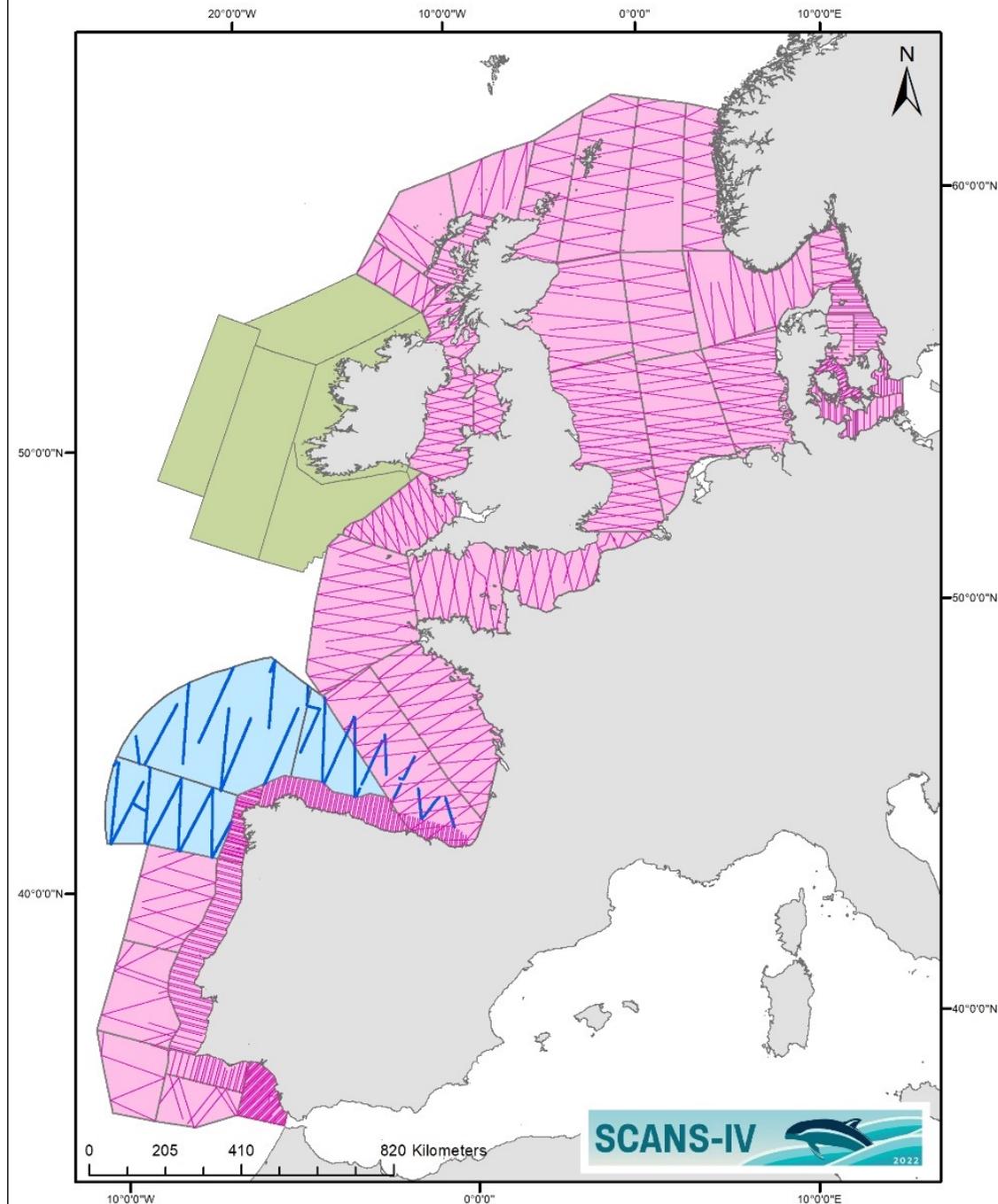


- No ship survey west of Scotland

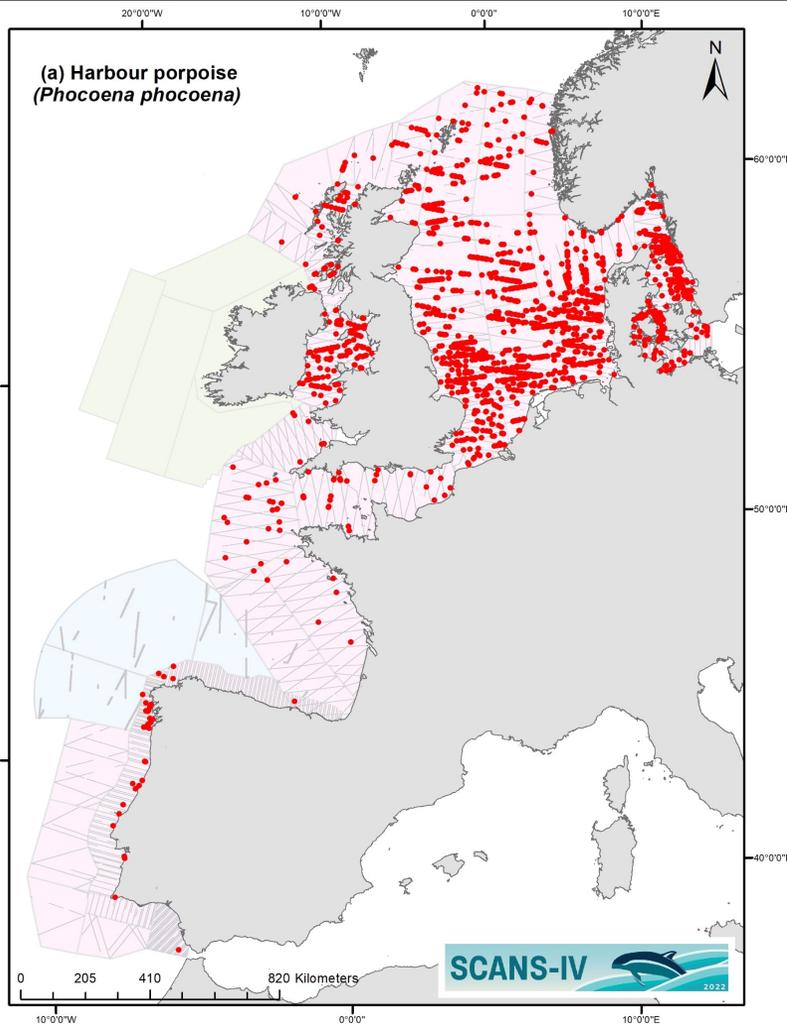


# Realised effort

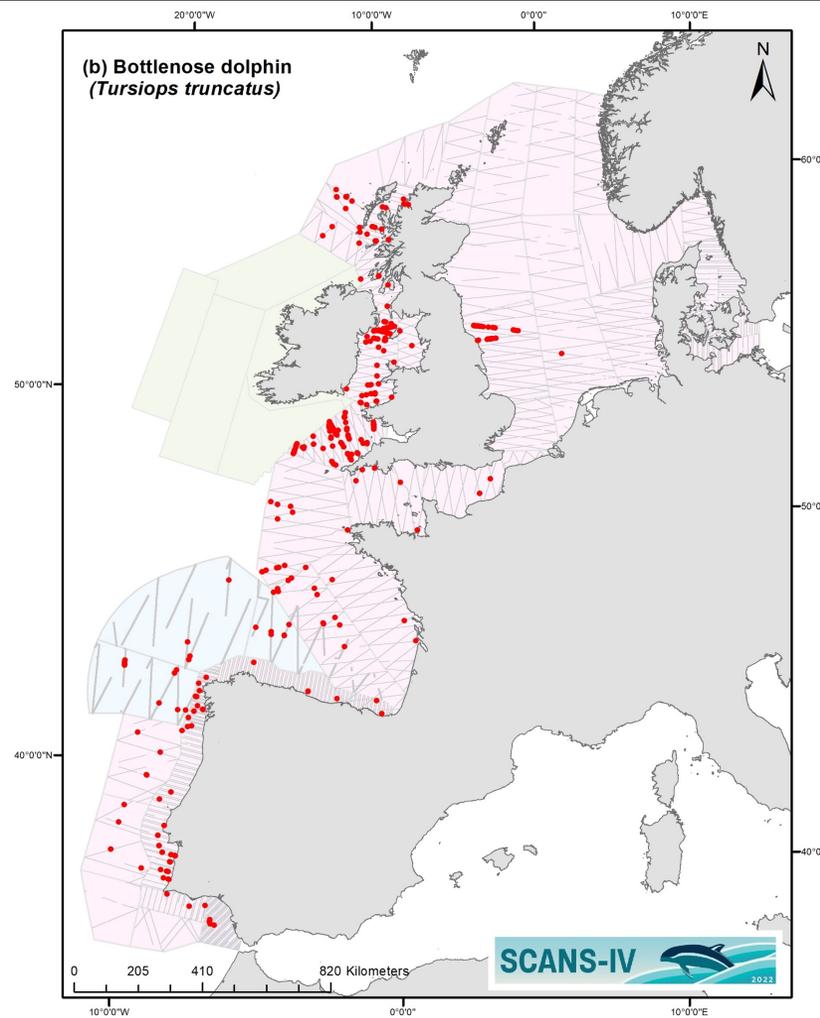
- 28.06. - 15.08.2022 (83% of effort)
- 2<sup>nd</sup> attempt NW Scotland: 07. - 12.09.2022 (3%)
- Spanish (coastal) aerial survey: 07.09. - 22.10.2022 (14%)
- **Good coverage overall, very high effort**
  - Total of 76,000 km on effort
    - Very good cov in central areas and Belt Seas
    - Adequate cov in northern areas
      - Couple of gaps west of Hebrides & northern North Sea
    - Very good coastally and adequate offshore in the south
      - Ship coverage patchy in offshore Bay of Biscay



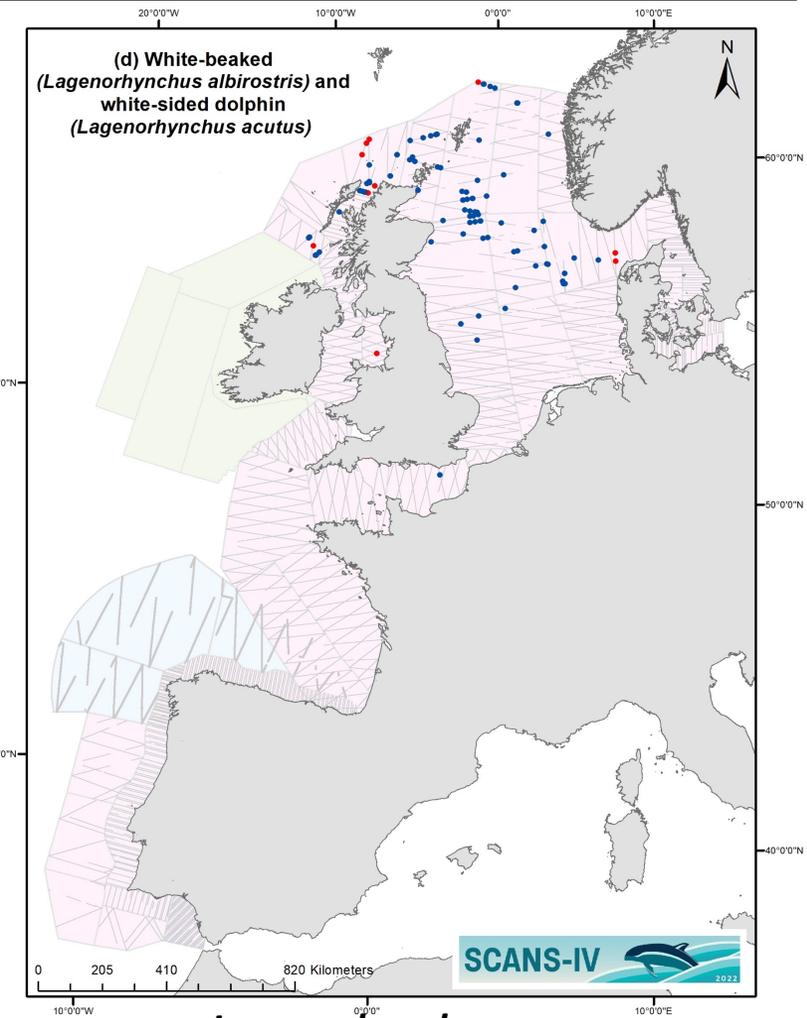
# Harbour porpoise and some dolphin species



**Harbour porpoise**  
N = 409,000 (0.17)

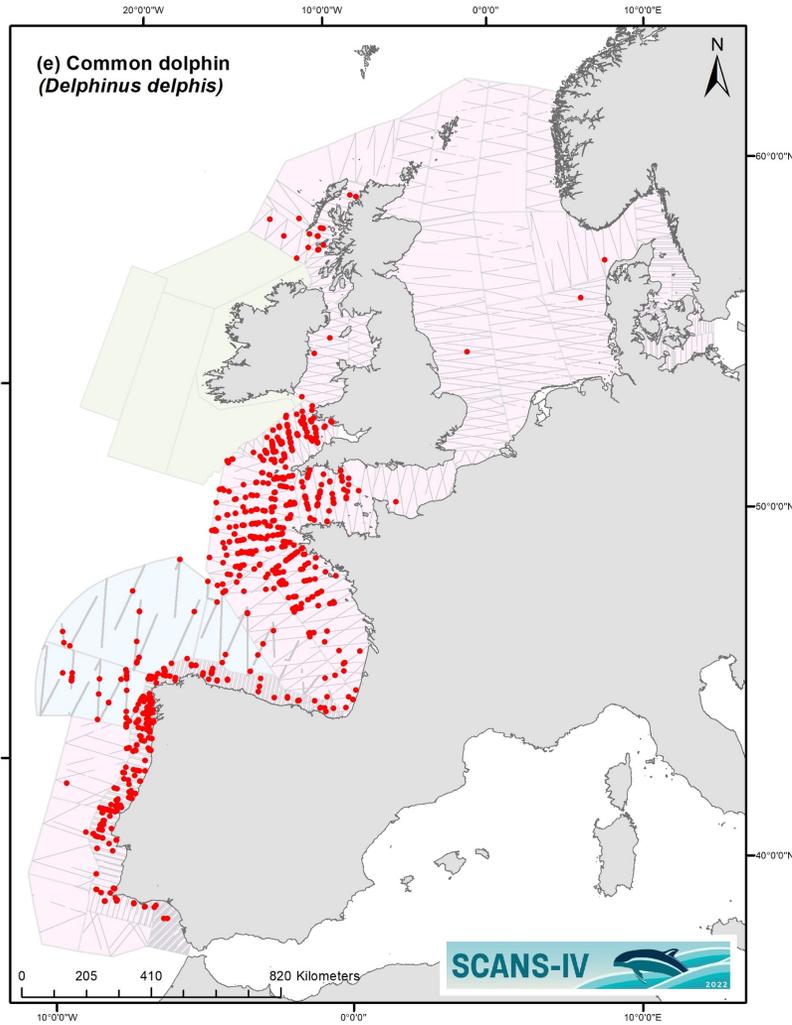


**Bottlenose dolphin**  
N = 126,000 (0.23)

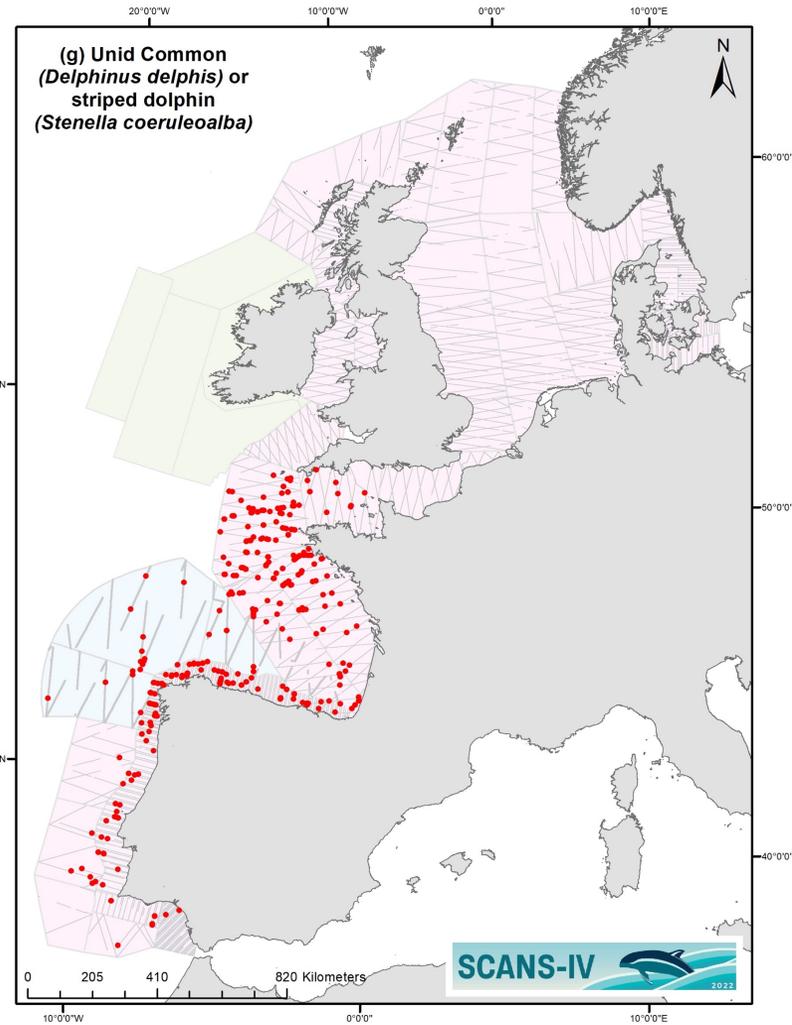


***Lagenorhynchus* spp**  
White-beaked dolphin (blue)  
N = 67,000 (0.33)  
White-sided dolphin (red)  
N = 4,000 (0.46)

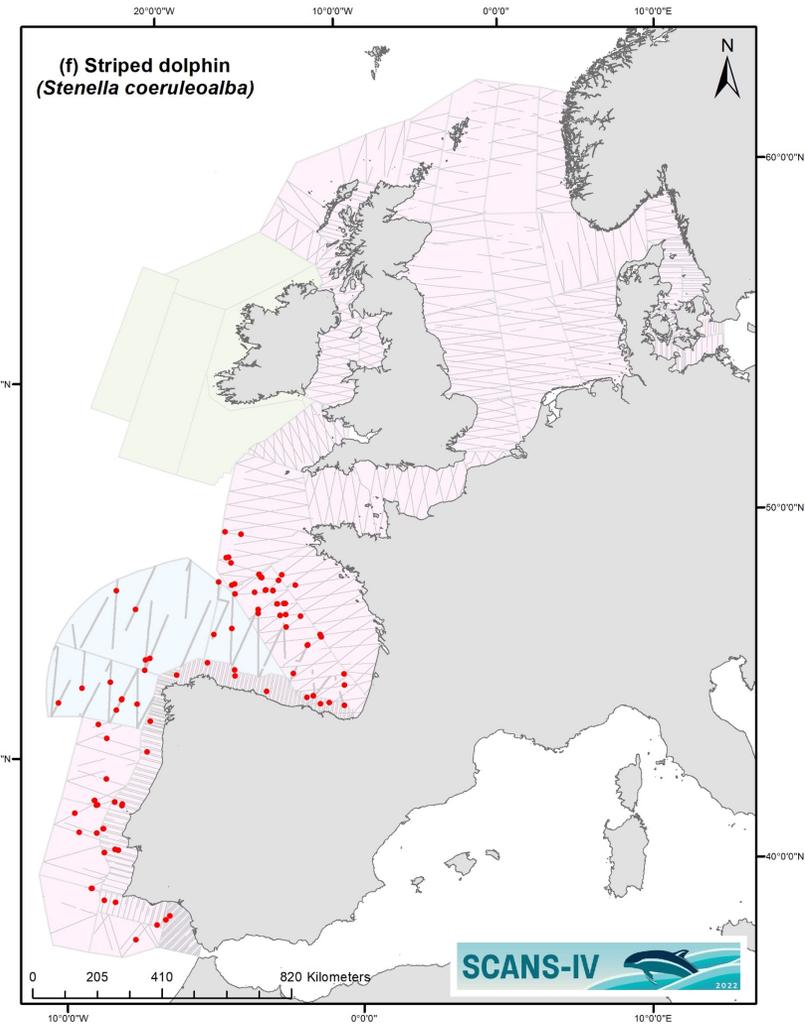
# Common and striped dolphin



**Common dolphin**  
N = 439,000 (0.18)

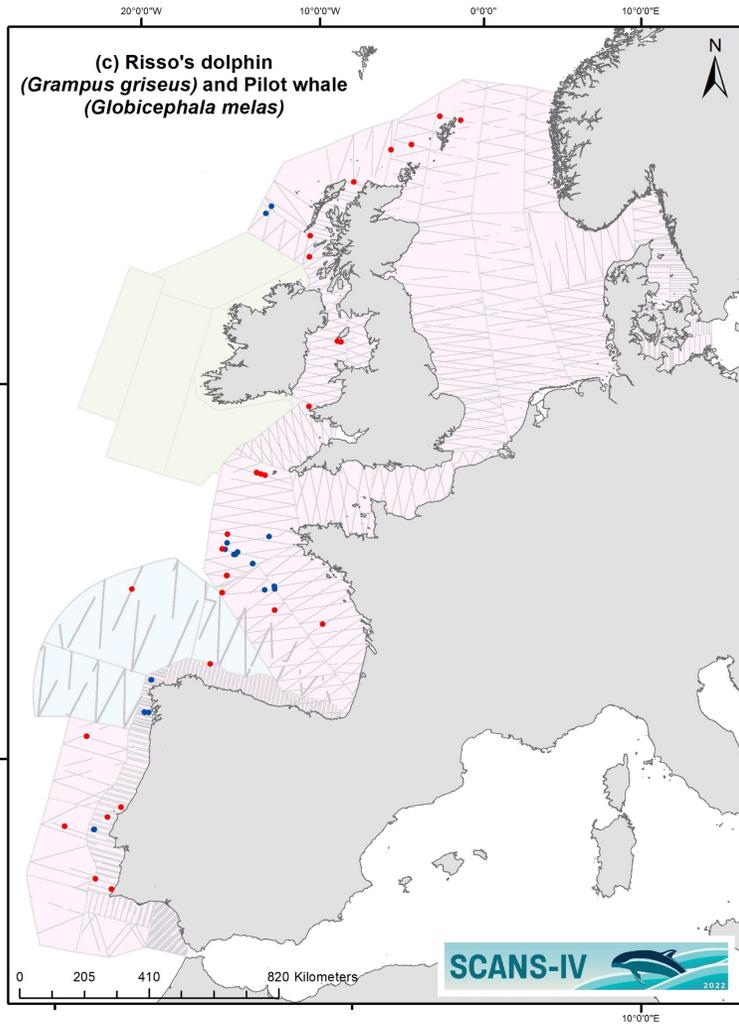


**Unidentified Common/Striped**  
N = 146,000 (0.22)

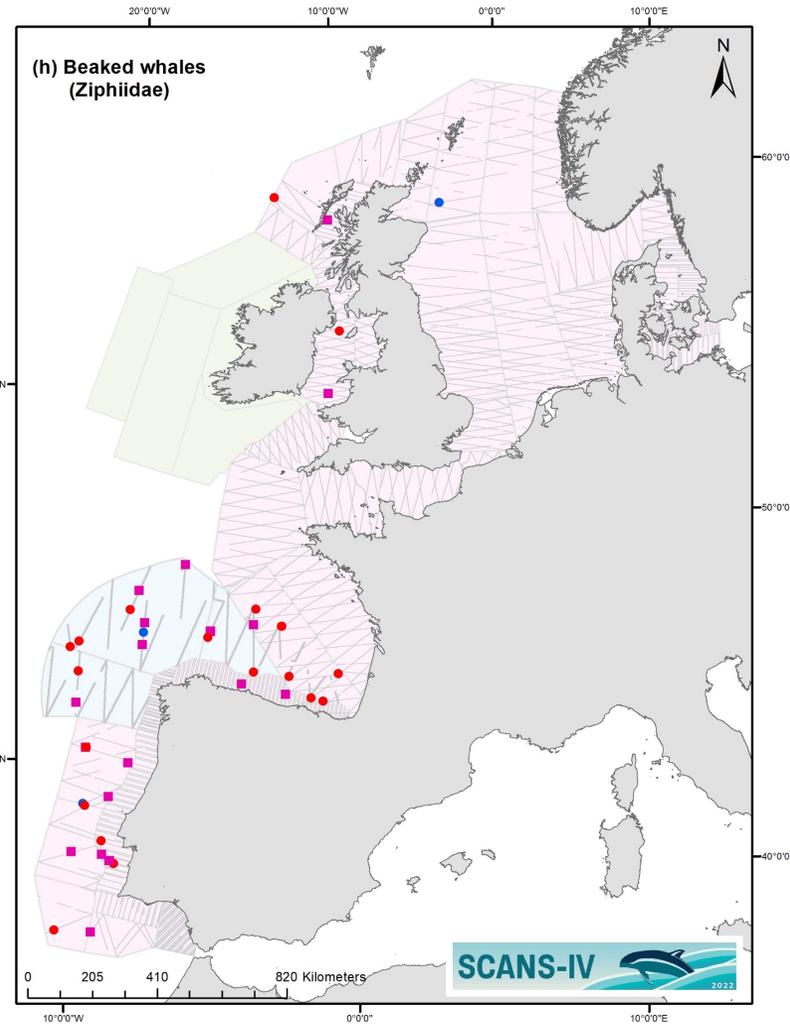


**Striped dolphin**  
N = 187,000 (0.36)

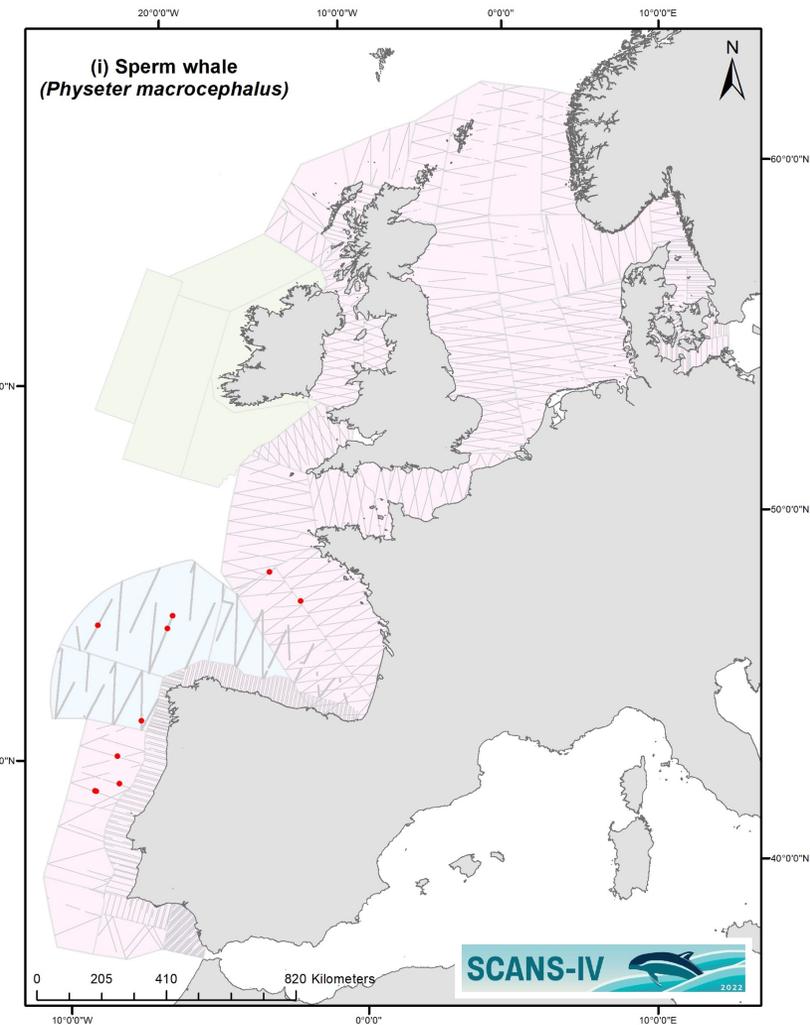
# Deep divers



**Pilot whale (blue)**  
N = 3,000 (0.43)  
**Risso's dolphin (red)**  
N = 14,000 (0.43)

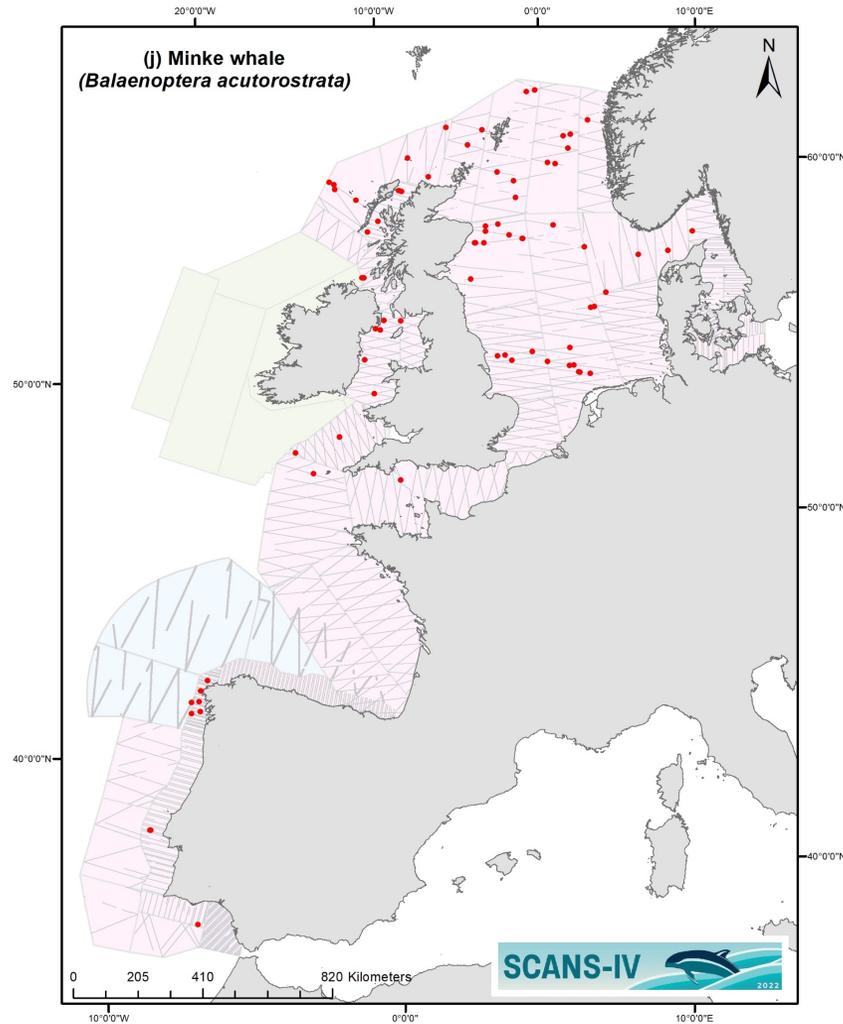


**Beaked whales**  
N = 5,000 (0.21)

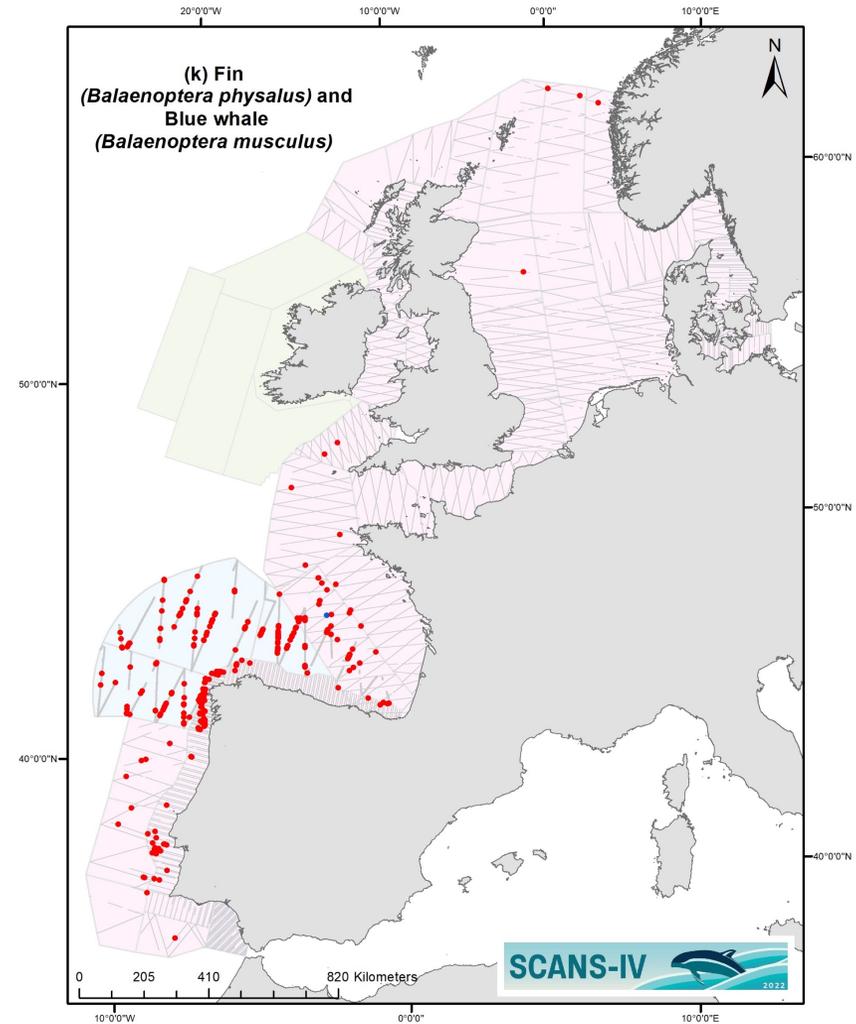


**Sperm whale**  
N = 150 (0.52)

# Baleen whales

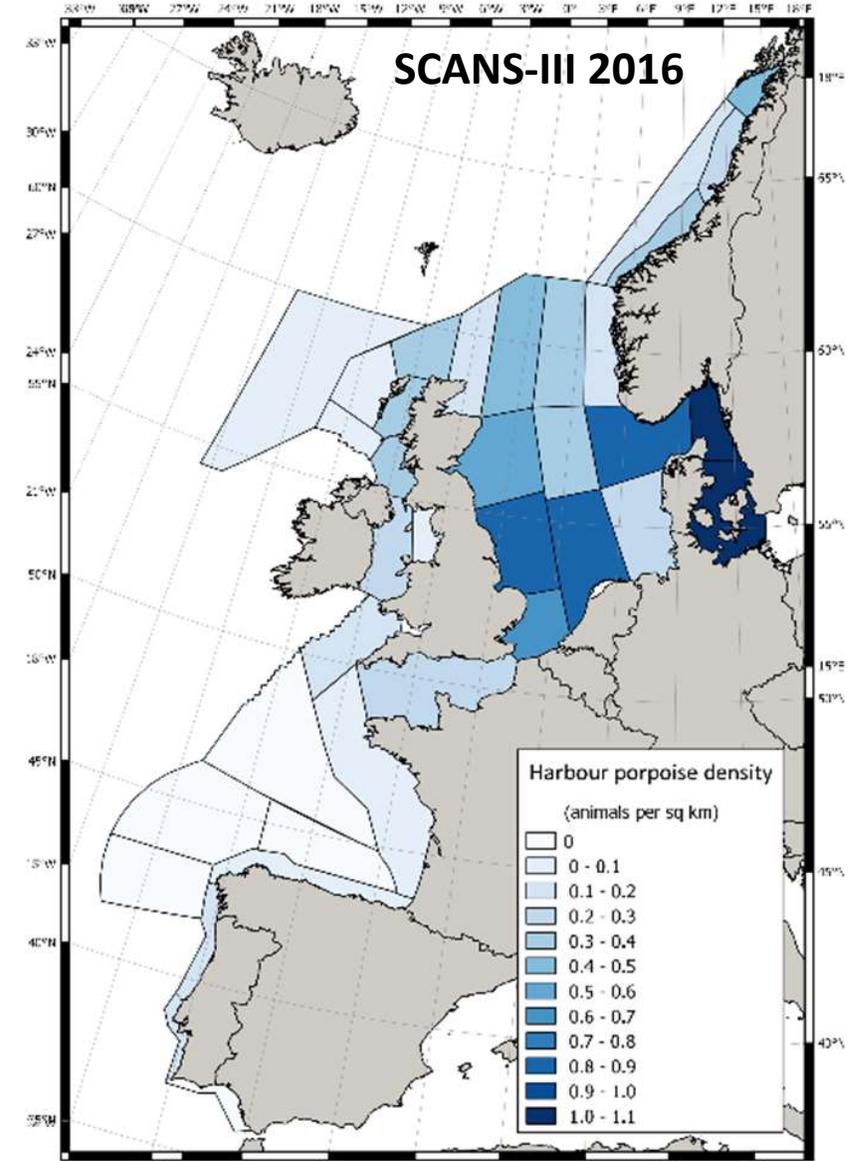
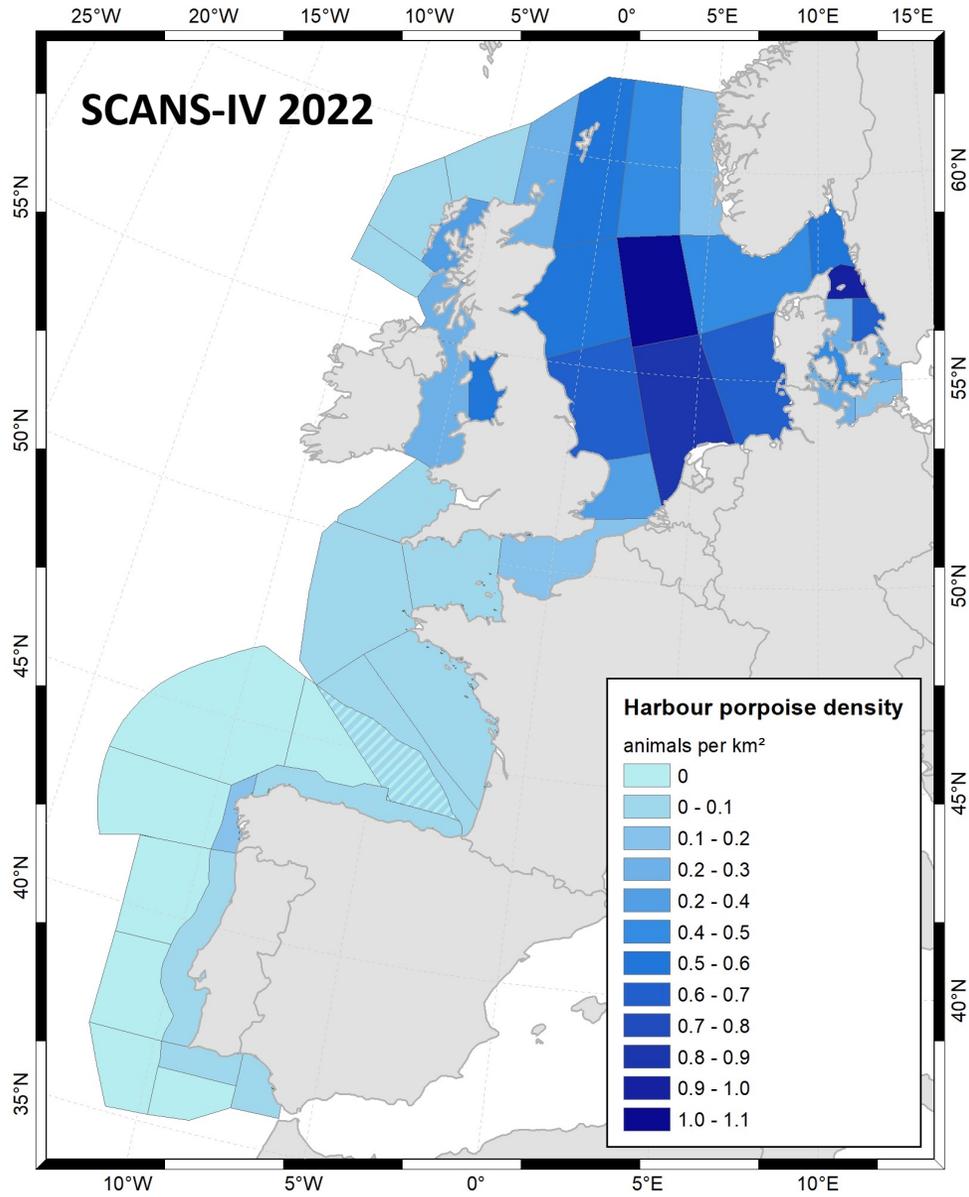


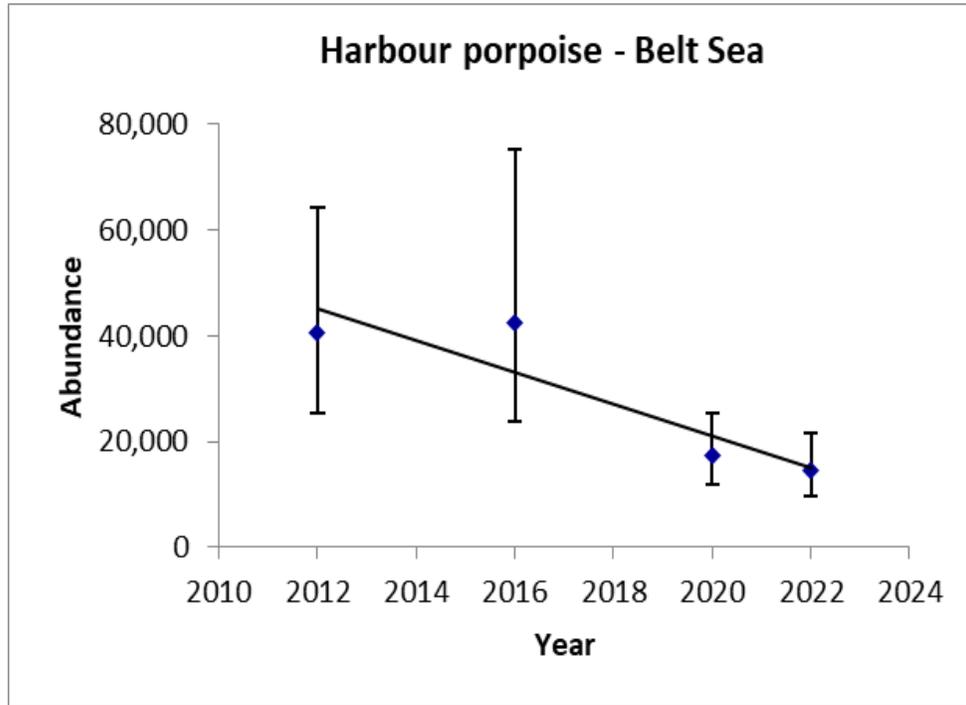
**Minke whale**  
N = 12,000 (0.36)



**Fin whale**  
N = 13,000 (0.19)

# Harbour porpoise

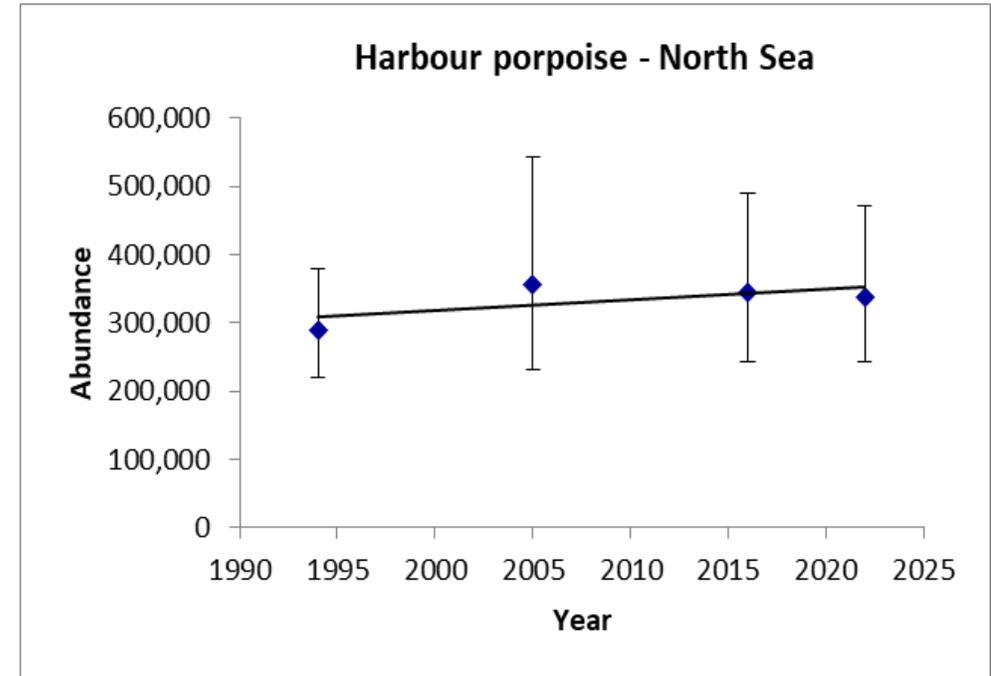




estimated rate of annual change =  
**-1.52%** (95%CI: -26.5; 31.9%),  $p = 0.84$

**BUT low power** and a decline would need to be at least 4.4% per year to be detected with this method

➔ Although there is no direct evidence of declines, these results should not be interpreted as providing evidence that there have been no declines.



-> no evidence for a change in harbour porpoise abundance in the North Sea

Other harbour porpoise AU ? – need to wait for ObSERVE2 (“west Scotland & Ireland”, “Irish and Celtic Sea”)

# Summary

- SCANS-IV 2022 was a huge success
- Higher effort than SCANS-III in a comparable area

## **New information on species:**

- North Sea (and Belt Seas) time series now up to 4 estimates, i.e. increasing power to detect trends over the whole time period;
- North Sea harbour porpoise – very consistent abundance estimates. Distribution continues to be expanding south (plus now throughout Channel).
- Belt Sea harbour porpoise – signal in the data is for fewer animals in this area. Needs in-depth trend analysis.
- Common dolphin: occurrence increased in the Celtic Sea, as well as southwest of UK and in the western part of the English Channel, suggesting that the population range may be expanding further north
  - estimates of common and striped dolphin abundance from ObSERVE2 will need to be added once available to give a fuller picture of trends in abundance for these species.

# Summary

## Logistically (WP Governance framework)

- Establishment of a 6-year frequency, which needs to be maintained
- Project co-ordination more challenging because of the way countries provide funding (link to future governance);
- Coordination with ObSERVE to ensure consistency (but need to wait for their results before inferences can be made regarding most species/areas);
- Further data collection outside of summer SCANS surveys would support our understanding of this changing distribution and how management may need to be adapted as a result

# And much more to come ....



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17 cetacean species

Pinnipeds

Turtles

Sharks

Sunfish

Tuna

Anthropo activities

... and, ad-hoc data collection, about 800 flocks of dead seabirds (bird flu summer 2022)

# Next steps



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## Project coordination

## Time line

Survey preparation

Q1 2022

Survey area and transect design

Q2 2022

Aerial surveys

Ship surveys

Q3 2022

Data validation

Q4 2022

Abundance estimates and trend analyses for MSFD

Q1 2023

Q2 2023

Model-based estimates of abundance and drivers of distribution

Q3 2023

Q4 2023

Development future governance framework SCANS surveys

Q1 2024

Q2 2024

Final report

Q3 2024

Dissemination of progress and results in relevant fora



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riksmuseet



University of  
St Andrews

# Big thank you to all teams!!



**More questions?** please contact Anita Gilles  
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**Report & distribution maps available here**

<https://www.tiho-hannover.de/en/clinics-institutes/institutes/institute-for-terrestrial-and-aquatic-wildlife-research-itaw/scans-iv-survey>

And follow us on twitter  
**@scans\_4**

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**Small Cetaceans in European Atlantic  
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SCANS is a large-scale ship-based and aerial survey designed to study the distribution and abundance of cetaceans in the northeast Atlantic. The survey is conducted during summer, surveying along predetermined transects for whales, dolphins and porpoises. SCANS-IV built on the previous surveys conducted in 1994, 2005/2007 and 2016.

