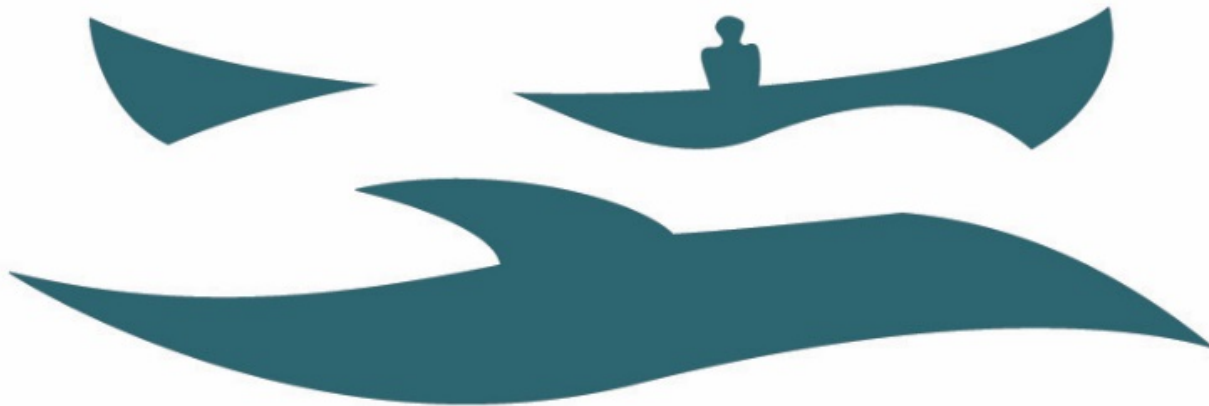
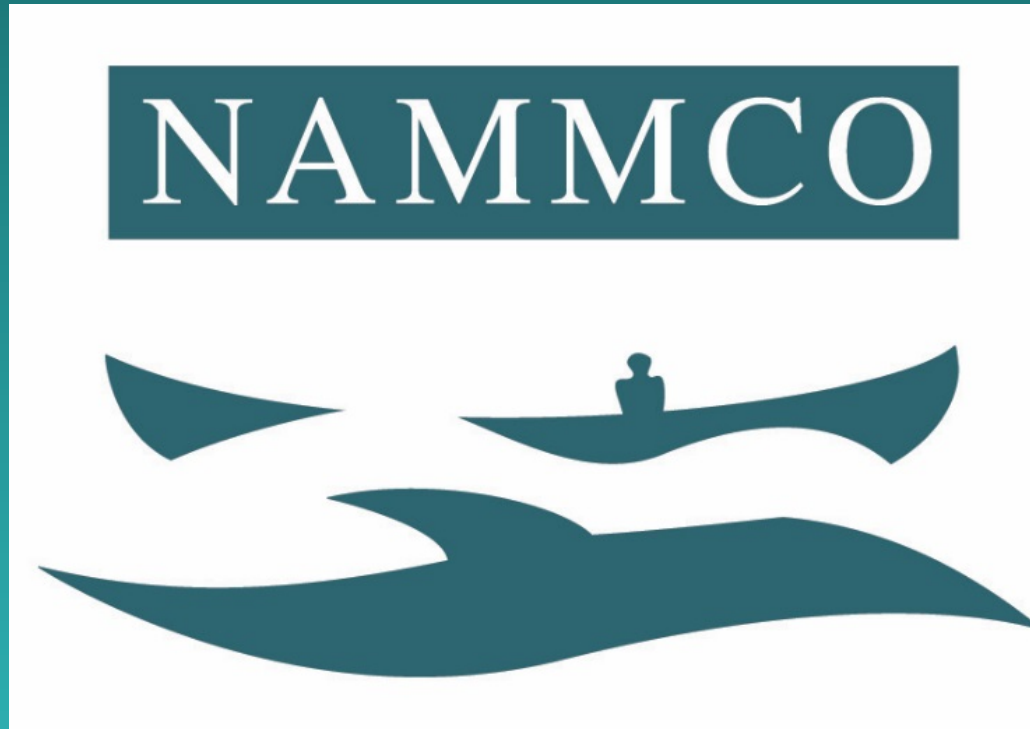


NAMMCO



NAMMCO Activities in the Arctic

Geneviève Desportes



NAMMCO ???

Marine Mammals // Changing Arctic

NAMMCO activities in the Arctic

www.nammco.no

NAMMCO



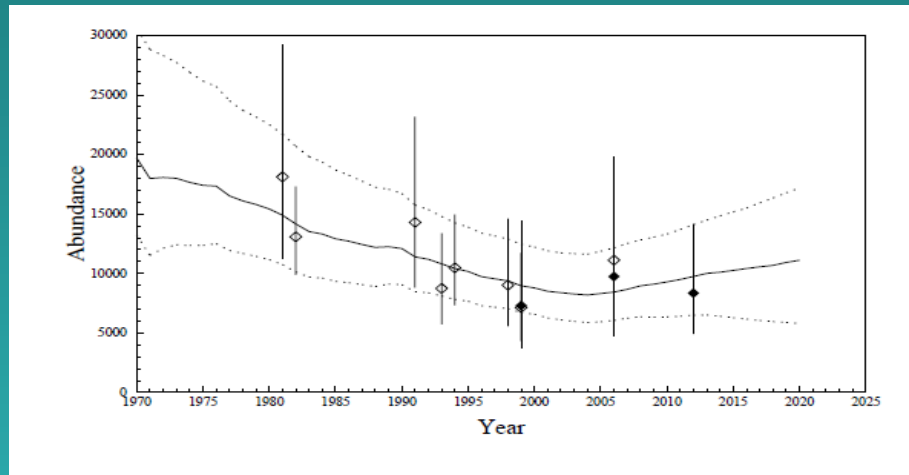
The North Atlantic Marine
Mammal Commission

enter site





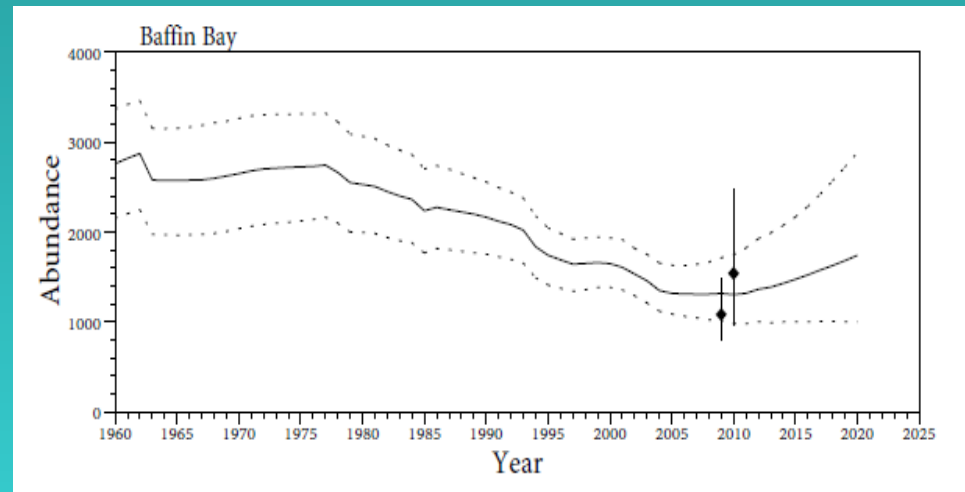
Population trajectories – West Greenland



WeG Belugas



WeG Walrus





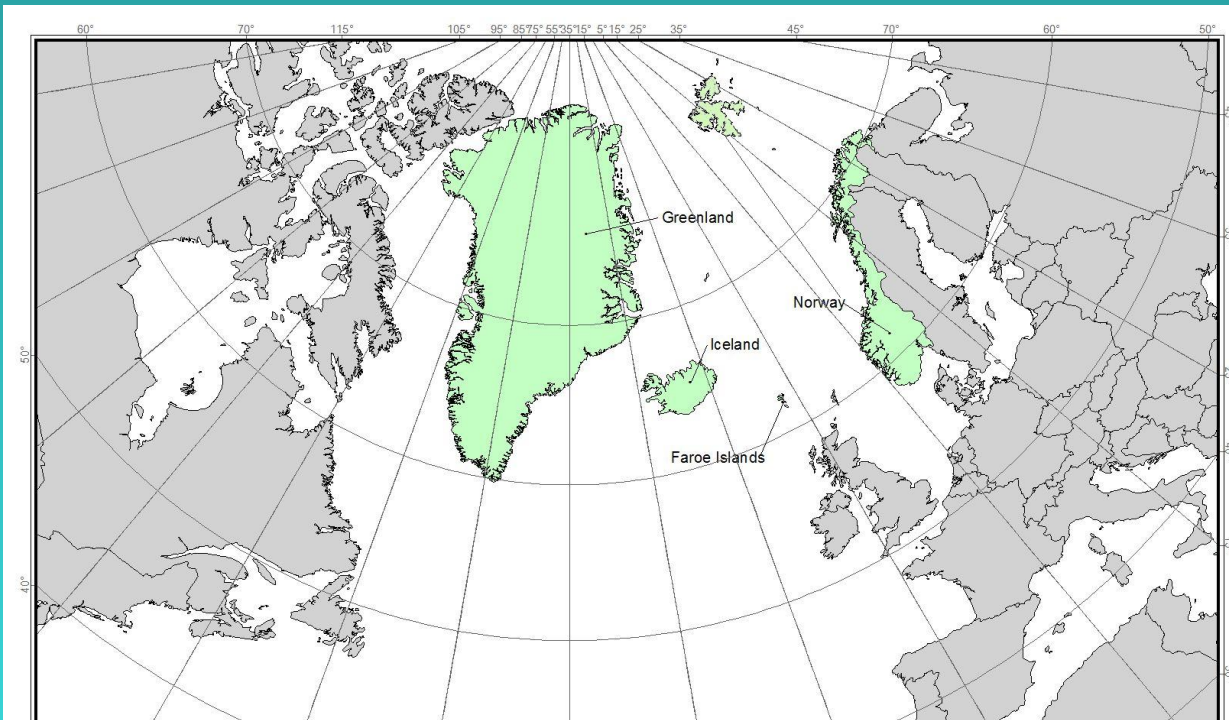
What is NAMMCO?

- **Regional Cooperation:**
on the **conservation, management and study of marine mammals** in the North Atlantic, including cetaceans (large and small), seals and walruses (*not polar bears*)
- **Forum:**
for the **dissemination of science-based information** about marine mammals



What is NAMMCO?

- IGO and RFMO
- Parties – F, G, I, N (not DK)
- North Atlantic – High seas and National waters
- Advisory mandate





Marine Mammal Removals

- **Faroese:** Long-finned pilot whales, white-sided dolphins, harbour porpoises, bottlenose dolphins, northern bottlenose whales, bycatch.
- **Greenland:** Most seal and whale species in the region, except protected species, bycatch.
- **Iceland:** Minke whales, fin whales, harbour seals, grey seals, vagrant seals, bycatch.
- **Norway:** Minke whales, harp and hooded seals, harbour and grey seals, bycatch.



What is NAMMCO?

Parties:

- Recognise
 - ✓ the rights and needs of coastal communities
- Have committed to the
 - ✓ Effective Conservation of MM
 - ✓ Sustainable and responsible utilisation of MM
 - ✓ Ecosystem-based approach
 - ✓ Management decisions based on best available scientific advice



Structure of NAMMCO

Council

Management committees

- ✓ Cetaceans
- ✓ Seals and walruses

Committee on Hunting Methods

Inspection and Observation Committee

- ✓ Joint Control Scheme for the Hunting of MM

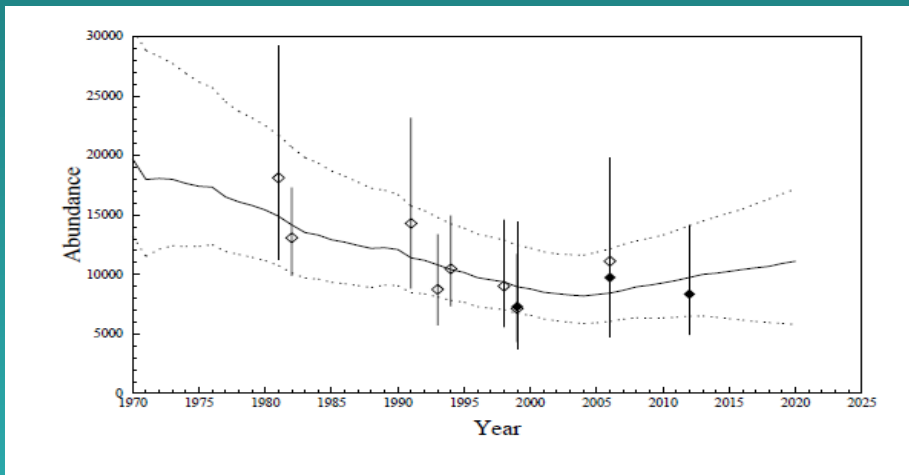
Scientific Committee

- ✓ **Committee**
- ✓ **Working Groups w. external experts**

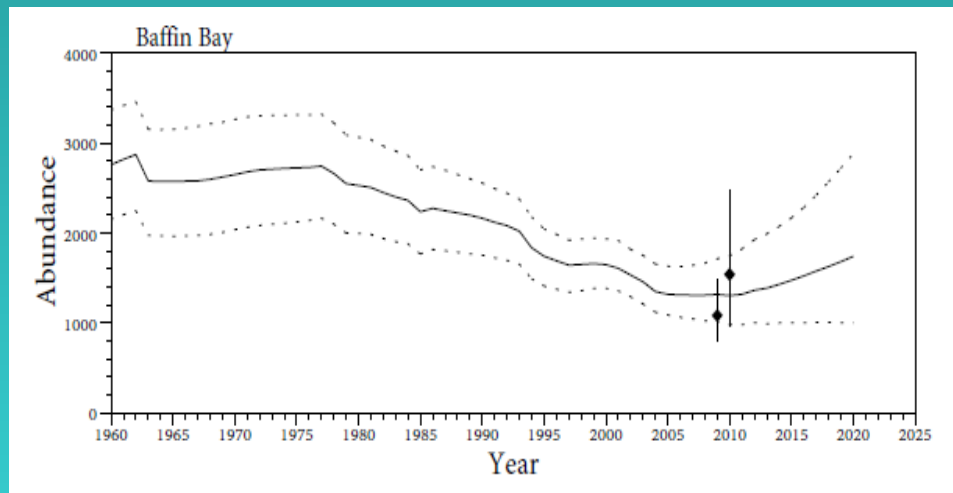


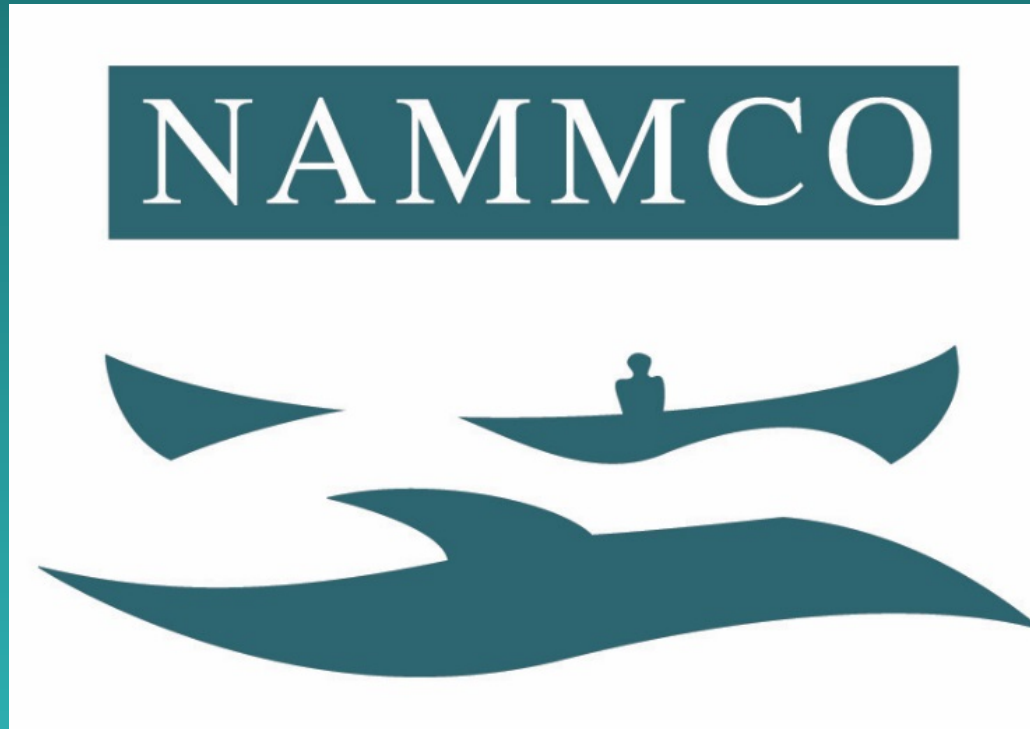
Population trajectories – West Greenland

WeG Belugas (2004)



WeG Walruses (2007)





Marine Mammals // Dev. in the Arctic



Impact of climate change

Direct impacts & Indirect effects ...

Changes in sea ice - extent, concentration, and quality

Decrease breeding success: **all ice-breeding seals, ringed seal**

Increased predation rates (also humans): **ringed seal, narwhal**

Limit access to offshore feeding areas: **walrus**

Reduction of habitat: **ringed seal, walrus**

Increased availability to hunting: **narwhal, walrus**

Rising sea level: changes in coastal habitat & haul out sites: **harbour seal**

Changes at lower trophic levels w. changes in distribution, density and prey species

Changes in distribution: **MM, minke whale, fin whale, beluga**

Changes in migration route: **narwhal**



Impact of climate change

Indirect effects...

Increased competition from temperate species

Increased risk – disease, parasites, contaminants, spills and discharge of pollutants

a.o., diminish resilience: **all MM**

Oil pollution of benthic invertebrates: **walrus**

Increase human activities (acoustic, seismic, drilling, building, ship traffic incl. fishing, near-shore traffic, trawl fisheries)

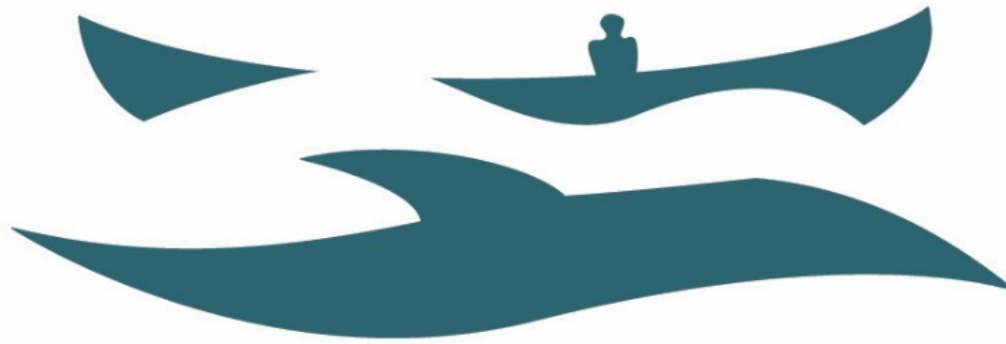
Increased human disturbances: **all MM, walrus**

Reduction of habitat: **all MM, walrus**

Changing in behaviour (acoustic, migratory): **all MM, walrus, belugas, narwhals**

Increased risk to entrapments: **narwhal, beluga, bowhead**

NAMMCO



Activities in the Arctic



NAMMCO: An Arctic Identity

**NAMMCO parties are all Arctic
States or Nations**



Species/stock specific Working Groups

Fin whale

Pilot whale

Harbour porpoise

Coastal Seals (Grey and Harbour seals)

**Harp and Hooded seals (WGHARP - Joint ICES /
NAFO / NAMMCO WG)**

Ringed seal

Walrus

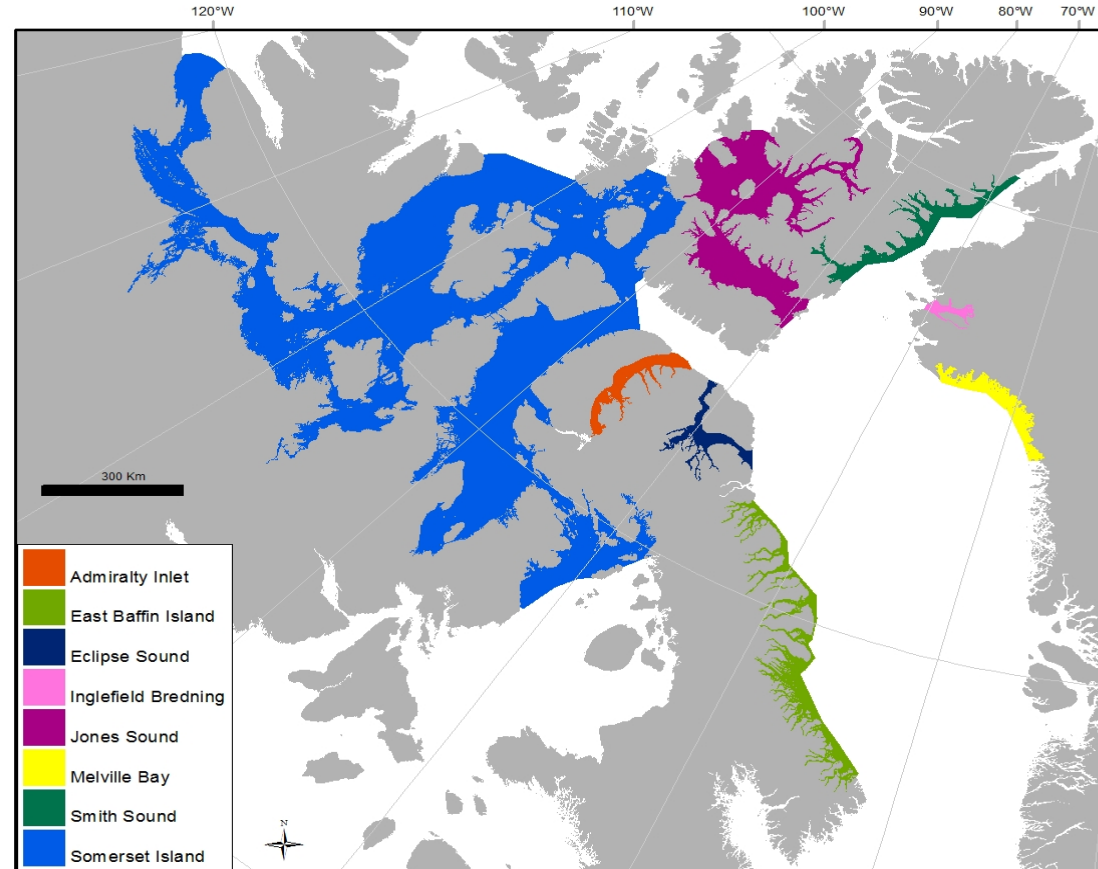
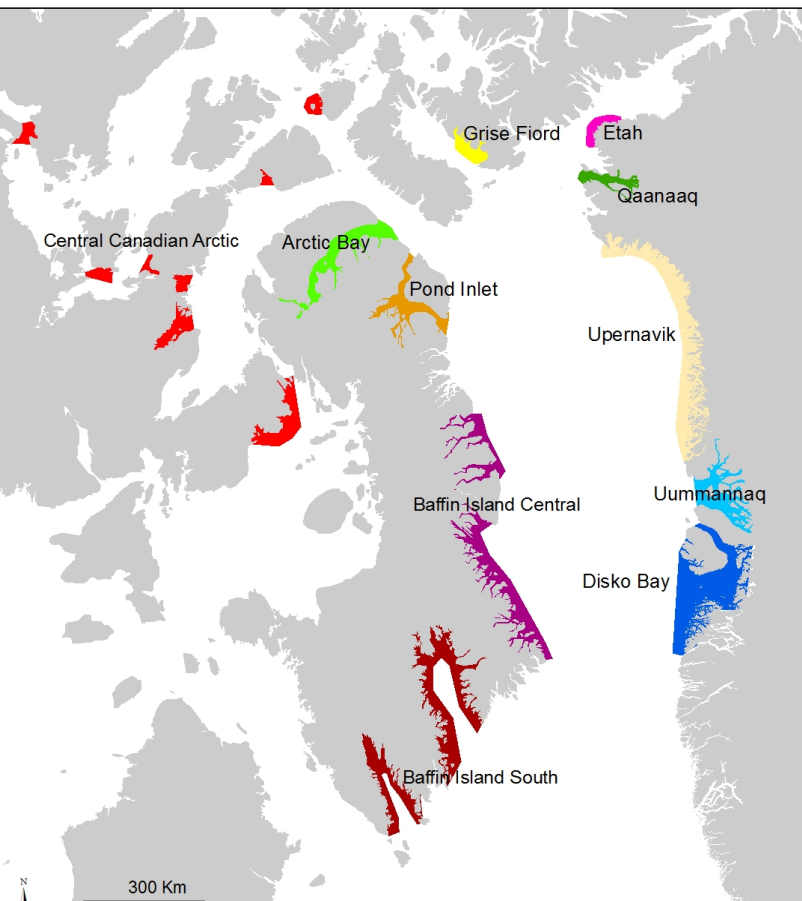
Narwhal & Beluga (Joint JCNB / NAMMCO WG)



Species/stock specific Working Groups

Joint Narwhal & Beluga WG

Catch allocation model for Narwhals, Baffin Bay (Can/Gr)



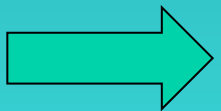


Species/stock specific Working Groups

Joint Narwhal & Beluga WG

Catch allocation model for Narwhals, Baffin Bay (Can/Gr)

- Develop a model for catch allocations for the Baffin Bay narwhal population: provide a mechanism for assigning harvested animals to all summer stocks based on existing data.
- Identify and quantify uncertainty in the allocation model and determine implications for management.
- Update the model as new data is coming in.



Develop an allocation matrix

24 seasonal hunts (10 regions, seasons)

8 summer aggregations



Thematic Working Groups

- **Abundance estimates & Trends in abundance**
- **Large Whale Stock Assessments**
- Management procedures
- Marine mammal fisheries interactions: sealworm infestation, marine mammals as predators, **bycatch**
- Environmental questions
 - Climate change
 - **Human Disturbance**



Research Programmes

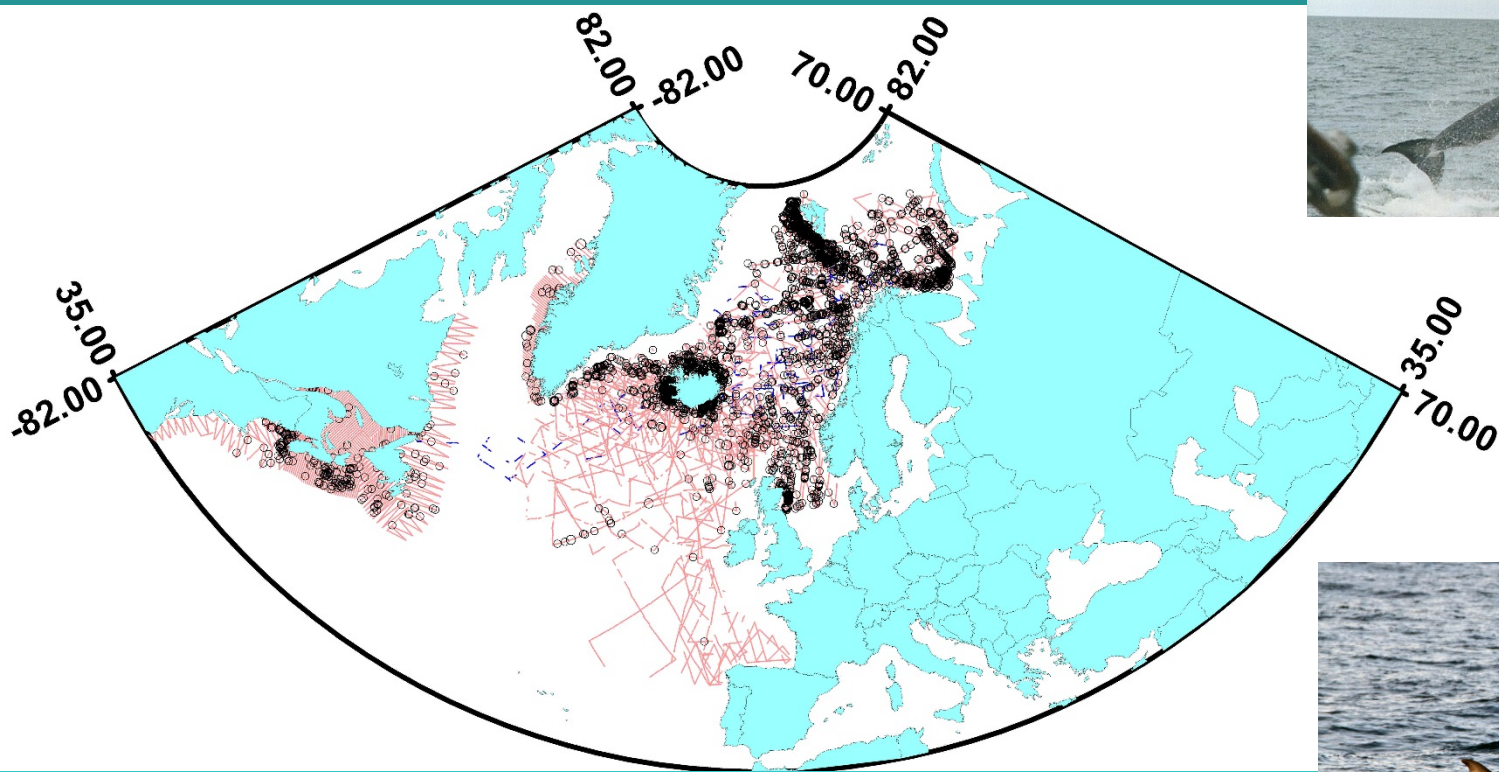
North Atlantic Sightings Surveys (NASS and T-NASS)



- Whale surveys from ships and aircraft
- 1987, 1989, 1995, 2001, 2007, 2015
- Minke, fin, pilot, porpoise, others
- Abundance estimates for trends & stock assessments
- Recommended survey interval 6 yr

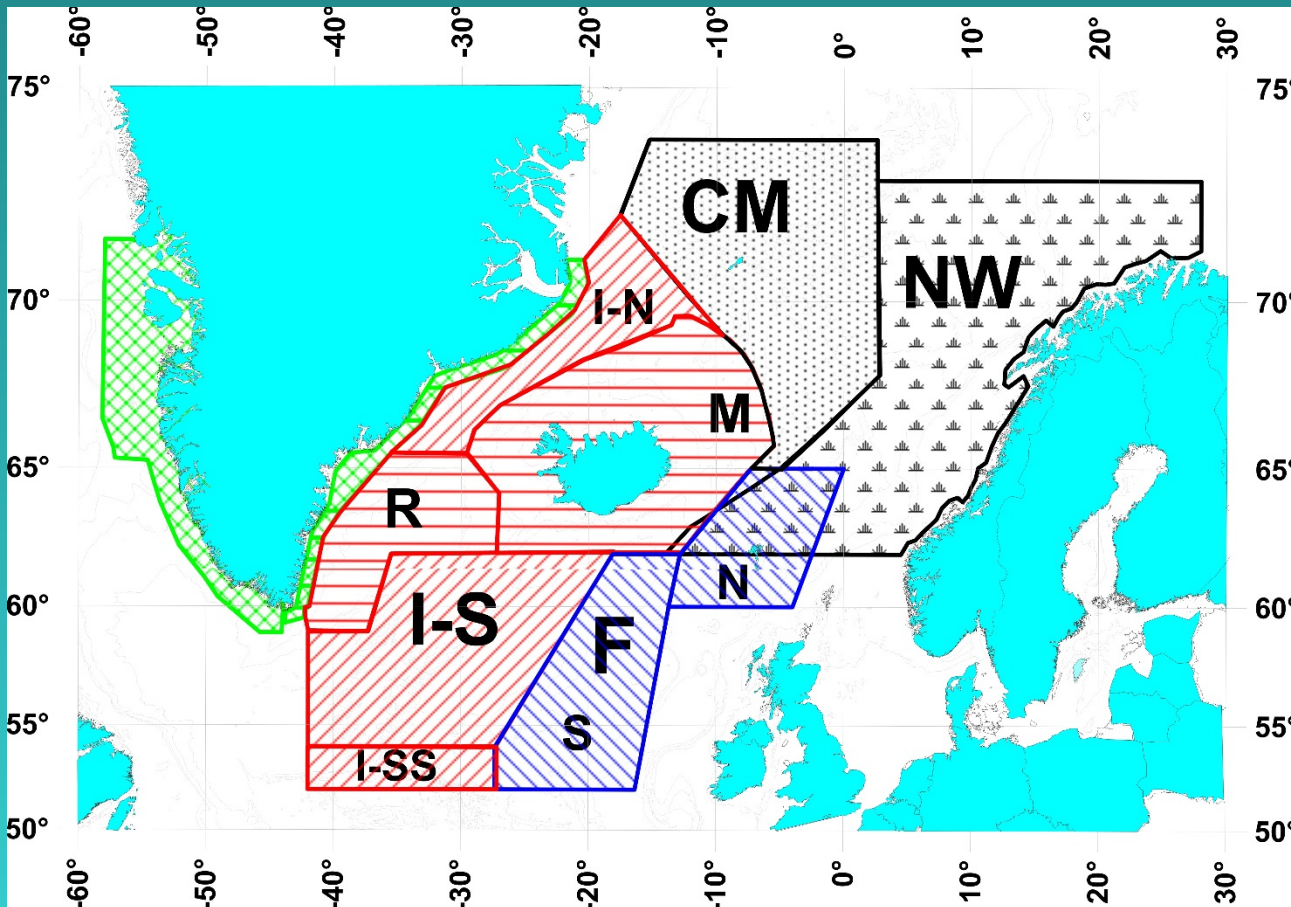


(T)NASS – All Minke whale sightings





NASS 2015 (June – September)



The primary areas of focus for the 2015 survey extend about 1,740,000 nmi²



Thematic Working Groups / Conference / Symposium

Disturbance Symposium

The SC should provide advice on:

[Req. 2.6.3] the effects of human disturbance, including fishing and shipping activities, in particular scallop fishing, on the distribution, behaviour and conservation status of walrus in West Greenland.

*[Req. 3.4.9] the effects of human disturbance, including noise and shipping activities, on the distribution, behaviour and conservation status of belugas, particularly in West Greenland.
[Narwhal added later]*



Thematic Working Groups / Conference / Symposium

Disturbance Symposium

Copenhagen, October 13-15, 2015

Impacts of human disturbance, including noise and shipping activities, on the distribution, behaviour and conservation status of marine mammals in the Arctic, with a focus on belugas, narwhals and walrus.





Thematic Working Groups / Conference / Symposium

Disturbance Symposium

Primary objectives

- 1) Present an overview of the information currently available
- 2) Identify and characterize possible sources of disturbance, and effects on individuals and populations
- 3) Consider the need for possible mitigation measures to minimise sources of anthropogenic disturbances
- 4) Reflect on future studies needed to assess long-term impacts of anthropogenic activities on both individual and population levels - particularly in the light of global warming



Thematic Working Groups / Conference / Symposium

Disturbance Symposium

Procedures

Both presentations/discussions & Round-tables.

Subjects

Marine Mammals, Ice-breeding seals, Bowhead whale,
Narwhal, Beluga, Walrus, Harbour seal

Seismic activity, shipping activity, tourism activity, acoustic
disturbance

Alaska, Canada, Greenland, Iceland, Caspian Sea



Thematic Working Groups / Conference / Symposium

Disturbance Symposium

Output

- Conclusions available to stakeholders: report with specific recommendations.
- Presentations submitted a special volume of the *NAMMCO Scientific Publications* series.

***Sponsors: NAMMCO, Greenland,
WWF Denmark, Shell, University
of Copenhagen***





Thematic Working Groups / Conference / Symposium

Global Review of Monodontids Symposium

- In conjunction with the Marine Mammals of the Holarctic Conference
- Fall 2016 in Russia
- Greenland, Norway, Russia, USA, Canada



M.P. Heide-Jørgensen
GINR



G.L. Williams
NOAA



Thematic Working Groups / Conference / Symposium

Next: Arctic Ringed Seal? (w. AC?)



C. Lydersen

A keystone species

Endemic

Sea-Ice **dependent**

(breeding, molting, resting)

Key-food resources

- northern communities
- polar bear
- (walrus, +++)

↘ **(Breeding) habitat**

Climate change effect?



Thank you!