

NAMMINERSORNERULLUTIK OQARTUSSAT · GRØNLANDS HJEMMESTYRE

Aalisarnermut, Piniarnermut Nunalerinermullu Pisortaqarfik

Ministry of Fisheries, Hunting and Agriculture

Direktoratet for Fiskeri, Fangst & Landbrug



Polar bear management in Greenland

by Deputy Minister, Amalie Jessen

26-28 June 2007 - Polar Bear Range State's Meeting,
Shepherdstown, West Virginia, USA (NCTC).

Contents



Polar bear management system in Greenland

Overview of Greenlandic populations and their status

Subsistence hunting

Greenland's view on sport hunting

Research

Monitoring

Important next steps

Polar bear management in Greenland



International agreements:

- Specific for polar bears: The International Agreement on the Conservation of Polar Bears and Their Habitat (Oslo Convention)/ IUCN/PBSG.
- Greenland and Canada/Nunavut have a Memorandum of Understanding from 2000, extended again last year
- Indirectly including polar bears: Convention on Biodiversity, CITES, IUCN, CAFF, etc.

National regulations for Polar bear management

- Greenland Home Rule Executive Order no. 21 of 22 September 2005 on the Protection and Hunting of Polar Bears.
- Indirectly: Other legislation



Photo: Michael Terp Laursen

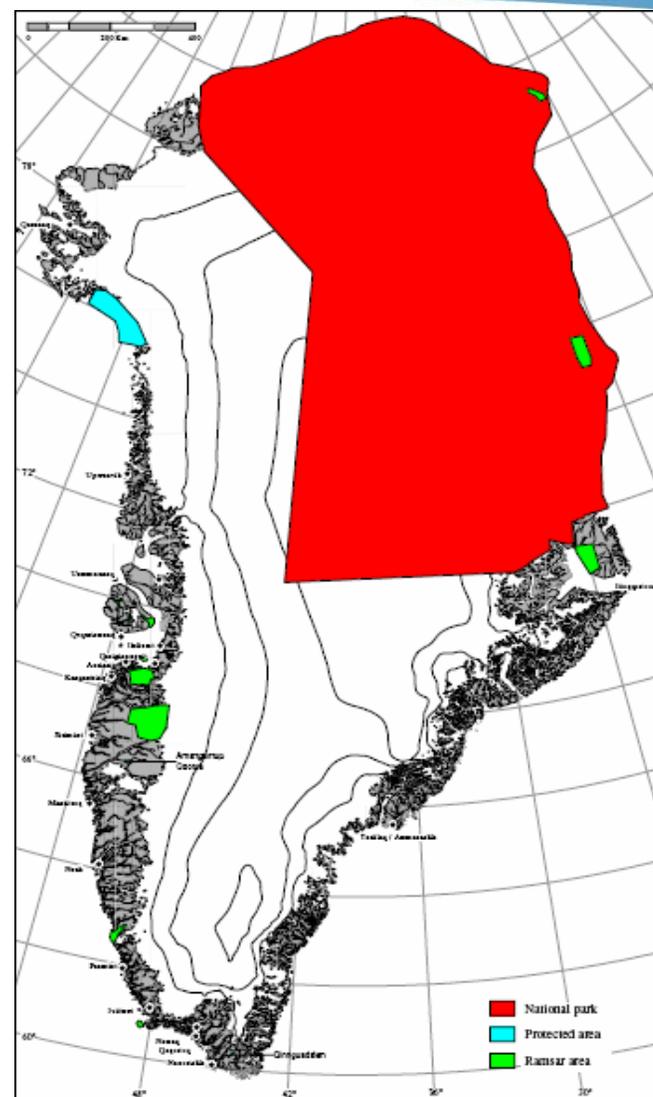
Polar bear management in Greenland



Geographical coverage of the executive order

- The executive order covers the land and the economic zones of Greenland
- Special provisions apply for access to the National Park in North and East Greenland (red), and the Melville Bay Nature Reserve (blue).

Source: Greenland Institute of Natural Resources (2004). The Biodiversity of Greenland – a country study. **Technical report no. 55**



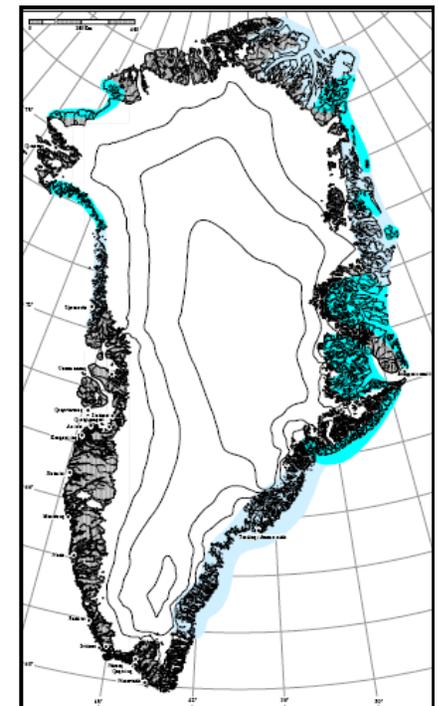
Polar bear management in Greenland



Protective elements in the executive order

- Quota-system dictates permitted harvest level and permitted hunting period
- Only occupational hunters can hunt polar bears
- Cubs and females accompanied by one or more cubs are fully protected
- It is prohibited to disturb denning polar bears
- Restrictions on hunting methods:
 - No use of aircraft, helicopters, snow scooters and other motorised vehicles and vessels of more than 20 GRT/15 GT.
 - No use of poison, spring guns, traps or any other technical aids to restrain polar bears.
 - Minimum calibre of 30.06 (7.62 mm)

Important denning areas



Source: Greenland Institute of Natural Resources (2004). The Biodiversity of Greenland – a country study. **Technical report no. 55**

Polar bear management in Greenland



Quota setting

The Home Rule Government sets annual quotas in accordance with international agreements, using;

- Biological advice provided by Greenland Institute of Natural Resources,
- Harvest statistics, and
- Consultation with the Hunting Council

The quota is divided between relevant municipalities by the Ministry in consultation with the Hunting Council.

In 2006, the Home Rule Government passed a three year quota plan to fulfil their aims to ensure sustainable harvest.

Catch reporting and control



Selling of polar bear parts

- A license is valid for hunting one polar bear.
Before parts can be sold, the license need to be stamped by the local authority. This is done when the local authority receive the standard form with details of the catch.
- The local authority forwards standard forms to the Ministry of Fisheries, Hunting and Agriculture.

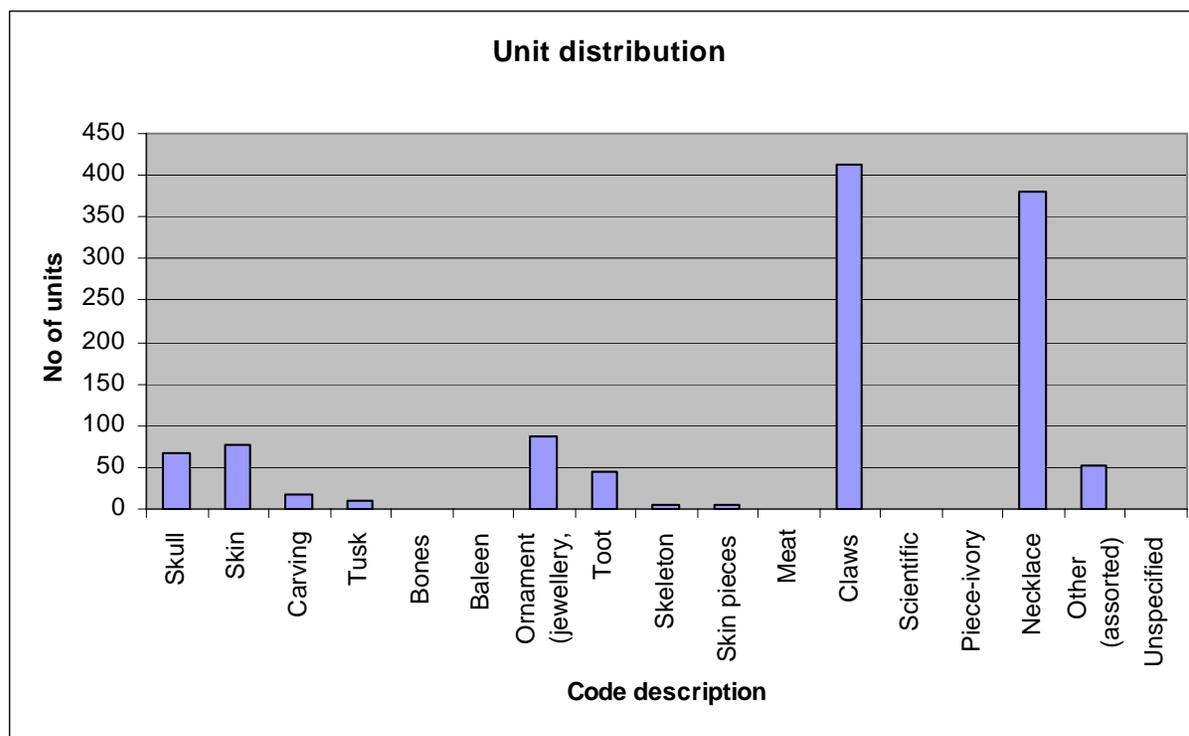


Catch reporting and control



CITES export of polar bear parts

- Executive order (2004) administered by the Ministry of Environment and Nature
- CITES permits are needed for all exports. Permits are provided by shops or the Ministry
- Annual report of exports (polar bear example below from 2005)



The polar bear is currently subjected to "non-detriment finding" assessment at the CITES Scientific Authority (Greenland Institute of Natural Resources)

Overview of Greenland's polar bear populations



- 5 populations
 - East Greenland
 - Davis Strait
 - Baffin Bay
 - Kane Basin
 - Arctic Basin

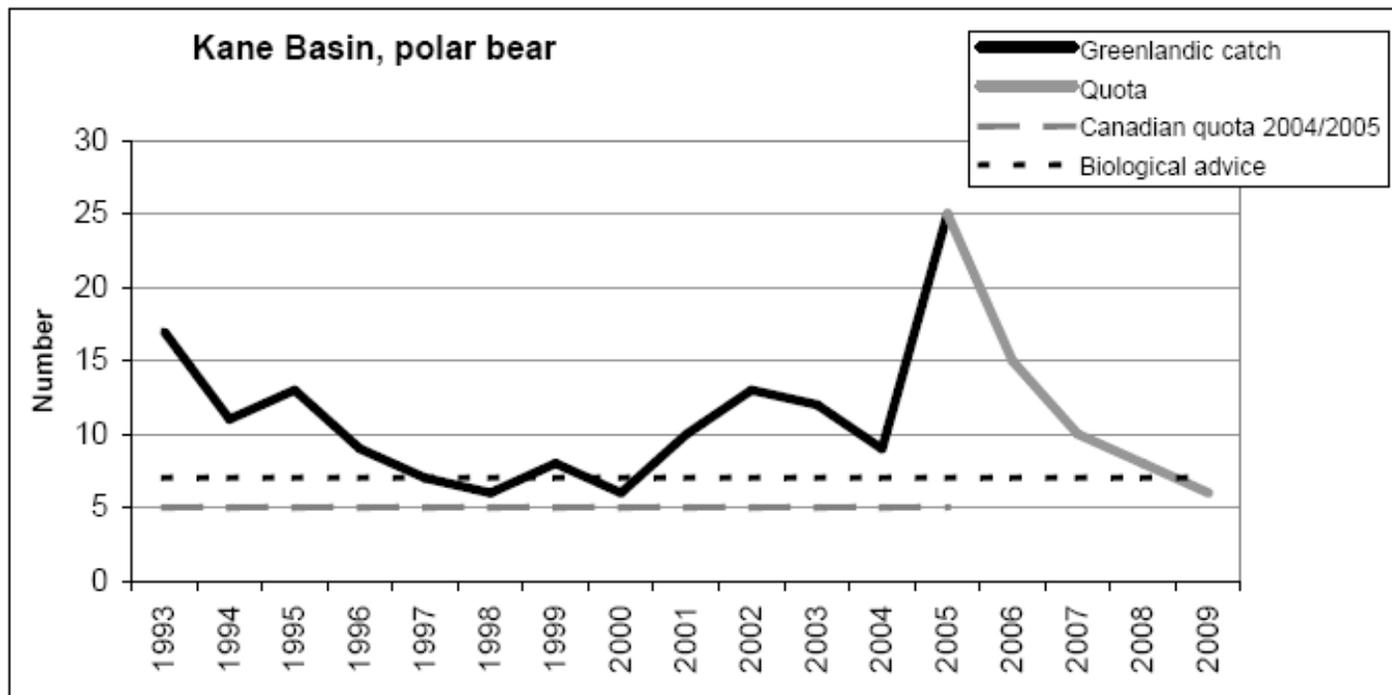


Co-management discussions initiated with Canada/ Nunavut for Kane Basin and Baffin Bay polar bear populations.

Status of Greenland's polar bear populations



| Population | Population size | | |
|-------------------|-----------------|-----------------|---|
| | Year | Number of bears | Methodology |
| Kane Basin | 2006 | 164 | Sat. radio-collars and Mark - recapture |



Status of Greenland's polar bear populations



| Population | Population size | | |
|------------|-----------------|-----------------|------------------|
| | Year | Number of bears | Methodology |
| Baffin Bay | 1984-1989 | 300-600* | Mark - recapture |
| | 1993-1997 | 2074 | Mark - recapture |
| | 2004 | 1600 | Simulation model |

| Population | Population size | | |
|--------------|-----------------|-------------------|-----------------------|
| | Year | Number of bears | Methodology |
| Davis Strait | 1980 | 900 [#] | Mark – recapture |
| | 1993 | 1400 [‡] | - |
| | 2004 | 1650 | Trad. Ecol. Knowledge |



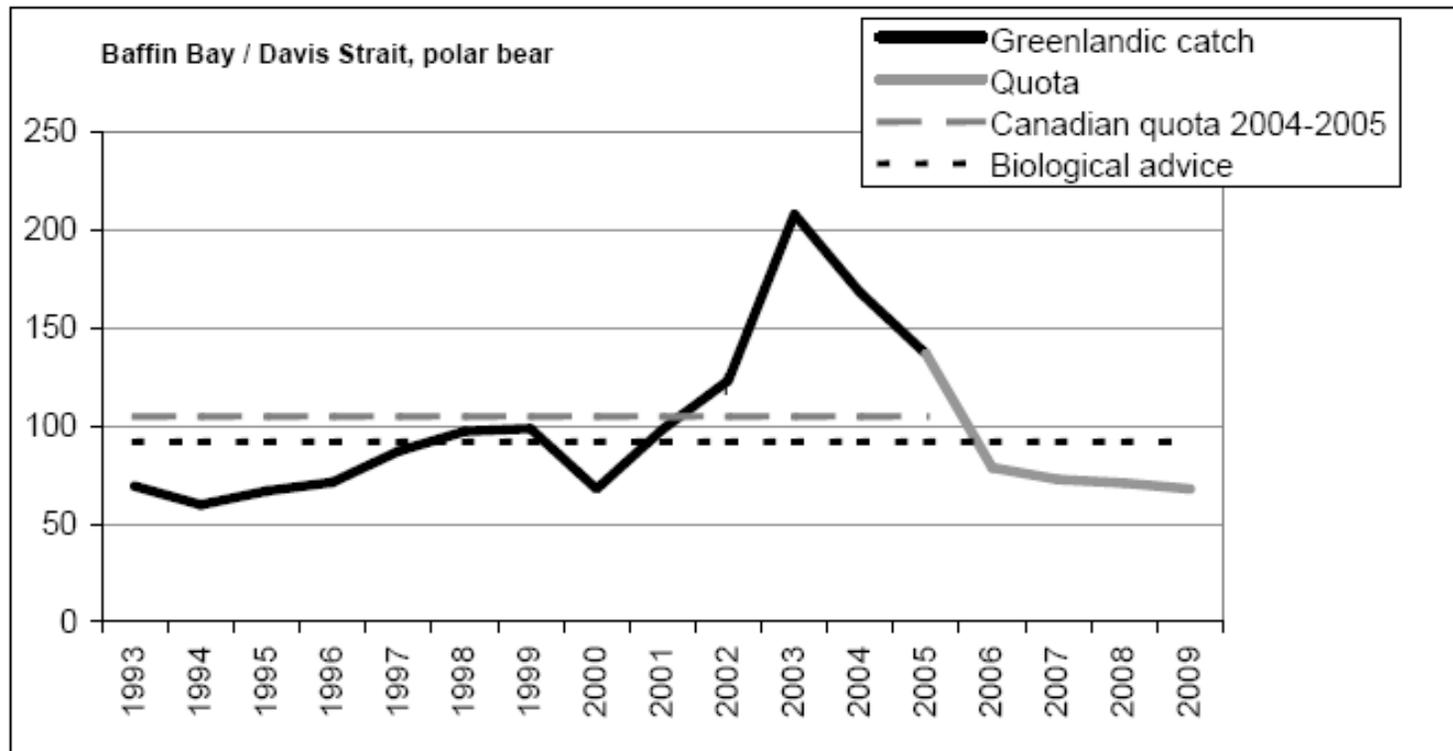
* The study is probably an underestimate as it did not consider that an unknown fraction of the population is off-shore during the spring and therefore unavailable for capture^[1].

[#] Corrected from 726 to 900 by Stirling et al. 1980, due to possible bias in the sampling.

[‡] Increased by Canadian Polar Bear Technical Committee to account for bias in sampling created by the inability of researchers to survey extensive area of off-shore pack ice.

[1] Aars, J., Lunn, N. J., Derocher, A. E. (2006). Polar Bear: Proceedings of the 14th working meeting of the IUCN / SSC Polar Bear Specialist Group, 20-24 June 2005, Seattle, Washington, USA. IUCN, Gland, Switzerland and Cambridge, UK.

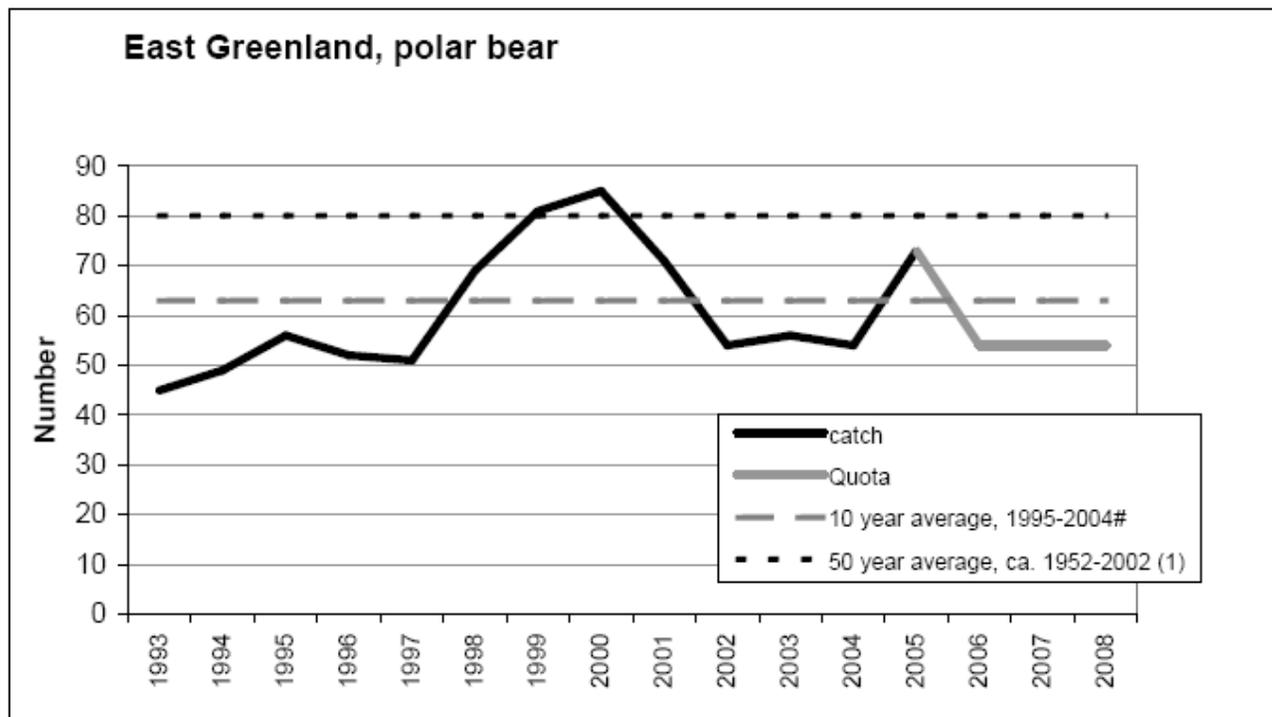
Status of Greenland's polar bear populations



Status of Greenland's polar bear populations



| Population | Population size | | |
|----------------|-----------------|------------------|---|
| | Year | Harvest per year | Methodology |
| East Greenland | 1952-2002 | 80 | Several types of catch statistics compiled ca. 1952-2002 ¹ |
| | 1999-2003 | Ca. 70 | Catch statistics from Piniarneq [§] 1999-2003 ² |



#Based on annual catch statistics from hunter's annual reports.

¹ A. Rosing-Asvid (2002). The Polar Bear Hunt in Greenland. Technical report No. 45, Greenland Institute of Natural Resources.

Subsistence hunting in Greenland



Polar bears play a central role in Greenland's mythology and culture. Polar bear hunting are particularly important for subsistence hunters in East and Northwest Greenland, where living conditions are particularly harsh and alternative sources of income are limited

Socioeconomic situation in typical polar bear areas compared to Greenland in general^[1]

| Category | Greenland, in total | In typical polar bear areas* |
|--------------------------------|---------------------|------------------------------|
| Number of inhabitants | 56.901 | 7370 |
| Number of occupational hunters | 2.731 | 760 |
| Number of spare-time hunters | 6.564 | 701 |
| Number of households | 22.520 | 2628 |
| Average annual income | 20-27.000 US\$ | 10-11.500 US\$ |

* The majority of Greenlandic catches are from the municipalities of Qaanaaq, Upernavik, Tasiilaq and Ittoqqortoormiit.

[1] Greenland Home Rule Government (2007). Greenland 2006: Statistical Yearbook. Forlaget Atuagkat Aps, Greenland.

Sport hunting



Sport hunting is currently not permitted in Greenland.

Greenland Home Rule Government sees sport hunting as a management tool that can optimize local income from restricted sustainable quotas.

A cross-ministerial working group is looking into possibilities and constraints to introducing sport hunting on polar bears in Greenland.



Polar Bear Research



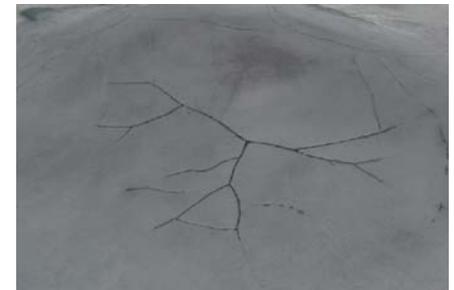
Research Institutions:

Greenland Institute of Natural Resources, www.natur.gl

National Environmental Research Institute (Denmark), www.dmu.dk

Current research activities

- Off-shore oil and gas exploration (under development)
 - Movement patterns of bears in pack ice, East Greenland.
- Climate change
 - User knowledge (traditional ecological knowledge) of polar bear hunting in North-west Greenland.
- Population assessment (monitoring)
 - Planned assessments 2008-2010 (depends on external funding)
- Effects of pollution
 - Accumulation studies and contaminants effect on reproductive measures



Monitoring



- In light of potential changes from e.g. climate change, monitoring is essential to adapt management to occurring changes in polar bear abundance and distribution.
- Population assessments are expensive for a country of 57.000 inhabitants.



Monitoring



Greenland is working to improve monitoring by

- Developing plans for regular population assessment, and
- Developing hunter based monitoring to supplement conventional monitoring by professional scientists.



Important next steps for Greenland



- Improved monitoring to allow immediate management responses to occurring changes.
- Development of bi-lateral management agreement for populations shared with Nunavut.

