Seafood conference 5 November 2026

Distribution and populations of marine mammals in the North Atlantic

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HOW WE COUNT

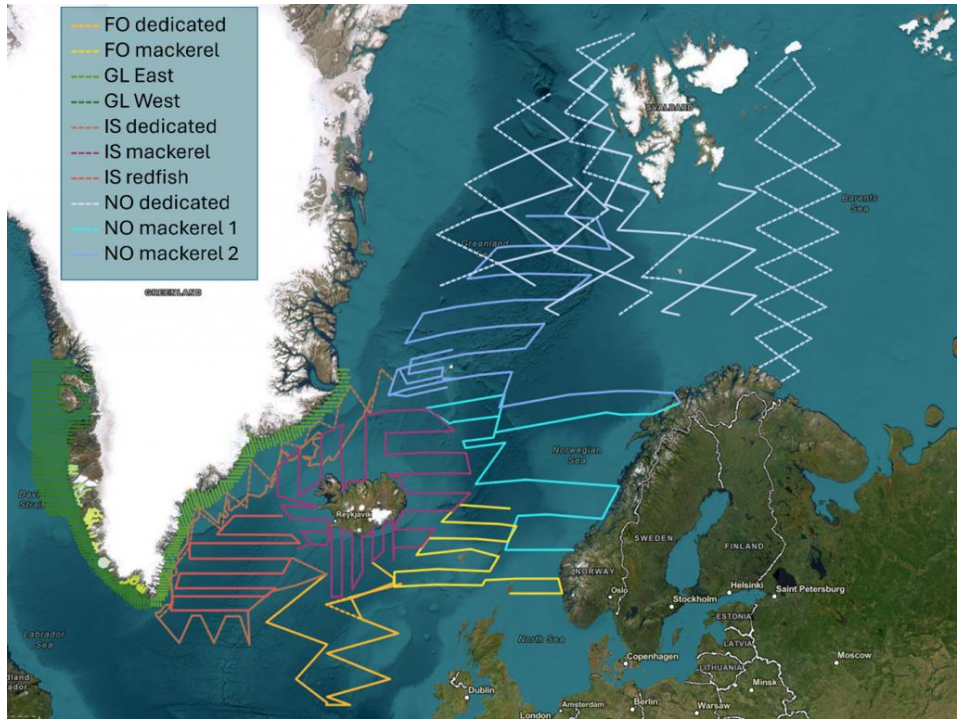
National surveys run in different years with different methods, so there is no single North Atlantic total.



Survey programme	Latest year	Platform
1 NOAA, US east coast	2021	Ship
2 DFO, Atlantic Canada	2016; seals 2021, 2024	Aerial
3 Greenland, W and E	2024	Aerial
4 NASS, Iceland/Faroes	2015 (2024 not yet endorsed)	Ship
5 Norway, Norwegian and Barents Seas	2014–18	Ship
6 SCANS-IV, European Atlantic	2022	Aerial and ship

HOW WE COUNT

Abundance estimates for whales



- After the whaling moratorium came into effect, a research programme was launched to assess the status of whales
- North Atlantic Marine Mammal Commission (NAMMCO) coordinates the North Atlantic Sighting Surveys (NASS) – since 1995
- Objectives:
  - Estimate the abundance of exploited stocks
  - Estimate the abundance of other species
  - Assess changes in abundance and distribution
- One of the largest wildlife surveys in the world



HOW WE COUNT

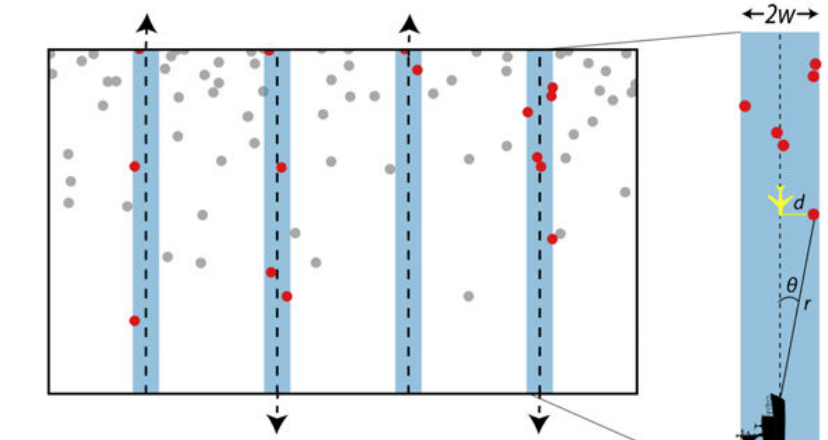
Abundance estimates for whales

Ship surveys

NASS - North Atlantic Sighting Surveys 1987-2024
NILS – Norwegian Independent Line Survey

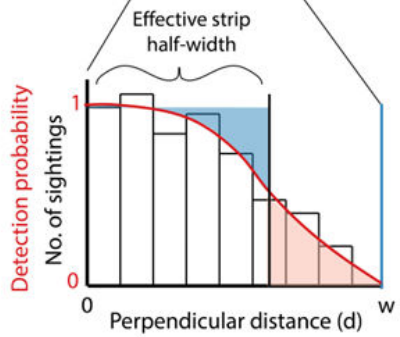
Aerial surveys

Icelandic coast 1986–2016, Greenland 2015 and 2024









HOW WE COUNT

Abundance estimates for seals





Pup production surveys

Harp, hooded and grey seals

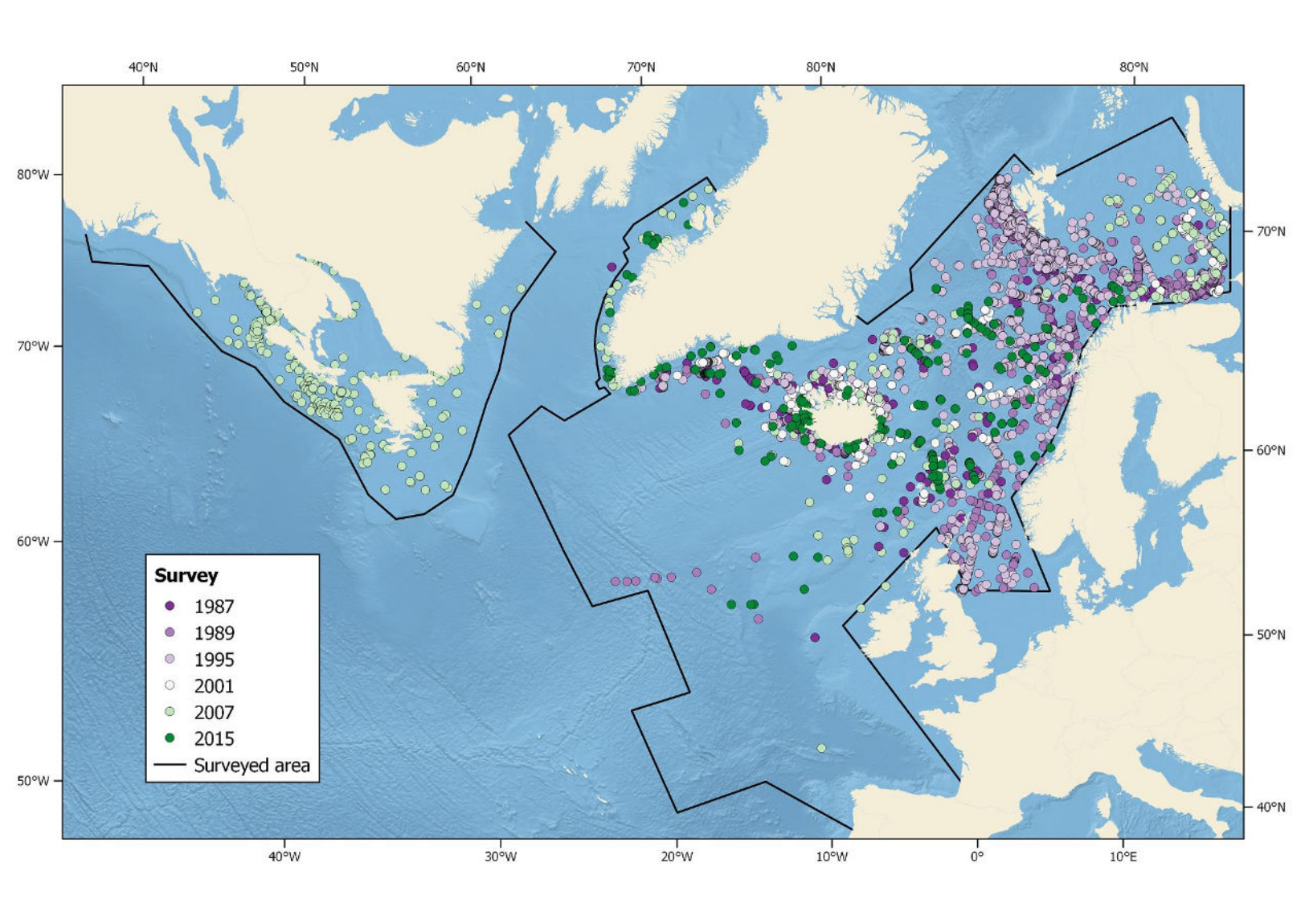
- Pups are counted at breeding colonies to estimate pup production
- Pup counts feed population models

Moulting surveys

Harbour and ringed seals

- Seals are counted during the moulting season, when most of the population is hauled out on land or ice.
- Moulting season is the period each year when seals shed their old fur and grow a new coat.

WHERE THEY ARE



WHERE THEY ARE

Whales feed in summer from the Irminger Sea to the Barents Sea, while seals breed on coasts and sea ice.

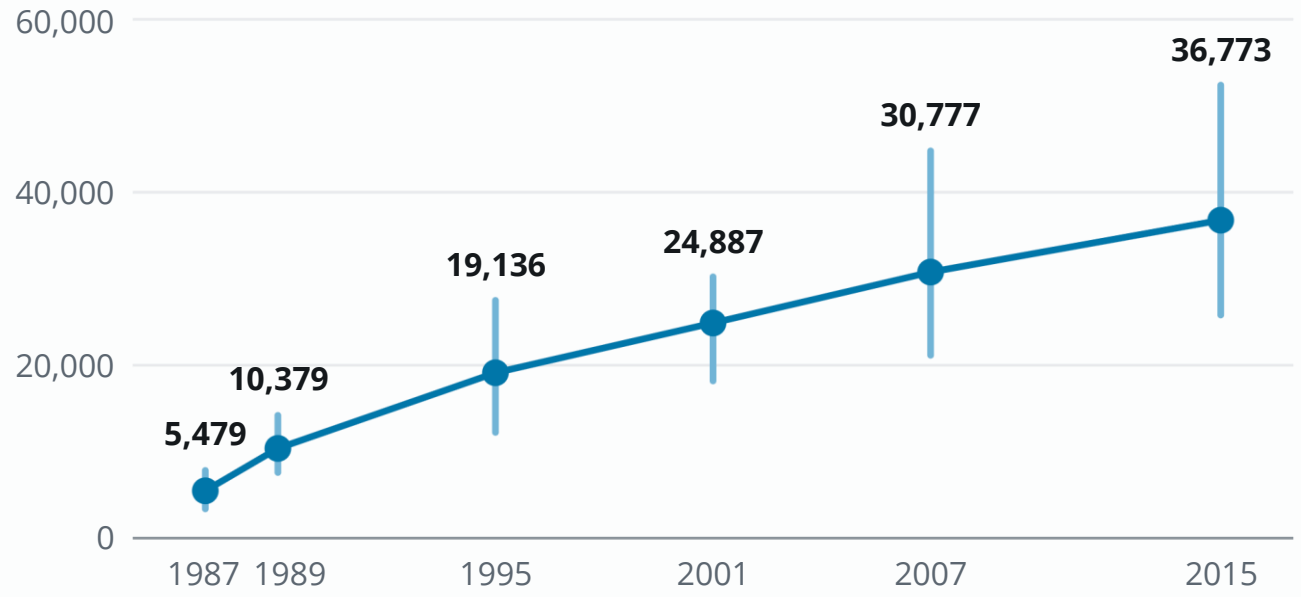
SPECIES	NW Atlantic & W Greenland	Irminger Sea	East Greenland	Iceland	Faroes	Jan Mayen & West Ice	Norway & Norw. Sea	Svalbard, Barents & White Sea	North Sea	SEASON
Fin whale		●	●	●		●	●	●		Summer
Humpback	●		●	●			●	●		Summer (+ winter)
Common minke	●		●	●			●	●	●	Summer
Blue whale			●	●						Summer
Pilot whale		●		●	●					Summer
White-beaked dolphin	●			●				●	●	Summer peak
Harbour porpoise	●			●	●		●		●	Year-round
Harbour seal				●			●	●		Moult Jul–Aug
Grey seal				●	●		●			Pupping Oct–Nov
Harp seal	●					●		●		Whelping Feb–Apr
Hooded seal	●		●			●				Whelping Mar; moult Jun–Jul

Main areas (blue: whales, orange: seals). Source: NAMMCO AEWG 2019; NAMMCO SC/32 2026; Metić & Garagouni 2024

STATUS · INCREASING

Fin and humpback whales in the central North Atlantic have increased several-fold since the late 1980s.

Fin whales, Iceland/Faroes survey area (NASS ship surveys, 95% CI)



Humpback whale, central North Atlantic

1,800 → 11,600

1987 → 2007

Fin: not corrected for all year, survey area and corrections differ between years.

Humpbacks around Iceland/Faroes were lower in 2015 than in 2007; the difference is not significant.

STATUS · ABUNDANT AND STABLE

Several large populations show no long-term decline.

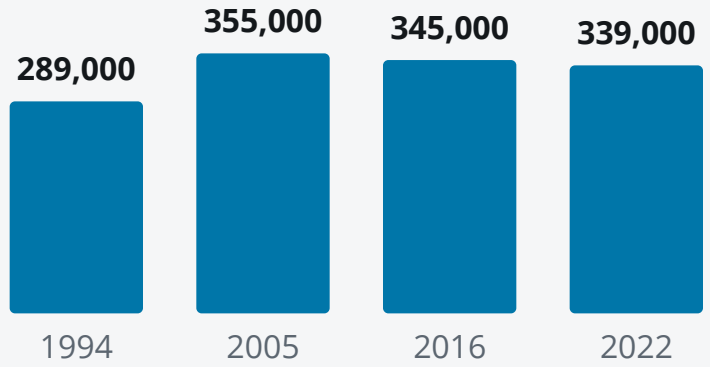
Common minke whale, NE Atlantic

104,700

2014–19 (95% CI 75,200–145,750)

No long-term trend 1989–2019

Harbour porpoise, North Sea



No significant trend; same area and survey series

Long-finned pilot whale, Norway to W Greenland

320,000

2025, population model (90% CI 196,000–530,000)

Slowly increasing, about 2% a year

SHIFTING

Minke whales on the Icelandic shelf fell about 75% after 2001, most likely by moving as their prey changed.

Warmer, saltier Atlantic inflow since about 1995

- Sandeel collapse from 2005
- Capelin moved north and west
- Mackerel influx
- Less krill

Minke diets changed; whales left the shelf

13,497

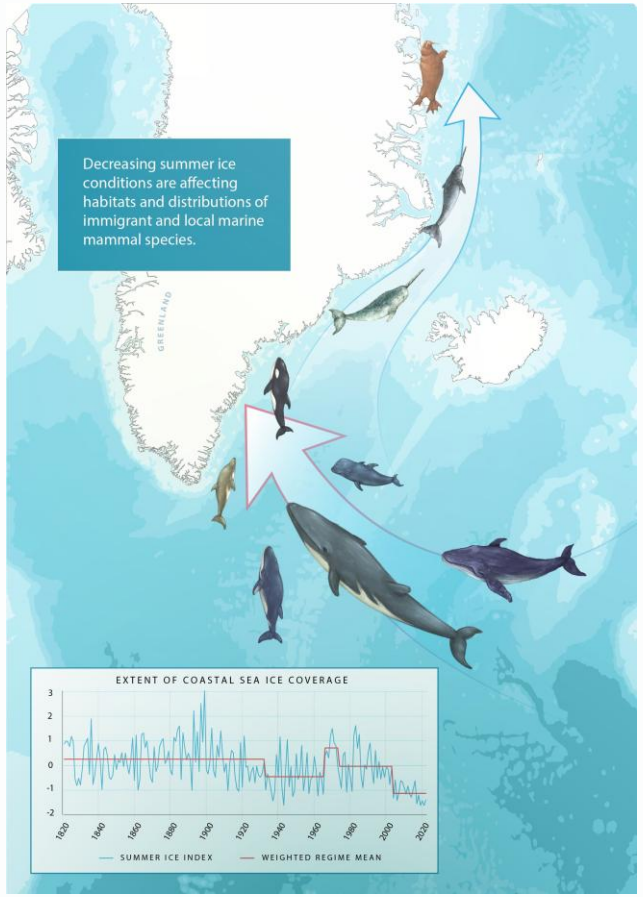
minke whales, Icelandic coast, 2016

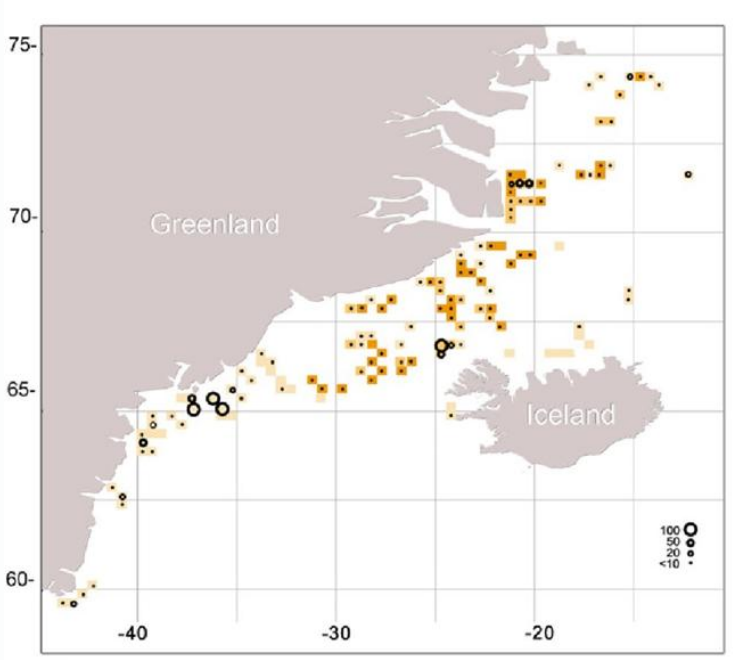
Humpbacks: +0.10 per year 1986–2001, then −0.12 per year 2001–2016, moving to northern areas

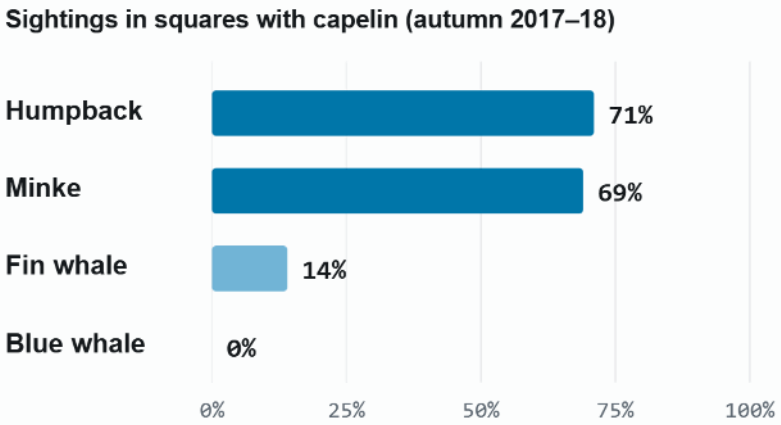
Blue whales: shifted from southwest to northeast Iceland

SHIFTING

Since about 2000, capelin feeding grounds moved to the East Greenland shelf, and humpback and minke whales followed.

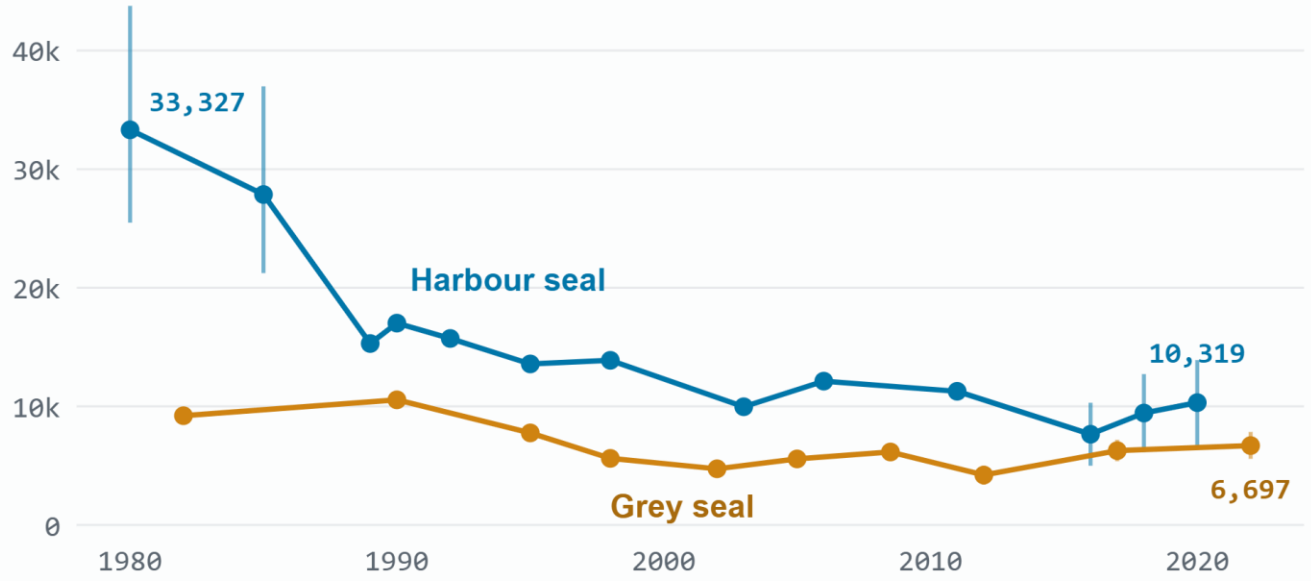






DECLINING

Icelandic harbour seals are at about a third of their 1980 numbers, and grey seals have been stable at a low level since 2005.



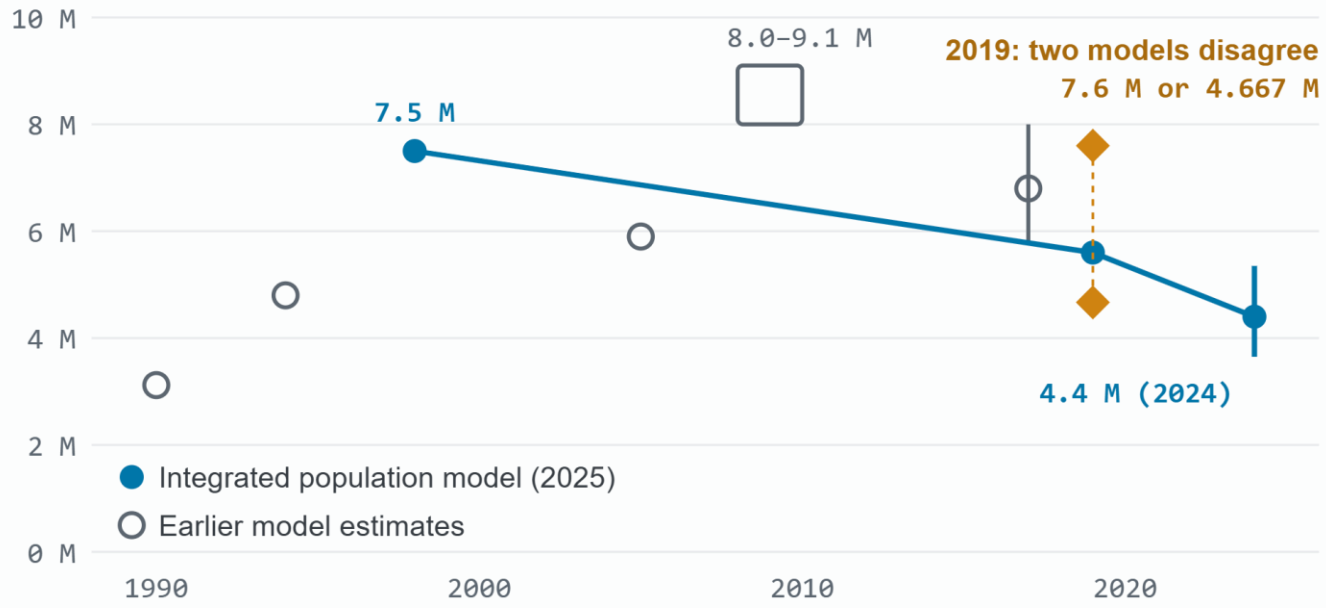
Harbour seal: 10,319 in 2020,
- 69% since 1980

Grey seal: 6,697 in 2022,
red-listed as vulnerable

DECLINING

Seals that breed on sea ice, and West Greenland narwhals, are declining as their ice habitat shrinks.

Northwest Atlantic harp seal



76,832

Greenland Sea hooded seals, 2023; limit 172,580

661

Melville Bay narwhals, 2023; lowest of five surveys

STATUS · VERY SMALL STOCKS

A few populations in the region remain very small.

North Atlantic right whale

Whole species, western North Atlantic

384

Start of 2024

Bowhead whale, Svalbard area

East Greenland–Svalbard–Barents stock

343

2015 (95% CI 136-862)

Narwhal, Melville Bay

West Greenland

661

2023 (95% CI 282-1,550)
lowest of five surveys

TAKE-HOME

Whales are recovering and moving, and long-term monitoring is how we keep track of both.

1. Many whale populations are larger today than decades ago, recovering from commercial whaling.
2. Distribution is often changing faster than abundance.
3. Climate-driven range shifts are becoming a major driver of marine mammal ecology in the North Atlantic.
4. Long-term monitoring remains essential for understanding and managing these changes.

WHAT WE KNOW AND WHAT WE DON'T

We know the large-whale trends well; we know much less about ice seals, deep divers and what the shifts mean.

Known well

- Large whales in the central and northeast Atlantic: NASS since 1987, Norwegian surveys
- Porpoises and dolphins in the North Sea: SCANS since 1994
- Northwest Atlantic harp seal decline
- Coastal seal counts in Iceland, Norway and Svalbard

Known poorly

- Northeast Atlantic harp and hooded seals: models unreliable
- Ringed and bearded seals: few or no estimates
- Deep divers, sei and killer whales
- Fewer animals, or animals that moved?

Needs more work

- Estimates that follow shifting animals, not fixed survey areas
- Whales tracked against their prey
- Effect of more whales and seals on fish stocks
- Sea-ice loss and Arctic species