



NATIONAL PROGRESS AND DATA REPORTING 2022

GREENLAND - PROGRESS REPORT ON MARINE MAMMALS 2022

I INTRODUCTION

Sections II, III and V of this report summarize the research done on pinnipeds and cetaceans in Greenland in 2022 by the Greenland Institute of Natural Resources (GINR), in collaboration with several organizations. Section IV and VI deals with management issues. The Department of Fisheries and Hunting provided the hunting data.

II RESEARCH BY SPECIES

A Species and stocks studied

Pinnipeds

- Walrus *Odobenus rosmarus* – Northern Baffin Bay and East Greenland
- Bearded seal *Erignathus barbatus* – East Greenland
- Ringed seal *Pusa hispida* - West and East Greenland
- Harp seal *Pagophilus groenlandicus* – West and East Greenland

Cetaceans

- Narwhal *Monodon monoceros* - West and East Greenland
- Beluga *Delphinapterus leucas* – West Greenland
- Harbour porpoise *Phocoena phocoena* – West Greenland
- Bowhead whale *Balaena mysticetus* – West and East Greenland
- Humpback whale *Megaptera novaeangliae* - West and East Greenland
- Fin whale *Balaenoptera physalus* – West Greenland
- Minke whale *Balaenoptera acutorostrata* – West and East Greenland
- White beaked dolphins *Lagenorhynchus albirostris* – East Greenland
- Killer whale *Orcinus orca* – East and West Greenland

B Field work in 2022

Walrus

In 2021, an automated camera was mounted on Edderfugleøerne, in Wolstenholme Fjord / Uummannaq Kangerlua, Northwest Greenland, to monitor a terrestrial haul-out of walrus discovered in 2018. The camera continued to take pictures throughout 2022.

As a pilot project to study the movements of walrus on Northern Baffin Bay on a cost-effective way, hunters from Qaanaaq tagged walrus with Satellite senders. This fieldwork was carried out 100 % by local hunters, without participation of GINR staff.

Seals

The time-series of ringed seal tagging in Sermilik (Southeast Greenland) and in Kangia (Ilulissat Ice fjord, West Greenland), started in 2012 and finished in 2022.

A two-year tagging study of ringed seals in Inglefield Bredning, which started in 2021, continued in 2022. The main aim of this work is to obtain oceanographic data for climate analysis. By-product of this study is data on habitat use, movements and ecology of seals in the area.

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Two PhD students from the University of Hokkaido carried out studies on the marine ecology of Qaanaaq, including seals and other top predators.

Cetaceans

A winter survey focusing on belugas, walrus and bowhead whales was carried out in West Greenland in March and April 2022. Three hunters participated in the survey.

An aerial survey for narwhals, with hunter participation, was carried out in East Greenland in May 2022.

As requested by the Government of Greenland, an aerial survey for narwhals in East Greenland was planned and carried out in conjunction with local hunters. This survey covered all the three management areas where narwhals are hunted in East Greenland.

There was an unsuccessful attempt to tag narwhals in Kangerlussuaq, East Greenland in August.

In 2022, as in previous years, hunters from Qeqertarsuaq collected biopsies of bowhead whales during spring in Disko Bay.

A telemetry study of bowhead whales in Disko Bay was carried out in May 2022.

There were also attempts to tag harbour porpoises in Maniitsoq, West Greenland during July 2022.

Collection of identification pictures taken by the public of humpback whale flukes continued throughout 2022.

Tissue samples were secured from killer whales and white sided dolphins caught in Tasiilaq (East Greenland).

Tissue samples from belugas illegally caught in Tasiilaq in May were acquired from hunters. There was also a legal catch of belugas in the same area in December, and by the time of writing this report, one sample had been received.

As every year, hunters sent samples from harvest of large cetaceans: humpback whales, fin whales, bowhead whales and minke whales.

C Laboratory work in 2022

Laboratory work carried in 2022 included the analysis of stomach samples from seals and fish from Ilulissat (GINR and University of Aarhus), as well as stomach samples from seals and narwhals in Qaanaaq (GINR and Hokkaido University), stomach samples from white beaked dolphins in East Greenland (GINR/GCRC & University of Copenhagen), genetic analyses of killer whales from East and West Greenland (University of Trondheim, University of Manitoba and GINR), genetic analyses of bowhead whales from Disko Bay (University of Oslo and GINR), genetic analysis of belugas and narwhals (University of Copenhagen and GINR), chemical analysis on narwhal tusks (multiple locations) and diverse contaminant studies.

Sound recordings from moorings in West and East Greenland were analysed for estimates of background noise and seasonal occurrence of marine mammals, as well as monitoring of seismic exploration and studying different aspects of human disturbance.

Deployment of acoustic tags was tested on captive belugas in Vestman Island, Iceland.

D Other studies in 2022

A number of desktop studies were carried out during 2021, including analysis of catch statistics for a number of species and assessments of narwhal for scientific working groups under NAMMCO and of large cetaceans for the IWC. Analysis and publications for a PhD study on the ecology of Ilulissat Icefjord continued during 2022. A postdoc on the effects of climate change on the distribution and movements of cetaceans that started in 2021 continued in 2022. Two PhD studies from Hokkaido University, in collaboration with GINR continued in 2022.

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E Research results in 2022

The majority of research results from the fieldwork of 2022 are not available yet.

III ONGOING (CURRENT) RESEARCH

The automated camera monitoring the newly established walrus terrestrial haul out in Wolstenholme Fjord, Qaanaaq, will get new batteries in summer 2023 and the memory card will be shifted.

Hunters from Qaanaaq will continue efforts to tag walruses during spring and early summer in 2023.

The University of Hokkaido, in collaboration with GINR, initiated two PhD studies from on the ecology of Inglefield Bredning, including studies on seals and other top predators. The studies will continue in 2023.

A PhD on the ecology of Ilulissat Icefjord, including several chapters on seals are scheduled to finish in the first half of 2023.

Marine mammal surveys planned for 2023 include aerial survey for narwhals during summer off Melville Bay and Inglefield Bredning. A large-scale aerial survey of polar bears in East Greenland, scheduled for April – May 2023, may yield secondary observations of other marine mammals.

Fieldwork for a PhD done in collaboration between the Faroese Marine Research Institute and GINR will be carried out in East Greenland in 2023, focusing on the ecology of pilot whales, killer whales and dolphins (in East Greenland, white beaked dolphins).

The long-term studies of bowhead whales in Disko Bay will also continue. Work in 2023 will focus on the collection of biopsy samples for mark – recapture abundance estimates, and on satellite telemetry.

Telemetry studies of narwhals in Scoresby Sound, (East Greenland) started in 2010 and ended in 2020. If possible, the field station will be closed in 2023.

Tagging of large cetaceans in Tasiilaq, (Southeast Greenland), as part of the NAMMCO Mintag project is planned for summer 2023.

As in previous years, collection of identification pictures taken by the public of humpback whale flukes and dorsal fins from West and East Greenland will continue.

Telemetry fieldwork on harbour porpoises in Maniitsoq area, West Greenland is planned for 2023.

Acoustic moorings will be deployed by GINR's Climate Research Centre in Qaanaaq in 2023.

IV ADVICE GIVEN AND MANAGEMENT MEASURES TAKEN

Advice and quotas for cetaceans and pinnipeds in the calendar year 2022 are summarized in table 1.

Large cetaceans:

Quotas for large cetaceans are set by the IWC. At the IWC 67 meeting in 2018, the IWC agreed upon quotas and revised carry-over provisions for the new quota block 2019 – 2026. The IWC quotas were implemented in 2022. Greenland have decided only to follow the carry-over provision for minke whales both in West and East Greenland. Carry-over provision for other large whales will be implemented if necessary.

Small cetaceans:

The Government of Greenland sets the quotas for narwhals, with basis on user's knowledge, cultural and meat needs and recommendations from NAMMCO and JCNB. Quotas for narwhals in 2022 in Etah (Smith Sound) Qaanaaq (Inglefield Bredning), Uummanaq and the Disko Bay (West Greenland) have been set in accordance with the advice by JCNB and NAMMCO. The quota for Etah was five animals, Qaanaaq 98 animals, Uummanaq 154 animals and 97 for Disko Bay (West Greenland).

For Melville Bay the original quota of 100 was raised by 12 in the summer of 2022, resulting in a total quota of 112.

In East Greenland there is advice from NAMMCO of 0 catches due to declining narwhal populations. The quotas in 2022 were 20 narwhals for Ittoqqortoormiit, 15 for Kangerlussuaq and 15 for Tasiilaq. For belugas in West Greenland, the quotas for 2022 were in accordance with recommendations from 2020 by the Joint Working Group of the Scientific Committees of JCNB NAMMCO and JCNB. The only difference is the management measure taken for Qaanaaq is still in effect, due to overharvest in 2019. The plan is to subtract 8 belugas per year until 2029. Furthermore, Government of Greenland has decided not to follow the recommendations regarding no hunting south of 65° N and seasonal closures in other parts of West Greenland.

For the first time, quotas for belugas in East Greenland were introduced in December 2022, with a technical quota of 30 animals for the period 2022-2027.

The Scientific Committee of NAMMCO recommends that belugas in East Greenland remain fully protected, as it is thought that there is insufficient information to perform an assessment, and the few belugas occasionally observed in East Greenland are probably vagrants from the Svalbard population. In consistence with the advice, at the beginning of 2022, there was no quota for belugas in East Greenland. The Department received reports that 12 belugas has been taken in Kuummiut area (Tasiilaq). In cooperation with local authorities the meat and blubber was confiscated and distributed to institutions.

Some aggregations of belugas were observed again in the Kuummiut area in December 2022 over several days. 16 belugas were reported taken after Government of Greenland granted beluga quota for 2022.

Regarding harbour porpoises, quota advice was received from NAMMCO in 2021, 1.869 landed harbour porpoises. This is yet to be followed.

There are catches without quotas for pilot whale, harbour porpoise, white-sided dolphins, and white-beaked dolphins, as there is no advice from NAMMCO nor the Greenland Institute of Natural Resources on quotas.

In 2013, NAMMCO recommended that Greenland should take a closer look at the accuracy of catch data for harbour porpoises and killer whales. This work has not been completed. An executive order for small cetaceans is underway.

Pinnipeds:

Walrus quotas are given by the Government of Greenland, and in 2022, as in previous years, followed the advice from NAMMCO.

A new executive order on walrus was introduced in 2022. Changes include hunting all year, protection of haul outs, new management areas and protection of adult females in East Greenland removed.

Harbour seals and grey seals are still protected, and there are no quotas for other seal species: ring seals, harp seals, hooded seals and bearded seals, as there is no advice on quotas from NAMMCO. However, all catches including struck and lost must be reported annually.



Table 1: Overview of management advice per stock and the quota or other management measures used in 2022.

Species - stock	Advisor	Advice in 2022	Management measure 2022
Harbour seal	NAMMCO	Total protection	Protected since 2010
Grey seal	NAMMCO	Total protection	Protected since 2010
Harp seal	ICES/NAFO/NAMMCO	No concern	No catch limit
Hooded seal	ICES/NAFO/NAMMCO	No concern	No catch limit
Walrus - Baffin Bay	NAMMCO	79 landed animals	Quota of 79
Walrus - Davis Strait / Baffin Island	NAMMCO	74 landed animals	Quota of 74
Walrus - East Greenland	NAMMCO	17 landed animals	Quota of 17
Beluga - West Greenland	JCNB & NAMMCO	265 landed animals. Protection south of 65°N.	Quota of 265, hunting still allowed south 65°N.
Beluga - East Greenland	NAMMCO	0 catches	Technical quota of 30.
Beluga - Qaanaaq	JCNB & NAMMCO	37 landed animals	29 allowed takes, due to overharvest in 2019.
Narwhal - Etah	JCNB & NAMMCO	5 removals	Quota of 5
Narwhal - Inglefield Bredning	JCNB & NAMMCO	98 removals	Quota of 98
Narwhal - Melville Bay	JCNB & NAMMCO	70 removals	Quota of 112
Narwhal - Uummannaq	JCNB & NAMMCO	154 removals	Quota of 154
Narwhal - Disko Bay (West Greenland)	JCNB & NAMMCO	97 removals	Quota of 97 ⁱ
Narwhal - Ittoqqortoormiit	NAMMCO	0 catches	Quota of 20
Narwhal - Kangerlussuaq	NAMMCO	0 catches	Quota of 15
Narwhal - Tasiilaq	NAMMCO	0 catches	Quota of 15
Bowhead whale – West Greenland / Arctic Canada	IWC	5 removals acceptable	Quota of 2
Humpback whale – West Greenland	IWC	10 removals acceptable	Quota of 10

ⁱ The quota in the Disko Bay area was 85, and the remaining 12 were allocated to West and Southwest Greenland.

Fin whale – West Greenland	IWC	19 removals acceptable	Quota of 19
Minke whale – West Greenland	IWC	164 removals acceptable	Quota of 164
Minke whale – East Greenland	IWC	20 removals acceptable	Quota of 20

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V PUBLICATIONS AND DOCUMENTS (INCOMPLETE)

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VI APPENDIX 1 – DATA REPORTING TO NAMMCO COMMITTEES

a. Short narrative

Hunting data for narwhals, belugas, walrus and large cetaceans are collected through mandatory catch reporting. The catch reports include biological information on the catches such as species, sex, length, presence of foetus and stomach content. Area of catch, hunting methods and time of death are also collected.

In other small cetaceans such as pilot whale, harbour porpoise, white-sided and white-beaked dolphins and killer whales, yearly reporting of catch numbers are collected. There is currently no mandatory reporting scheme in this moment in time. The same for seals.

b. Fill in Excel spreadsheet

SC has agreed on new Management Areas, described in the excel sheet, to be used in the reporting of catches of seals and whales.

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