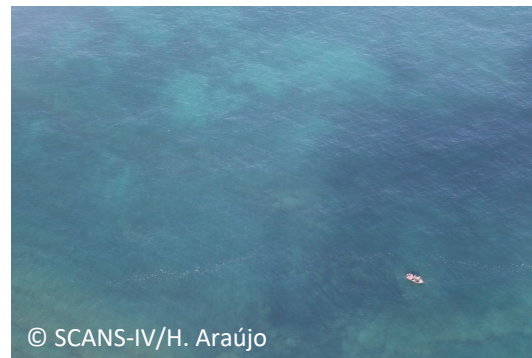


SCANS-IV

Small Cetaceans in European Atlantic
waters and the North Sea 2022



ASCOBANS AC 28
Presentation by **Anita Gilles**¹
Coordinator SCANS-IV
26 Sep 2023



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SCANS-IV

Small Cetaceans in European Atlantic
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13. Sea Mammal Research Unit, University of St Andrews, UK

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SCANS-IV



2022

Denmark



**Ministry of Environment
of Denmark**

Environmental
Protection Agency

France



Germany



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection



Federal Agency for
Nature Conservation

Spain



Netherlands



Ministerie van Landbouw,
Natuur en Voedselkwaliteit

Portugal

FUNDO AMBIENTAL



Sweden

**Swedish Agency
for Marine and
Water Management**

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.

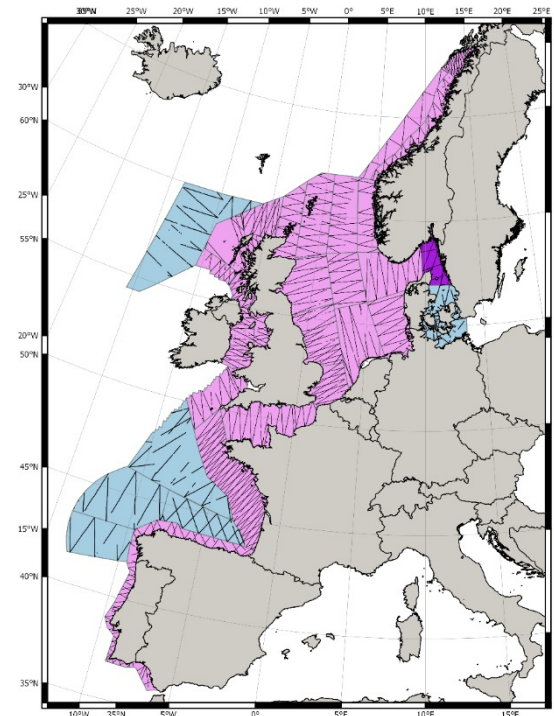
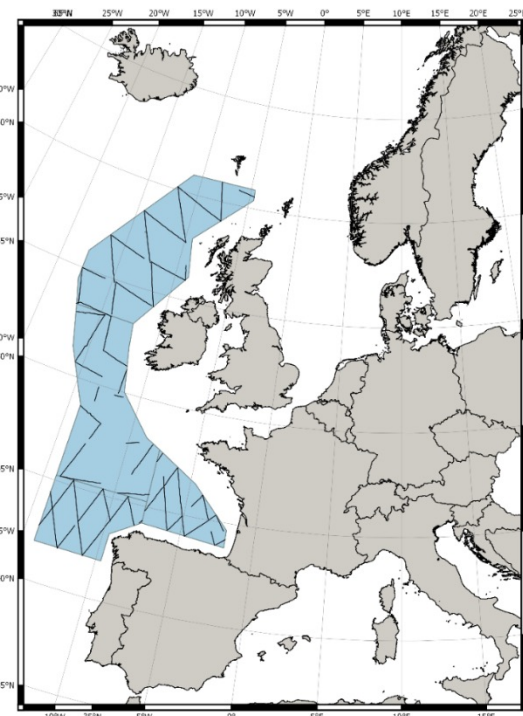
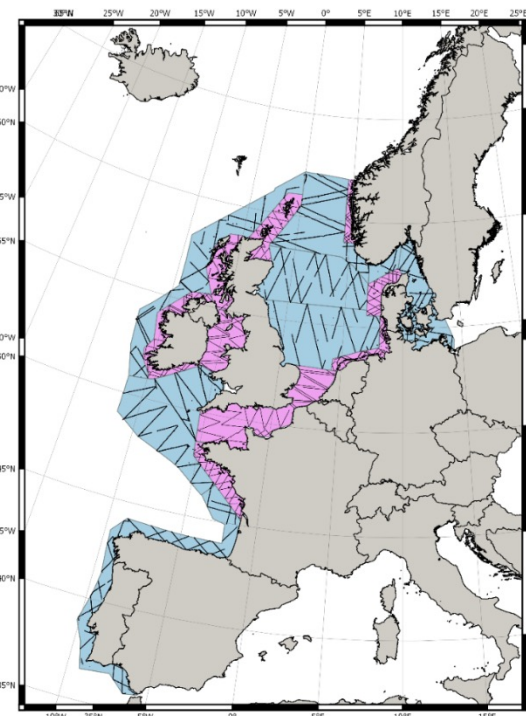
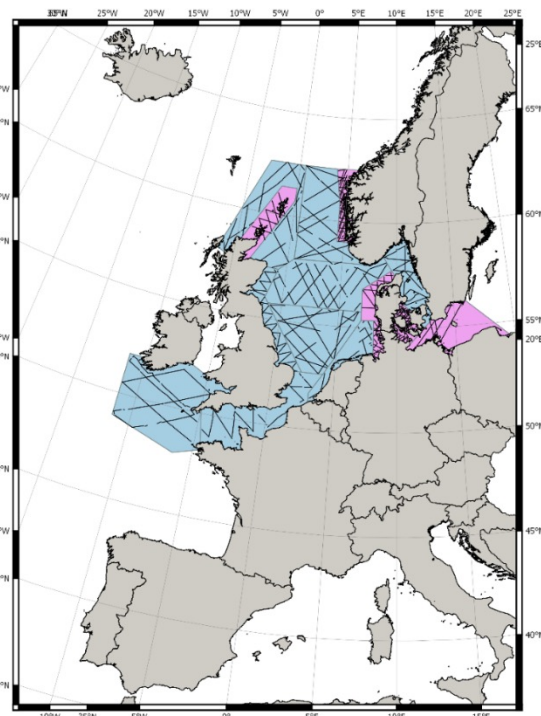
Context

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 1st time in SCANS

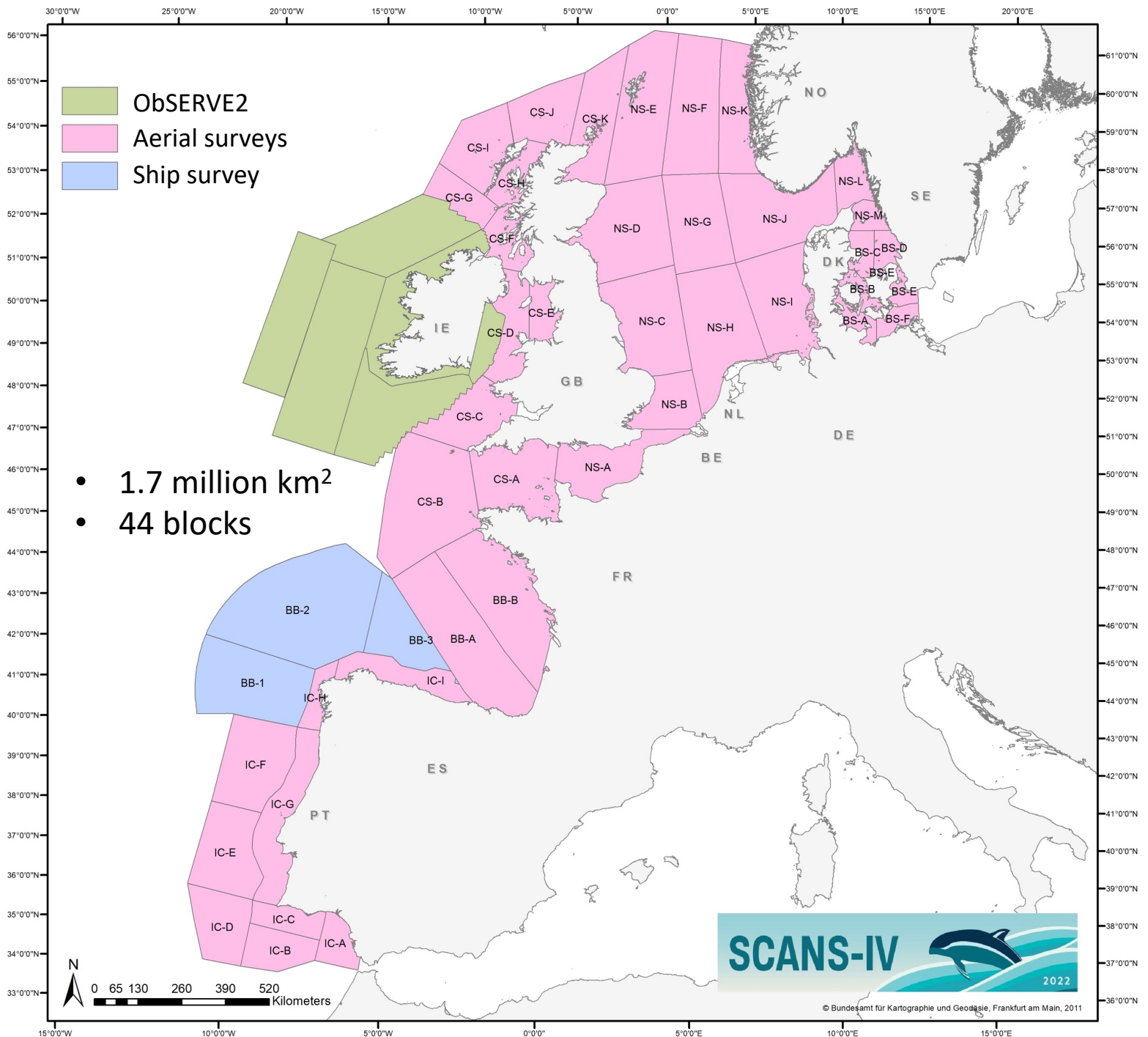
Shipboard survey(s)

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



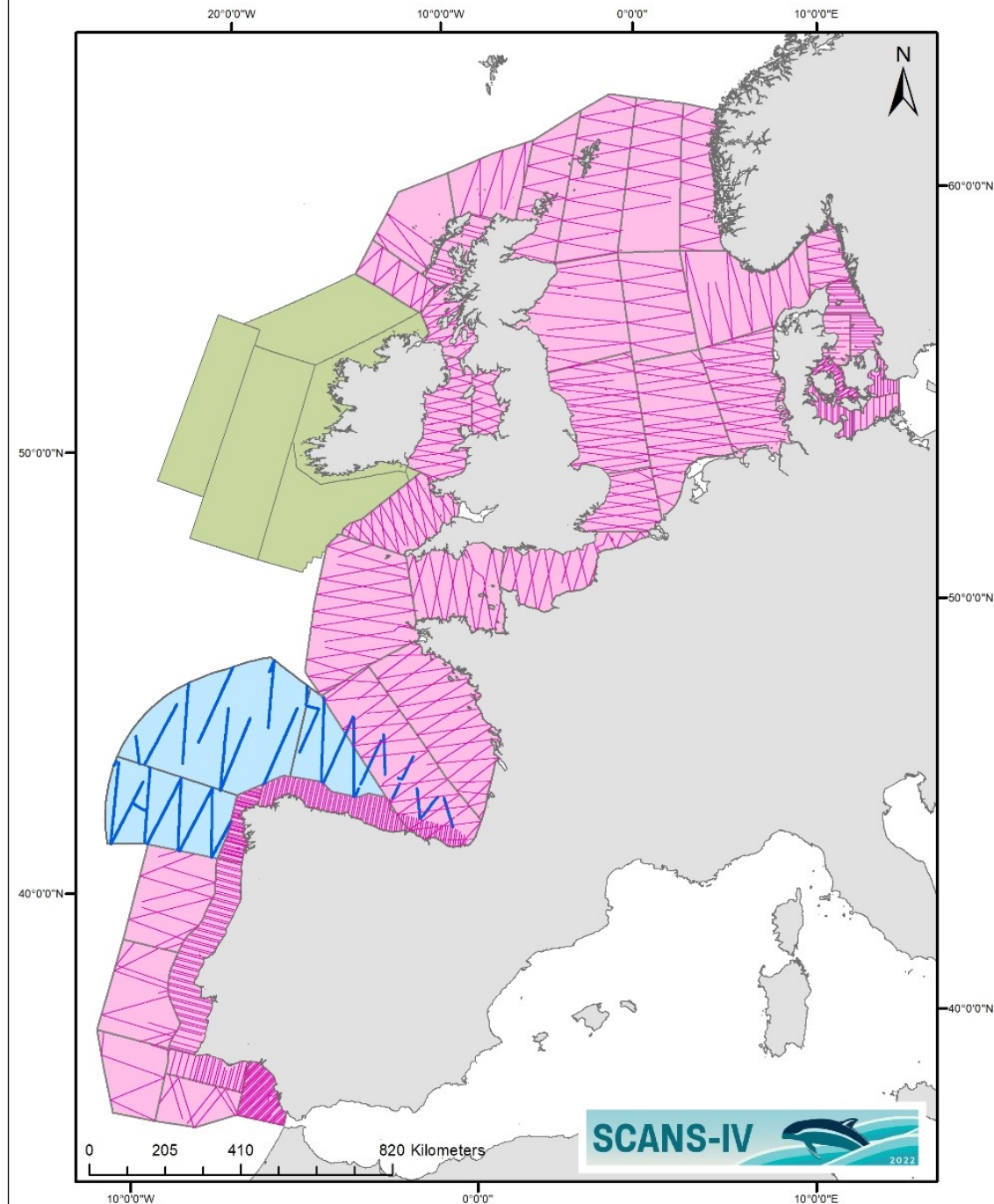
SCANS-IV / IEO_CSIC

- No ship survey west of Scotland

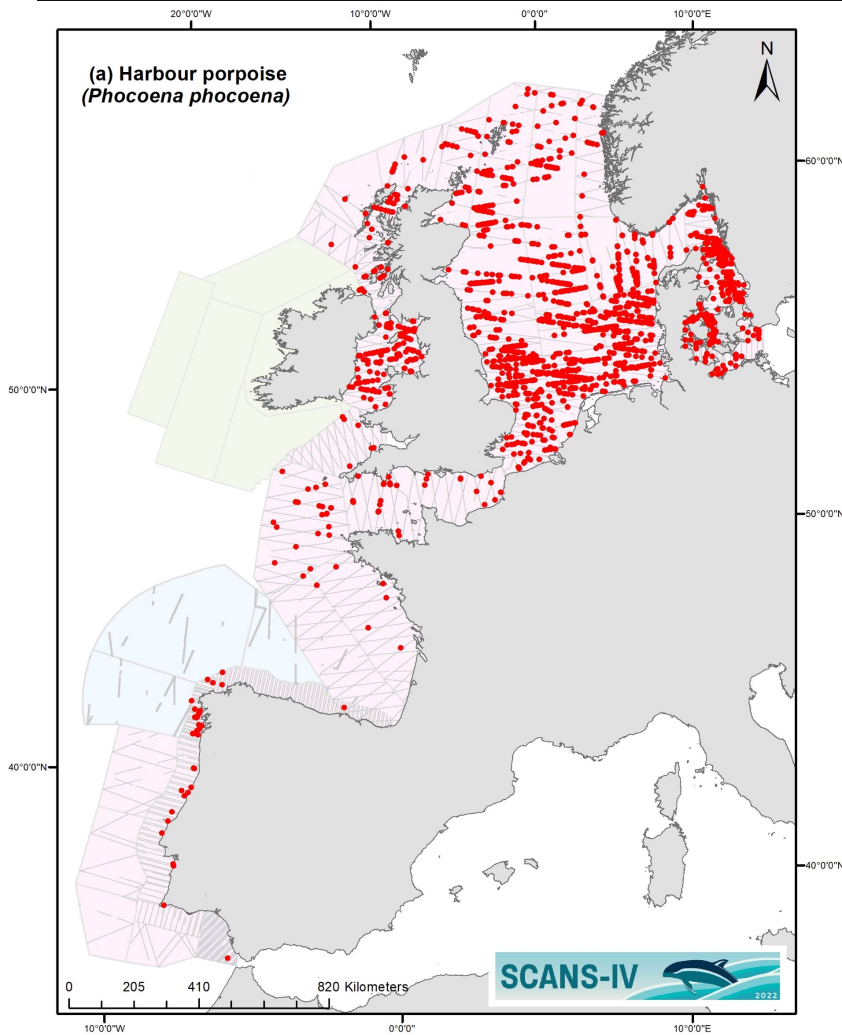


Realised effort

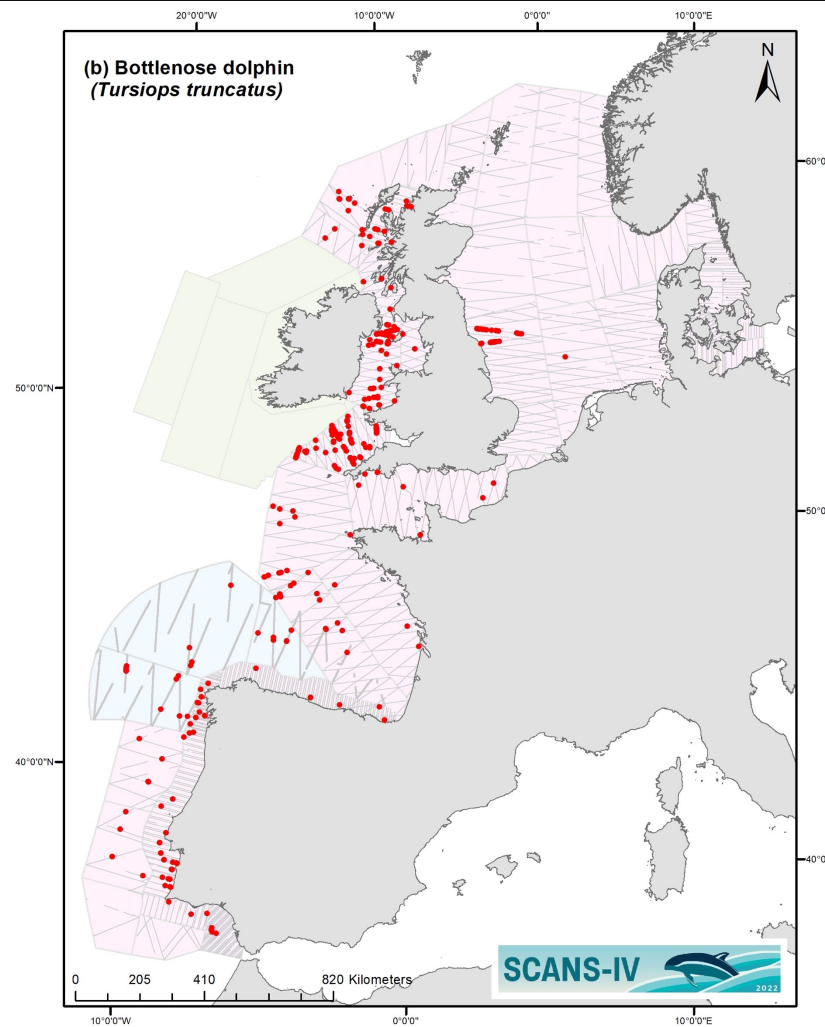
- 28.06. - 15.08.2022 (83% of effort)
- 2nd attempt NW Scotland: 07. - 12.09.2022 (3%)
- Spanish (coastal) aerial survey: 07.09. - 22.10.2022 (14%)
- **Good coverage overall, very high effort**
 - Total of 76,000 km on effort
 - Very good cov in central areas and Belt Seas
 - Adequate cov in northern 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



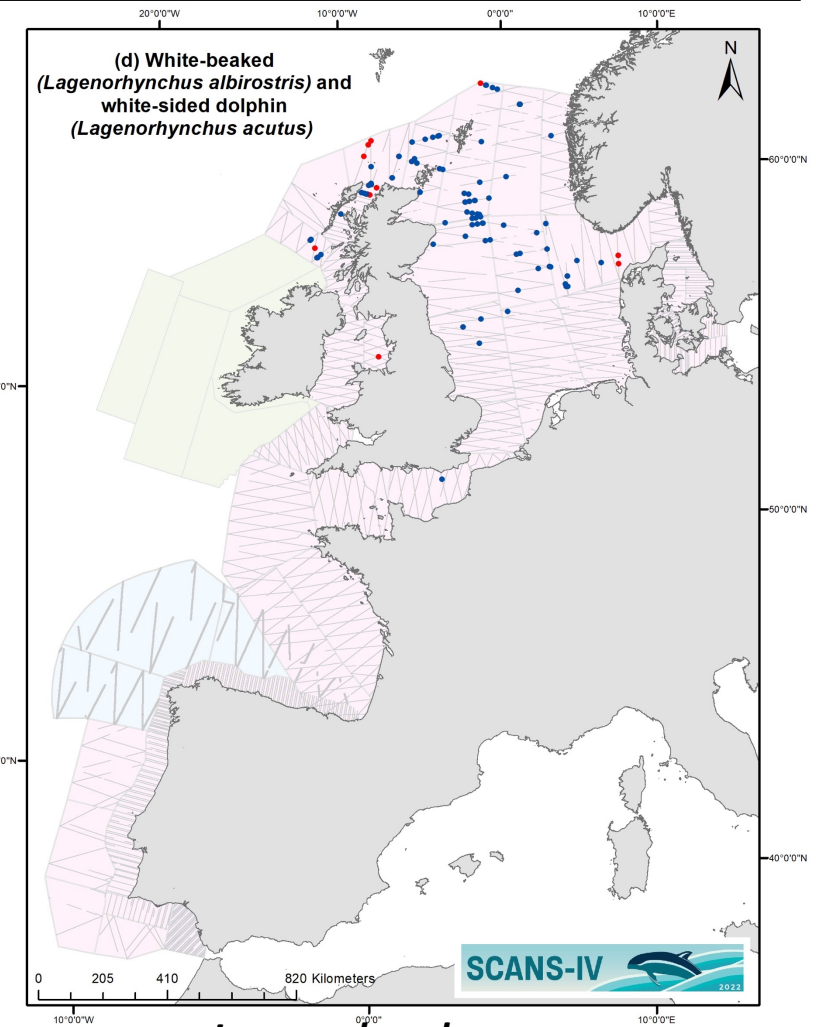
Harbour porpoise and some dolphin species



Harbour porpoise
N = 409,000 (0.17)

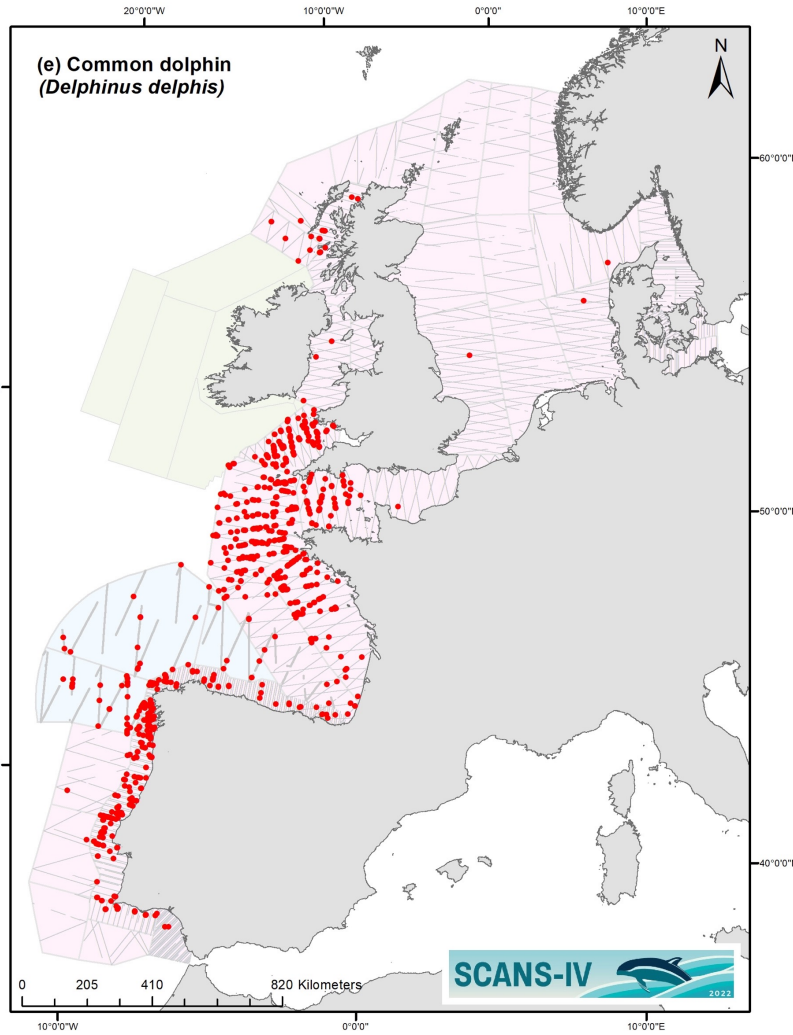


Bottlenose dolphin
N = 126,000 (0.23)

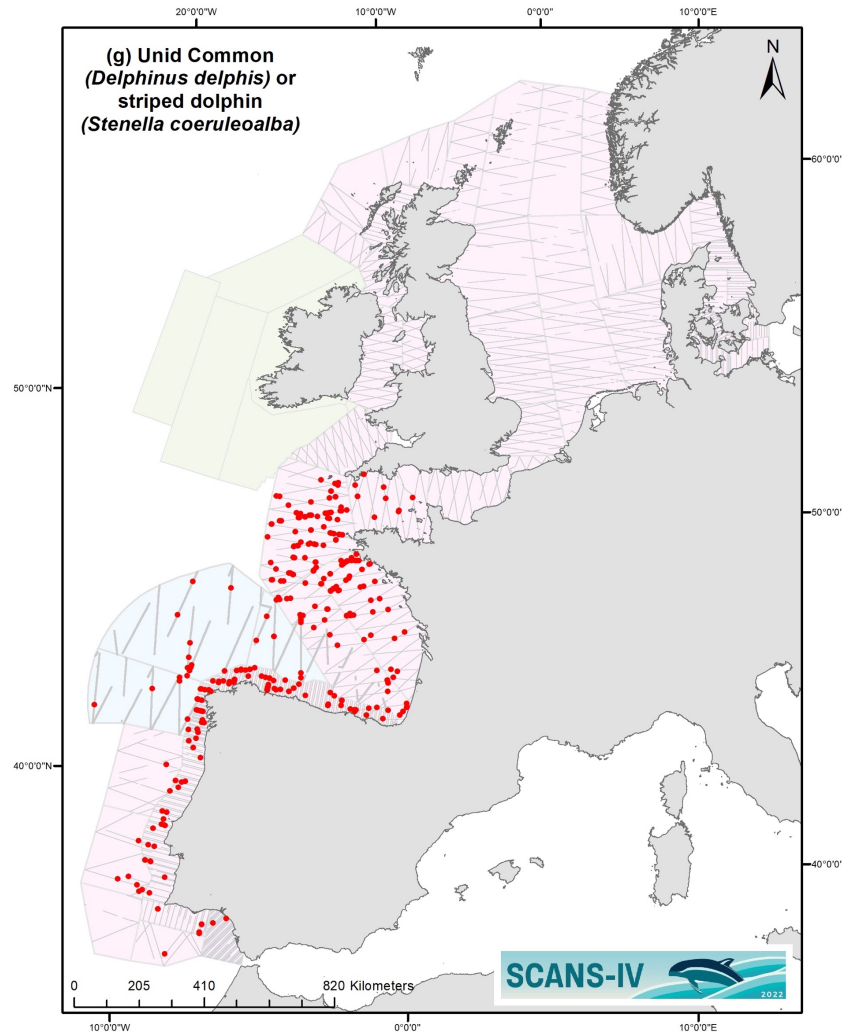


***Lagenorhynchus* spp**
White-beaked dolphin (blue)
N = 67,000 (0.33)
White-sided dolphin (red)
N = 4,000 (0.46)

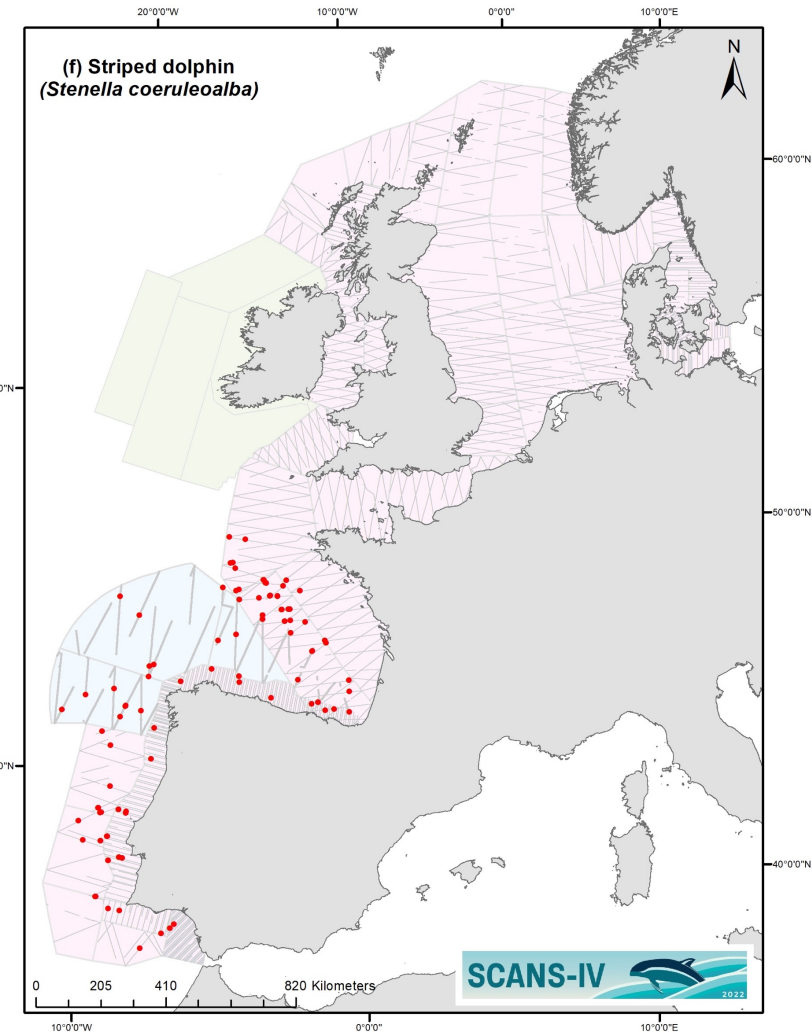
Common and striped dolphin



Common dolphin
N = 439,000 (0.18)

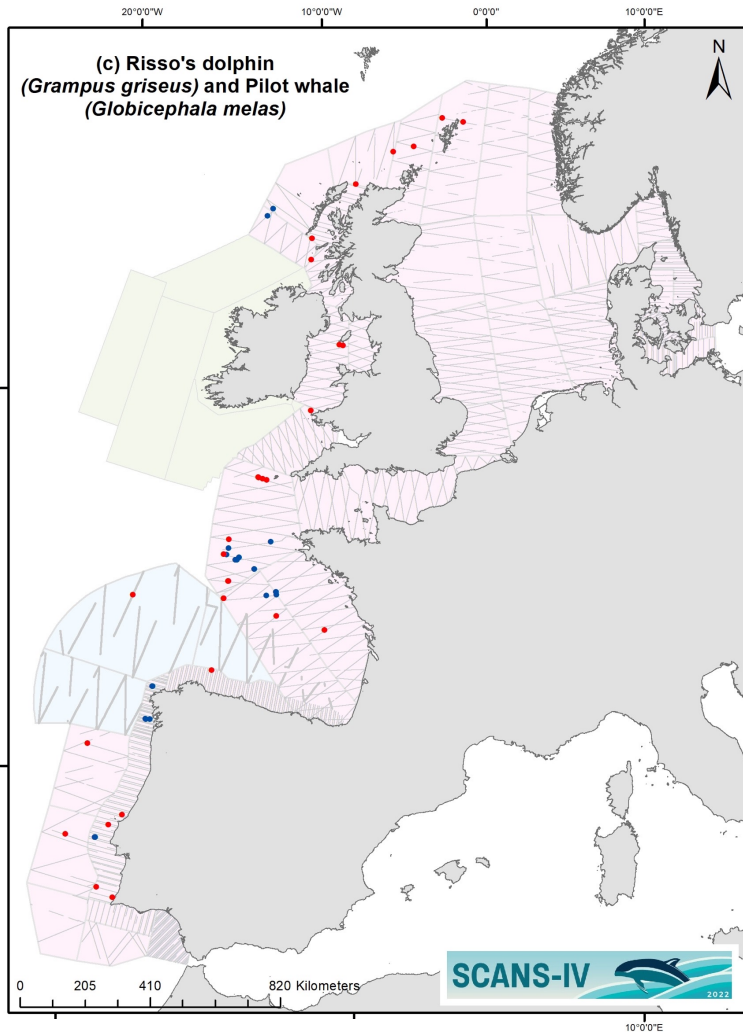


Unidentified Common/Striped
N = 146,000 (0.22)

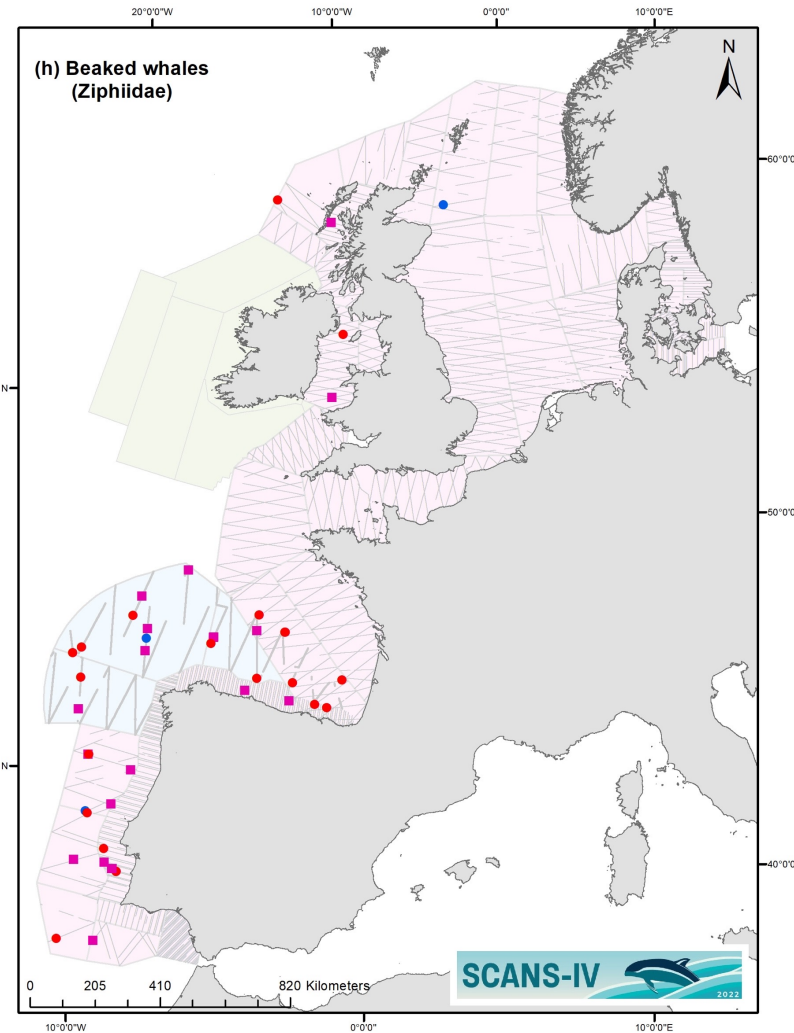


Striped dolphin
N = 187,000 (0.36)

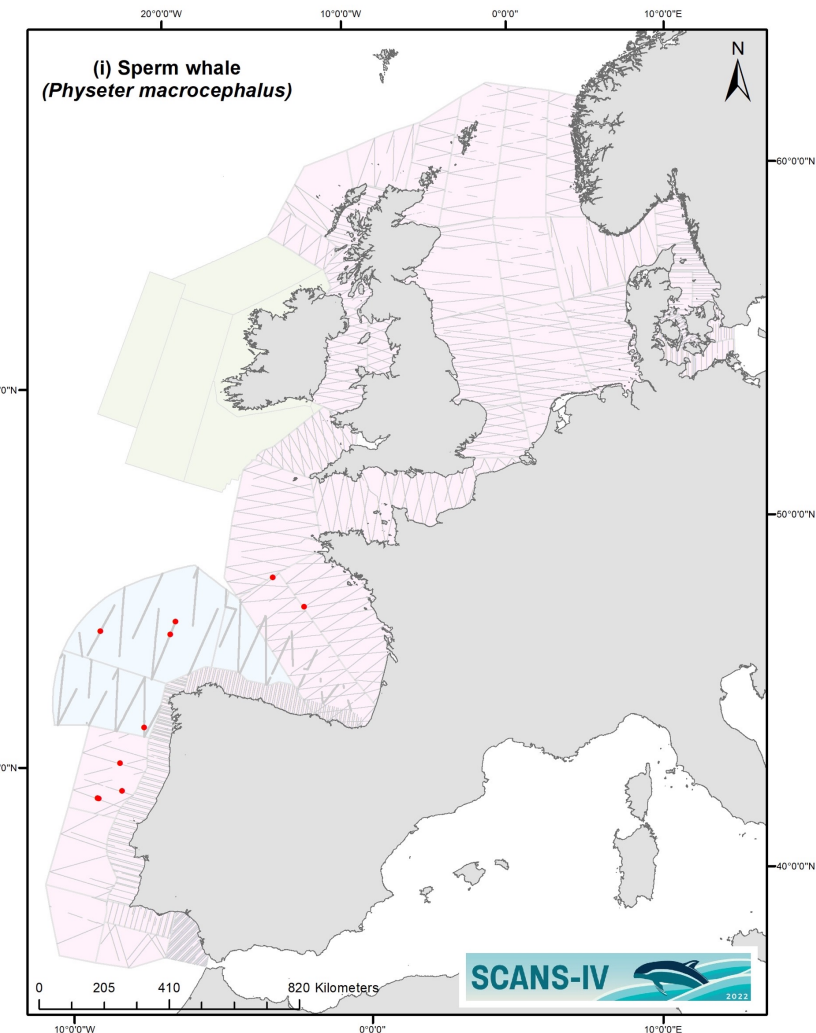
Deep divers



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

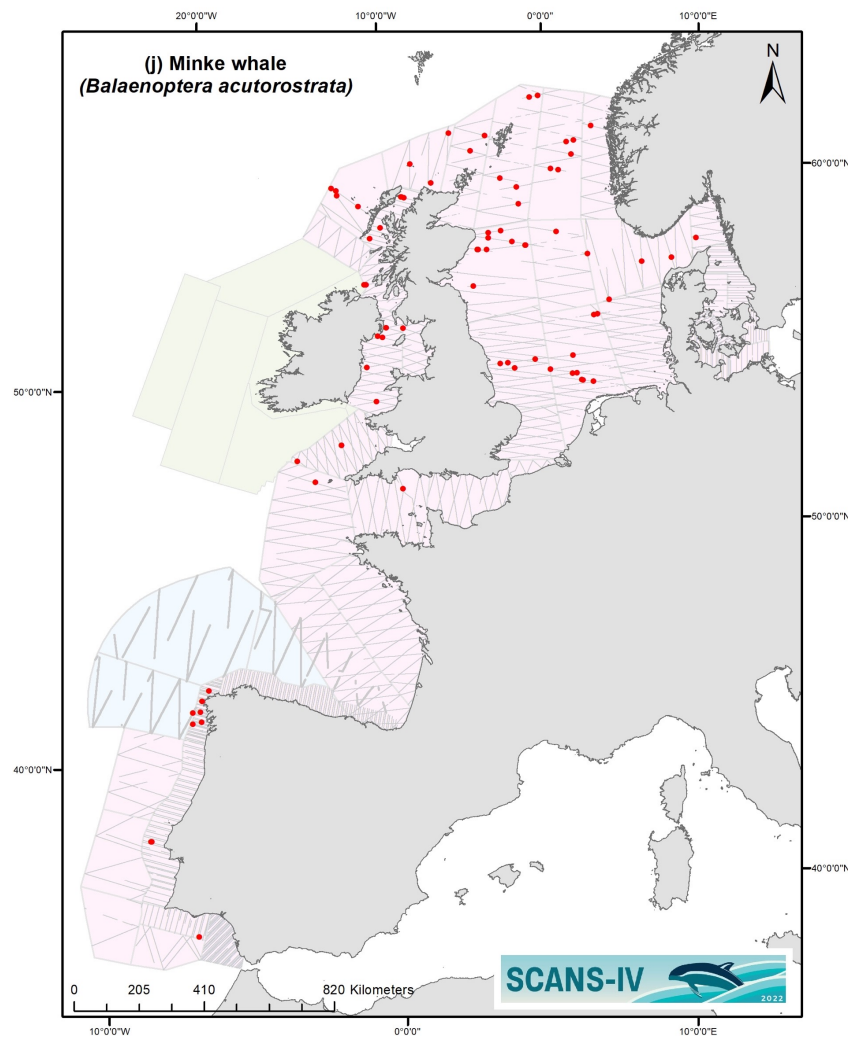


Beaked whales
N = 5,000 (0.21)

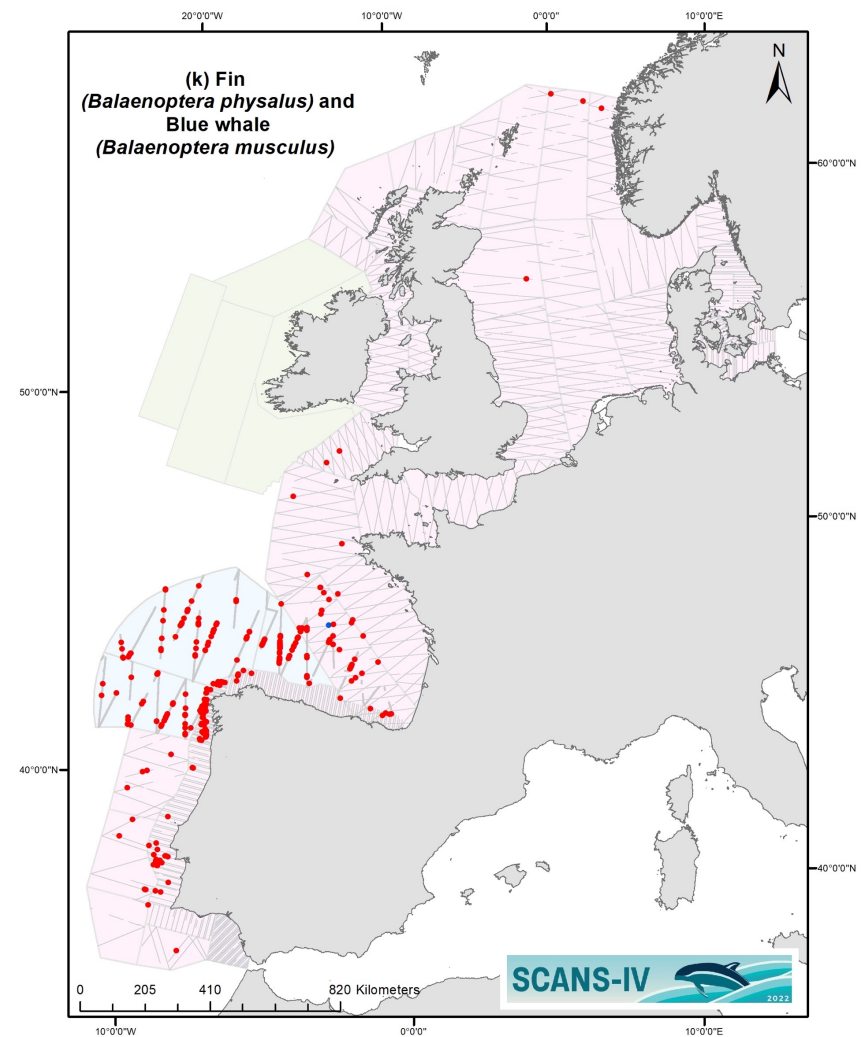


Sperm whale
N = 150 (0.52)

Baleen whales

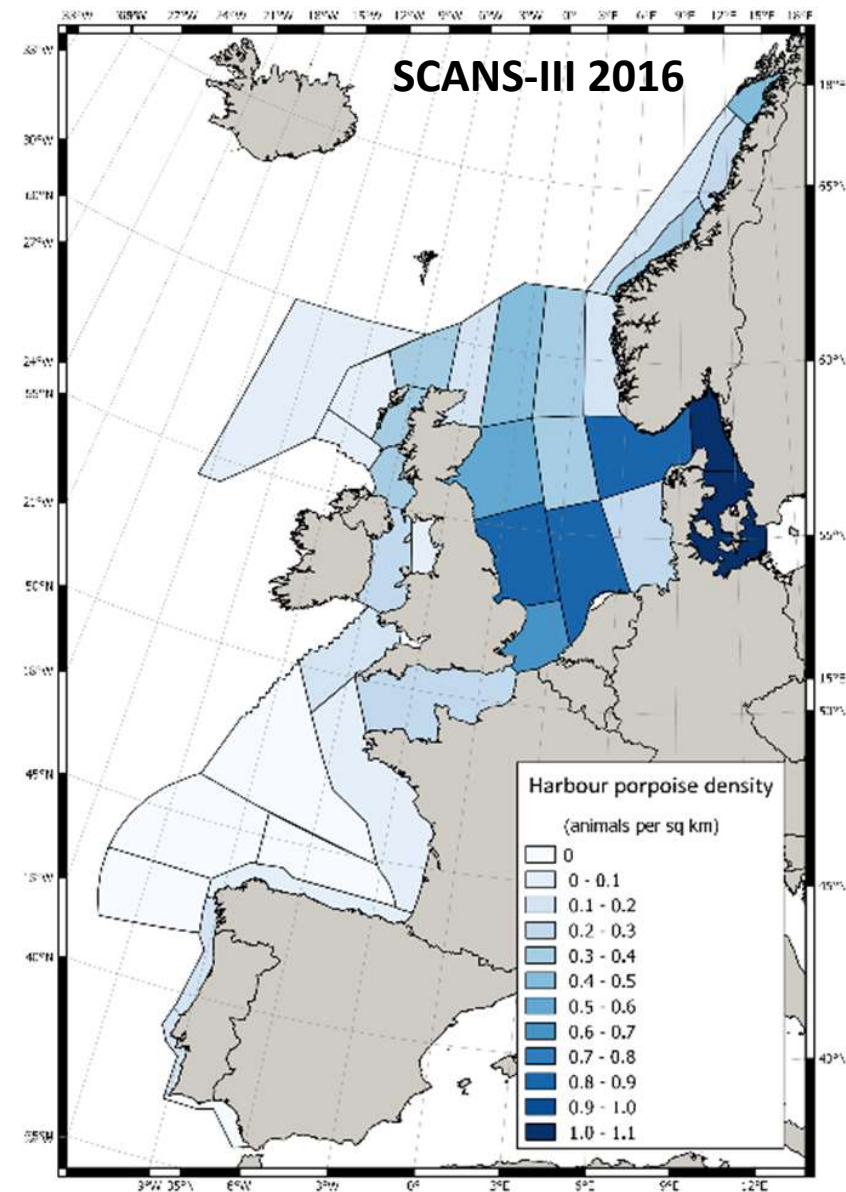
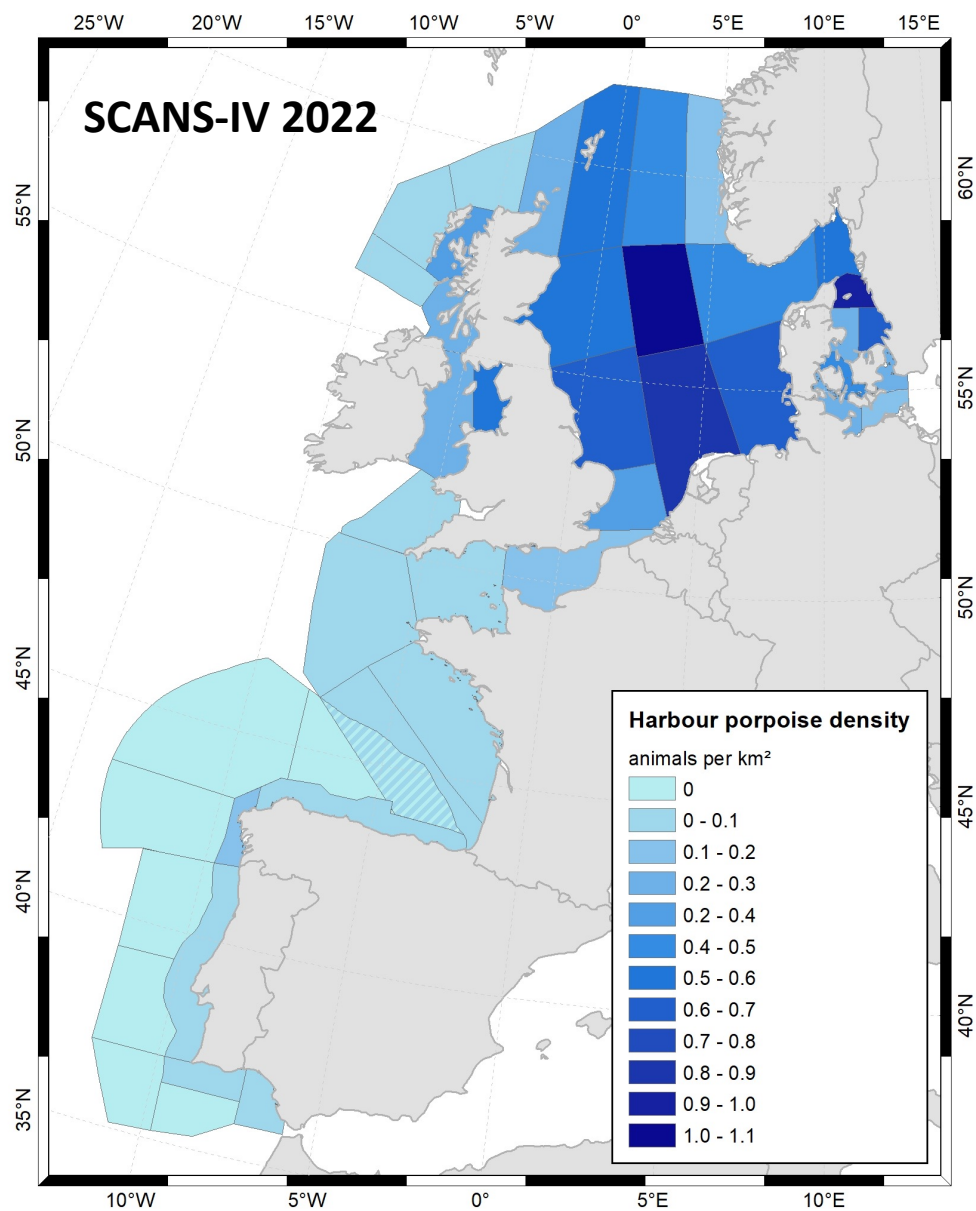


Minke whale
N = 12,000 (0.36)

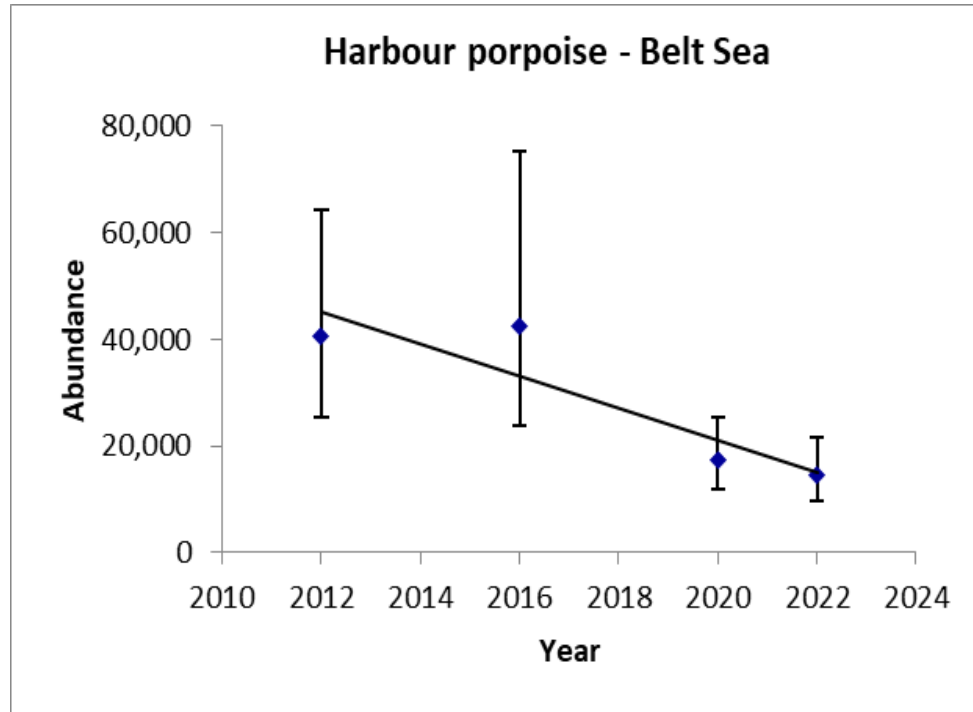


Fin whale
N = 13,000 (0.19)

Harbour porpoise



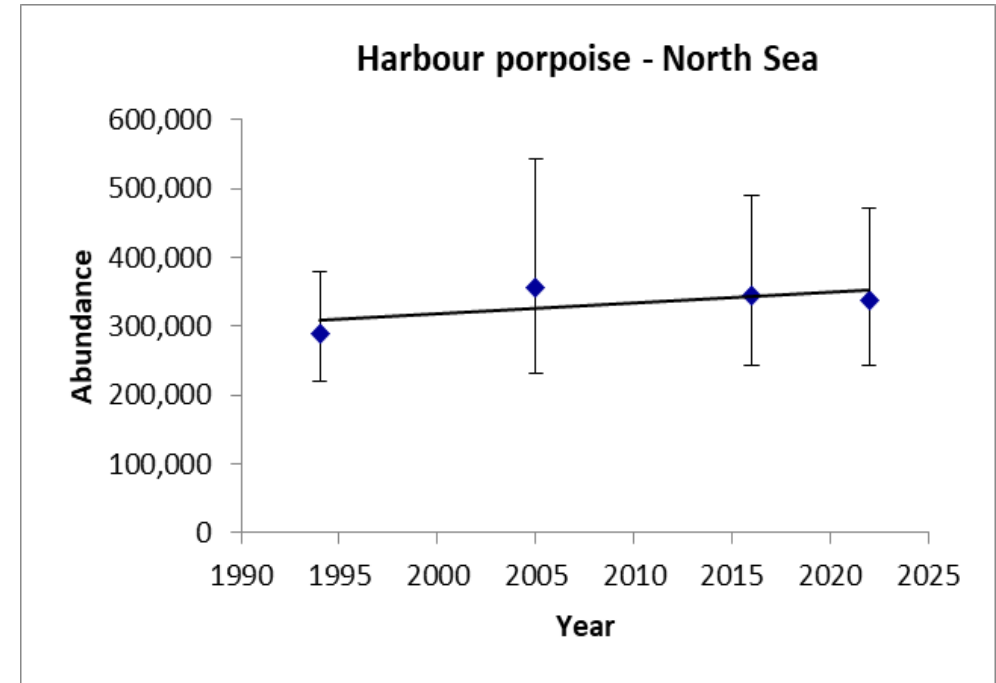
Hammond et al. 2021



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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**Dissemination
of progress and
results in
relevant fora**

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



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

SCANS-IV

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

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.

