NAMMCO Activities in the Arctic

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NAMMCO ???
Marine Mammals // Changing Arctic NAMMCO activities in the Arctic
Population trajectories – West Greenland

WeG Belugas

WeG Walruses
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

- **Faroes:** 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
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
- Minke, fin, pilot, porpoise, others
- Abundance estimates for trends & stock assessments
- Recommended survey interval 6 yr
(T)NASS – All Minke whale sightings
The primary areas of focus for the 2015 survey extend about 1,740,000 nmi²
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]
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.
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
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
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*
Global Review of Monodontids Symposium

– In conjunction with the Marine Mammals of the Holarctic Conference
– Fall 2016 in Russia
– Greenland, Norway, Russia, USA, Canada
Next: Arctic Ringed Seal? (w. AC?)

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!

I hate Halloween.
none of the
costumes
fit me

we'll
think of
something

you're
a
genius

I know