The Big Four

– a WWF update on Greenland's efforts with regard to species conservation and nature protection

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Consultant
Thor Hjarsen (M.Sc., Conservation biology)
EcoAdvise & Communication
Esthersvej 20A
DK-2900 Hellerup
Denmark
ecoadvise@ecoadvise.dk
www.ecoadvise.dk

Proof reading:
Tom McGuirk

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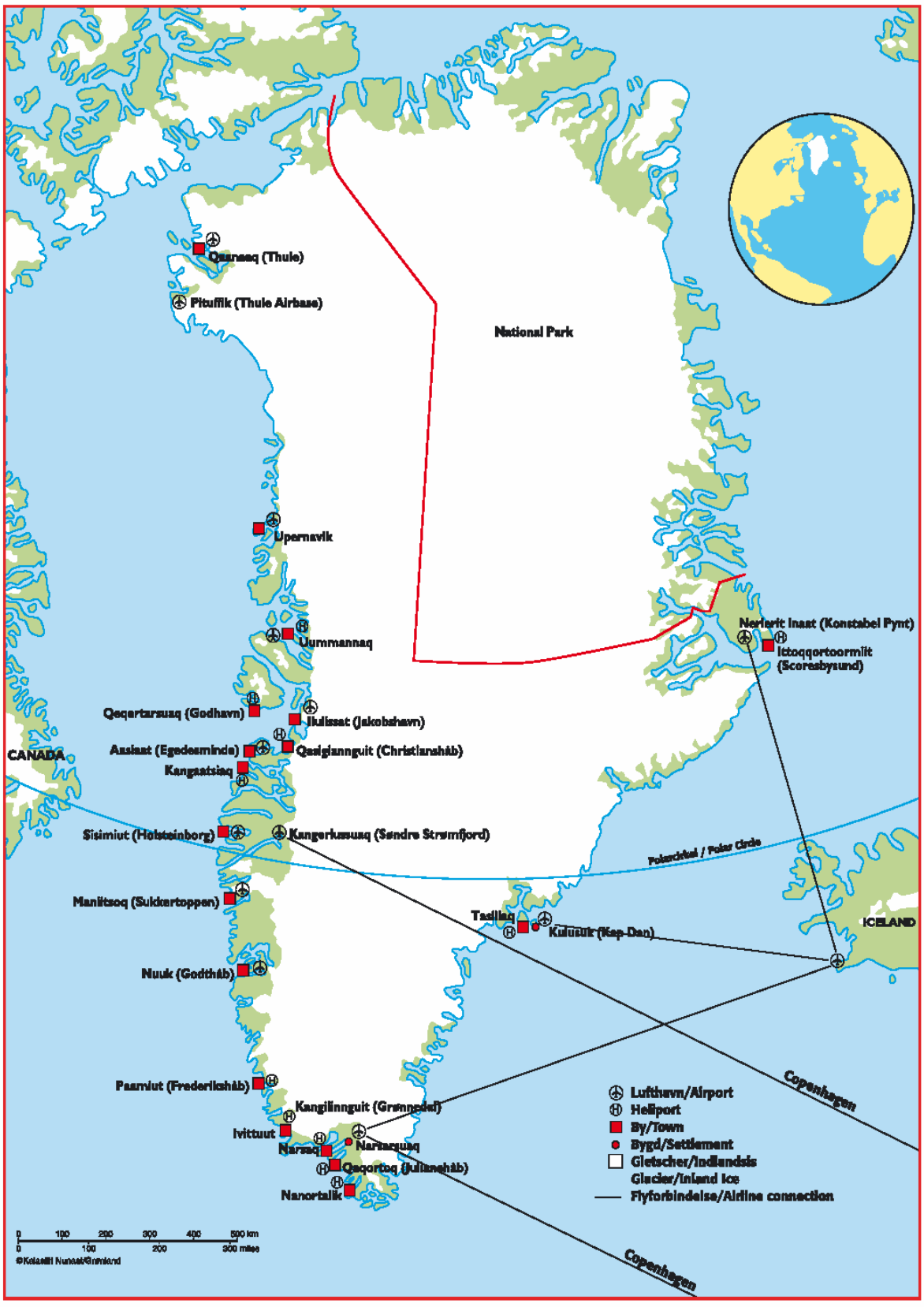
(Courtesy of Greenland Tourism, www.gt.gl)



1. Introduction

"*Greenland fails – Denmark looks on*". This was the headline in a Danish newspaper following a report published by WWF Denmark during the winter 2003-2004.

The report, "*Greenland's International Obligations – a report on Greenland's fulfilment of international conventions and agreements on nature protection, species, conservation, and wildlife management*", brought national and international attention to the poor state of nature management in Greenland, the northernmost part of the Danish Kingdom.

This report is available at the WWF Denmark website:

In English: http://www.wwf.dk/db/files/greenland_report_1.pdf
In Danish: http://www.wwf.dk/db/files/report_2_1.pdf

The report was WWF Denmark's contribution to the debate and it provided the public, the press, other NGO's and most importantly: government officials in Greenland with the first overview of the status of nature management in Greenland.

In previous years international attention had already focused on this problem. WWF together with Danish and international NGOs had already spotlighted the issue. A brief historical overview is provided in the 2003-report.

The report was useful. The Greenlandic Home Rule Minister for Environment and Nature, Mr. Jens Napaattooq commended the report by saying, in an interview to WWF Denmark: "It's good that someone keeps an eye on our nature…". The Minister continued: "- *It is a nice and very detailed report. But I feel that there is already a great attention to the subject and we are in the process of acting on the subjects*"[1].

The report from 2003 highlighted several gaps in the Greenlandic management of the international nature conventions and agreements. An abstract from the 2003-report:

> "*Greenland has:*
>
> - *Failed to introduce a domestic legislation to implement the legally binding conventions and agreements*

[1] Interview from March 2003 in "Levende Natur", the member magazine of WWF Denmark.

- *Failed to build up a nature and wildlife management to meet the goals and implement the recommendations put forward by the conventions and agreements, e.g. regarding the size of quotas or protection of nature*
- *Failed to report back violations of legislation, in spite of this being a demand in several conventions*
- *Failed to report back inadequate management, in spite of this being expected under certain agreements*
- *Failed to sufficiently monitor populations and protected areas, in spite of this being a condition in a number of the agreements, among others to provide the basis for relevant recommendations from international scientific working groups*

The problems are serious, not least because in international forums, Greenland often characterises its activities using phrases like "sustainable catch", "respect for nature", etc.

However, the lack of implementation for legally binding conventions and agreements is not Greenland's responsibility alone. As the leading nation in the commonwealth of Denmark, Greenland and the Faeroe Islands, Denmark must take it share of responsibility."

Now, almost one and a half years later, it is time to take stock. How have Greenland and Denmark proceeded with this issue since then? This report will assess the development of Greenlandic nature management from 2003 until today (April 2005).

A number of questions arise:

- Has Greenland improved its management and implementation of the international conventions such as CITES, Ramsar and CBD?
- Has new legislation been drafted and how does it work?
- Have any management changes lead to improvements in species conservation?

These questions – and many others - are the guidelines for this report.

A small handful of key species need special attention now. Species that are in the middle of a Greenlandic conflict zone with regard to hunter's interests and conservationist's concerns:

Polar Bear
Walrus
Narwhal
Beluga

These important species, "**The Big Four"** will be the focus of this report. These four species are keystone species in several respects: As environmental indicators due to their position in the upper level of the Arctic food chain, as important ecosystem moderators, as important hunting resources for locals, as species well known to the public and as potentially economically valuable species because of their potential to attract tourists to Greenland, etc.

In addition to this, the report will also take stock of the development of the legal framework process for improved implementation of three important nature conventions: CITES, Ramsar and Biodiversity.

Since the 2003-report improvements have indeed been made and positive developments are in progress in Greenland. WWF acknowledge this fact and congratulates Greenland on such important moves and decisions during the last 1-2 years.

However, there are still some serious gaps in Greenlandic wildlife management and it is our hope that this new report will be used by politicians, authorities and others to prioritize and fill out these gaps.

Polar Bear hide air drying, Ittoqqortoormiit, September 2004
(Photo: Fred Pierson)

2. Foreword

WWF (World Wide Fund for Nature), the global conservation organization, has closely followed developments in Greenland's nature management. In November 2003, WWF published a report on Greenland's management of its environment, particularly its living resources. The report focused on issues covered by international conventions and agreements to which Greenland is a party. The results were striking and disappointing - Greenland did not meet its international obligations in a single area.

Fortunately the situation has changed significantly since our last report. Greenland has enacted a nature protection law. Regulations have been enacted to protect birds, narwhal and beluga. A law is in place that will ensure the implementation of CITES, also known as the Washington Convention. These are major and positive steps forward, and WWF wishes congratulate Greenland on this.

Nonetheless, Greenland is still a long way from meeting its international environmental obligations. Laws implementing these obligations are missing, implementation of existing laws is lacking, and in a number of cases existing laws are inadequate. Scientific data is inadequate for nature management, and the exploitation of several species is far from sustainable.

In this report WWF focuses on four species that currently are subject to excessive harvesting: polar bear, walrus, narwhal and beluga. Future harvesting of these four species depends on whether Greenlandic politicians dare to take a major, but absolutely necessary, step to limit hunting of these species to a sustainable level.

Once again, Denmark has provided very little help to Greenland. Denmark has a responsibility to Greenland, and its environment, as the leading nation in the Commonwealth of Denmark, Greenland and the Faeroe Islands. Nature management in a country such as Greenland is both expensive and time-consuming. Denmark should therefore support this work with both money and expertise. Though Denmark for several years has provided about 40 million kroner annually to the Arctic Environment Program, only a very small amount of this sum has gone to ensure that the use of Greenland's living resources is sustainable. This can be changed in 2005: DKK 42,6 million (c. EUR 6.1 million) is already budgeted for the program.

WWF therefore once more challenges Danish politicians to live up to their responsibilities to Greenland and its environment. We also challenge Greenlandic politicians to live up to their responsibilities and ensure defensible management of Greenlandic nature and its living resources. Time is running out, not least for the four species that are the focus of this report.

Kim Carstensen - CEO, WWF Denmark

3. Summaries

3.1 Summary

During the winter of 2003-2004 WWF Denmark published the first report on the state of Greenlandic nature management. The report, entitled: "*Greenland's International Obligations*", analysed Greenland's implementation of international nature conventions and agreements. The report in front of you is an assessment of Greenland's progress in this regard over the last 1½ years.

This report asks two important questions; how has Greenland's Home Rule government met the challenge of declining populations in four of its major marine mammal species? And has implementation of the most important nature conventions (CITES, Ramsar and Biodiversity) improved?

In general Greenland has taken important initiatives. In December 2003 the home rule parliament approved a nature protection act and during 2004 two executive orders where approved by the Home Rule government, improving the legal protection of birds, narwhal and beluga. In addition the government decided on an executive order fully implementing CITES in Greenland.

However, there are still serious gaps in nature management on the World's largest island.

Polar bears and walruses are hunted in Greenland, in an almost unregulated way and the populations of both species on the western coast is seriously over-hunted. However, population data is scarce and therefore most population data, and recommended harvest levels, are necessarily "guesstimates". Therefore the real effect of the current hunting levels in western Greenland (polar bear: 203 annually in average, walrus: 356-379 annually in average including losses) is not known. The hunting of polar bear would is of particular concern, since the increased hunting levels during the last 4-5 years (up from 159 in 2000 to 278 in 2003) could be seen as a result of the bears' response to climatic change: The decreasing sea ice cover forces the bears towards the coasts where contact with hunters is more frequent. Improved protection of polar bears and walruses in Greenland is therefore needed.

Our knowledge of the narwhal and beluga populations in Greenland is much better. Therefore, in 2004 it was possible for the first time to set hunting quotas for western Greenland. Unfortunately the quotas for the first year were set at a level three times higher than recommended by

most biologists. In addition, the reported CITES trade in narwhal tusk and carved ivory pieces has increased significantly. Better reporting due to a new permit system, combined with a growth in tourism, has increased the reported export of narwhal from 255 transactions in 2000 to 1550 in 2003. This level of trade calls for a reassessment of the effect of this trade on the wild populations by the CITES Animals Committee. . The need for such international assessment is also underlined by the fact that Greenland is issuing CITES permits without any involvement of a Scientific Authority.

The legal framework has improved significantly with regard to the implementation of the three major nature conventions.

However, there are still some worrying gaps:

- The Greenlandic Home Rule authorities have issued and continues to issue CITES export permits without any scientific assessment of the effect on the wild populations of such exports.
- The poor implementation of the Ramsar Convention has not changed with regard to bird regulations, because the protection of Greenland's 11 Ramsar sites has not been improved.
- The approval of a new hunting regulation for narwhal and beluga has not yet lead to the establishment of sustainable hunting quotas. The current quotas are about 3 times higher than recommended sustainable hunting levels.

LATEST NEWS - summary!

See page 67 for more details

After finishing this report reliable sources informed WWF Denmark, that the Home Rule very soon will re-introduce the unsustainable spring hunting on sea birds. The decision is very problematic and completely in the opposite direction of the initiatives during the last years in Greenland.

The spring hunt and illegal egging was in 2002 assessed to be the main reason for an approximately 70-80% decline in Common Eiders in western and north-western Greenland.

Information about the planned change in the bird hunting regulation is still limited but updates will be available on the website of WWF Denmark (www.wwf.dk).

26th April 2005

3.2 Resumé på dansk

I løbet af vinteren 2003-2004 udsendte WWF Verdensnaturfonden den første rapport om den grønlandske naturforvaltnings tilstand. Rapporten "*Grønlands internationale forpligtelser*" analyserede, hvor godt Grønland implementerer en række internationale naturbeskyttelsesaftaler og –konventioner.

Nærværende rapport er en vurdering af fremskridtene taget af Grønland gennem det seneste 1½ år. Hvordan har Grønlands Hjemmestyre mødt de udfordringer, man er stillet overfor med faldende bestande af bl.a. fire vigtige arter af havpattedyr? Og er forvaltningen af de vigtigste naturkonventioner blevet bedre?

Generelt har Grønland taget vigtige initiativer. I december 2003 vedtog landstinget (det grønlandske parlament) en ny naturbeskyttelseslov og i løbet af 2004 udsendte landsstyret (den grønlandske regering) to bekendtgørelser, der fastsatte regler for forbedret beskyttelse af fugle, narhvaler og hvidhvaler. Hertil kom en bekendtgørelse, som implementerede Washingtonkonventionen/CITES.

Men der er desværre stadig alvorlige huller i naturforvaltningen på verdens største ø.

Isbjørn og hvalros jages næsten uden begrænsninger, og på Grønlands vestkyst synes begge arter at være alvorligt truede. Men viden om bestandene er begrænset, så bestandsopgørelserne og anbefalede fangsttal er reelt baseret på gætterier. Derfor er der ingen, der i dag kan sige, hvad effekten af den nuværende jagt på vestkysten er (gennemsnitligt fanges 203 isbjørne årligt og 356-379 hvalrosser). Jagten på isbjørn er særligt bekymrende, da en stigning i fangsten gennem de sidste år (en stigning fra 159 i 2000 til 278 i 2003) måske skyldes, at isbjørnen er udsat for "klimatisk stress": I de seneste år har der været mindre og mindre havis om vinteren, hvilket har medført, at isbjørnene har været tvunget til at søge føde fra kysterne. Dér er chancen større for, at dyrene kommer tæt på mennesker og møder grønlandske fangere. En forbedret beskyttelse af både isbjørn og hvalros i Grønland er påkrævet.

Viden om hvidhvalernes og narhvalernes bestande i Grønland er meget større. Derfor var det i 2004 muligt for første gang i Vestgrønland at fastsætte jagtkvoter for disse to arter. Desværre var de kvoter, som landstyret besluttede omkring tre gange højere end det fangstniveau, som hjemmestyrets egne biologer anbefalede. Hertil kommer, at eksporten af narhvaltand og udskæringer af dette er steget signifikant. Et nyt tilladelsessystem samt en stigende turisme i Grønland har

medført, at antallet af udstedte CITES-eksporttilladelser er steget fra 255 i 2000 til 1550 i 2003. En sådan stigning betyder, at Washingtonkonventionens eksperter i Animals Committee bør genoverveje betydningen af den grønlandske handel med produkter fra truede dyr. Nødvendigheden af en sådan vurdering understreges af, at Grønland i strid med konventionen stadig udsteder CITES-tilladelser uden at involvere sin videnskabelige myndighed.

Muligheden for at implementere tre vigtige naturbeskyttelses-konventioner er blevet væsentligt forbedret, men der er stadig nogle alvorlige mangler:

- Hjemmestyret fortsætter med at udstede CITES-tilladelser, der tillader eksport af dele af truede dyrearter, uden at der har foregået en videnskabelig vurdering af, om eksporten er til skade for de pågældende arter.
- Den ringe implementering af Ramsarkonventionen i de 11 Ramsarområder i Grønland blev ikke forbedret ved landsstyrets vedtagelse af en ny fuglebekendtgørelse.
- Fangstkvoterne for narhval og hvidhval var i jagtsæsonen 2004-2005 væsentligt højere end de biologiske anbefalinger, selv om man havde vedtaget en ny bekendtgørelse, der skulle have øget beskyttelsen.

SIDSTE NYT! – resumé

Se side 67 for flere detaljer

Efter færdiggørelsen af denne rapport er WWF Verdensnaturfonden blevet bekendt med, at det grønlandske landsstyre vil genindføre den ikke-bæredygtige forårsjagt på havfugle. En sådan beslutning vil være meget problematisk for bestandene og være i den helt forkerte retning i forhold til de ellers gode initiativer, der er taget gennem de seneste par år i Grønland.

I 2002 blev netop forårsjagt og illegal ægsamling vurderet af Grønlands Naturinstitut til at være hovedårsagen til en tilbagegang på 70-80 % i edderfuglekolonierne i Vest- og Nordvestgrønland.

Indholdet af den påtænkte ændring af fuglebekendtgørelsen fra januar 2004 er endnu ukendt, men så snart WWF Verdensnaturfonden har flere informationer, vil de blive offentliggjort på hjemmesiden www.wwf.dk.

26. april 2005

4. Polar bears

4.1 Global overview

The polar bear is the largest terrestrial carnivore in the world. It is a creamy white coloured bear with a long body and neck, a narrow head, and very small ears. Its claws and tongue are black, and its eyes are brown. The polar bear moults once a year, during the summer. Males reach their maximum size at 8 to 10 years of age. A typical male is between 2 and 3 m long and weighs 420 to 500 kg. Some exceptional individuals may weigh as much as 800 kg. Females reach their maximum size of 150 to 250 kg when they are five to six years old.

Information compiled in 1997 indicates that there are between 21,000 and 25,000 polar bears in the world, with more than 15,000 in Canada. More recent population data was compiled in 2001 by the IUCN/SSC Polar Bear Specialist Group (PBSG) at a meeting in Nuuk and this estimate was confirmed (see Table 1).

Table 1: The polar bear populations[2]

Populations	**Estimate – certainty**	**Trend**
East Greenland (**GL**)	2,000 (1997) – poor	Uncertain
Kane Basin (**GL** and CA)	200 (1996) – fair	Stable
Baffin Bay (**GL** and CA)	2,200 (1996) – fair	Declining
Davis Strait (**GL** and CA)	1,400 (1996) – fair	Declining
Arctic Basin (**GL**, CA)	Unknown	Unknown
Barents Sea (NO and RU)	2-5,000 (1982) – poor	Uncertain
Beaufort Sea (CA and US)	3,000 (1987, 2001) – good	Increasing
Northern Canada (CA)*	8,000 (1979-1997) – good	Stable
Sibera and West Alaska (RU and US)**	3,200 to unknown – poor	Unknown
Total	**21-25,000 individuals**	

GL: Greenland, CA: Canada, RU: Russia, NO: Norway, US: USA
* Includes the Canadian populations as delimited by the PBSG: QE, NW, VM, LS, MC, GB, FB, SH and WH
** Includes the Russian and US populations as delimited by the PBSG: Chukchi, Laptev and Kara Seas. Kara Sea population is unknown

More recent estimates[3] for Norway, based on extensive surveys and population models, were released in January 2005. The counts made by the Norwegian Polar Institute showed that the Barents Sea population, shared between Norway and Russia, holds 3,000 polar bears. That is in the lower end of the previous estimate of 2-5,000 individuals.

[2] Lunn, *et al.* 2001
[3] http://npweb.npolar.no (13.01.2005)

Table 2: International conservation efforts

Red list category (IUCN): Lower Risk/Conservation Dependent[4] (1994) **CITES:** Appendix II, i.e. export shall require the prior grant and presentation of an export permit and shall only be granted if e.g. the Scientific Authority of the State of export has advised that such export will not be detrimental to the survival of that species (Article IV, 2)[5]. **EU wildlife trade regulations**: Annex B. **IUCN Polar Bear Specialist Group (PBSG)[6]:** "Greenland to improve its harvest monitoring programme" (2001).	**The "Oslo Convention"*:** Internationally, polar bear management and research have been coordinated since 1976 under the *Agreement on the Conservation of Polar Bears* or the Oslo Convention. Signatory states are: Norway, Denmark/Greenland, USA, Canada and Russia. Under the terms of the agreement (Article III), the taking of polar bears is restricted to "local people". In Canada this is interpreted to mean aboriginal people or sport hunters guided by aboriginal people[7].

* The international Agreement on the Conservation of Polar Bears

In almost all range states polar bears are harvested or killed for security reasons. The PBSG give the following mean annual harvest figures, based on legal annual harvest statistics from seasons 1995-96 and 1999-2000:

Table 3: Global polar bear harvest

Populations	**Mean annual kill[8]**	**Females in kill[6]**
East Greenland (**GL**)	80	38%
Kane Basin (**GL** and CA)	11	32%
Baffin Bay (**GL** and CA)	147	36%
Davis Strait (**GL** and CA)	68	38%
Arctic Basin (**GL**, CA)	None reported	-
Barents Sea (NO and RU)	2+	-
Beaufort Sea (CA and US)	82	33%
Northern Canada (CA)*	329	-
Sibera and West Alaska (RU and US)**	Unknown	-
Total	**705**	

[4] http://www.redlist.org/search/details.php?species=22823
[5] Rosser & Haywood 2002
[6] Lunn *et al.* 2001
[7] http://www.speciesatrisk.gc.ca/search/speciesDetails_e.cfm?SpeciesID=167
[8] http://dk.nanoq.gl/tema.asp?page=tema&objno=66764 (2004)

Total known global harvest of polar bears is at least 705 individuals, on average, per year. This is out of a total population of 21-25,000 bears. Following the model for sustainable harvest, used by PBSG[9], the global sustainable harvest of polar bears would be in the range from 954 to 1,136 bears per year.

Thus, the current estimated global hunt seems to be on the sound side of the carrying capacity for the total polar bear world population.

Of the polar bear populations restricted only to Canada, Inuit and trophy hunters annually kill 411 bears. The sustainable harvest is assessed by PBSG to be 464 polar bears[6]. The kill makes up 88% of the possible sustainable harvest and therefore does not exceed the calculated carrying capacity of the Canadian populations.

In the areas where the polar bear populations are shared between Canada and Greenland hunters on both sides annually kill 246 polar bears, on average (see also Table 5). The sustainable harvest is calculated by the PBSG formula[9] to be just 145 polar bears. This means that the removal of the populations in the Kane Basin, Baffin Bay and the Davis Strait is, in general, exceeding the carrying capacity by more than 60%. However, in some cases the hunting pressure is much higher – se also Chapter 4.3.

Due to uncertain population data the PBSG can not assess the harvest levels within the Russian populations[6]. Both monitoring and the enforcement of domestic wildlife laws and the international polar bear agreement is weak in Russia. Some harvesting of polar bears for subsistence, in addition to outtake of "problem bears" in local communities has been documented, particularly in Chukotka. Legislation to strengthen monitoring, and to allow a limited hunt in Chukotka, based on scientifically supported quotas, is being drafted in a co-operation between Alaska and Russia. Until this is in place status and harvesting in Chukotka will remain unreliable.

The potential threats from pollution, climatic change and habitat destruction should be assessed when setting quotas. Over the last few years it has been realised that these factors pose a serious threat to the polar bear populations. Reductions of sea ice will drastically shrink marine habitat for polar bears, ice-inhabiting seals, and some seabirds, pushing some species to extinction[10].

[9] Sustainable harvest = (N * 0.015)/proportion of females in harvest or min. 0.33. N is population estimate. See Lunn *et al.* 2001
[10] ACIA 2004

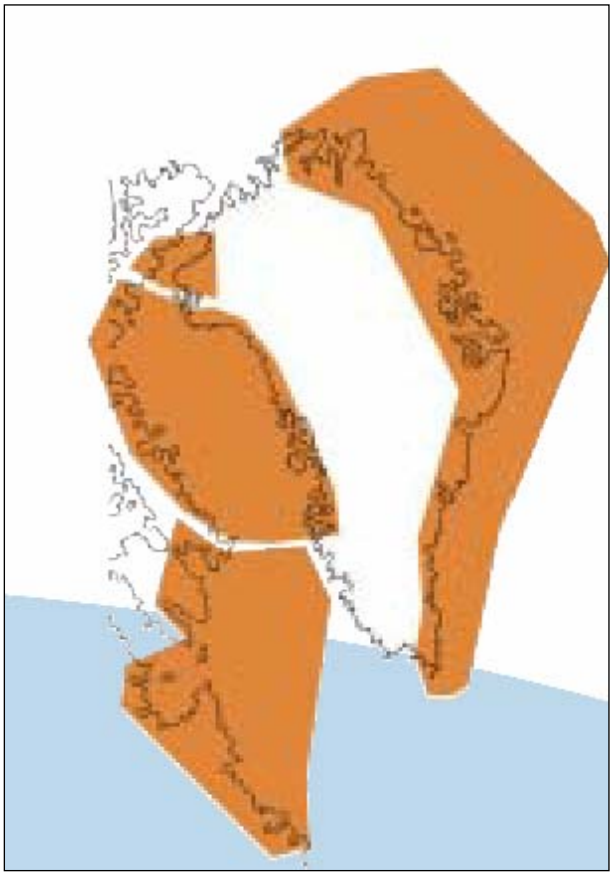


Figure 1: *Distribution of the four polar bear populations in Greenland (Map courtesy of Tulugaq/Greenland Home Rule)*

4.2 Status in Greenland

Greenland hosts four polar bear populations: three in western Greenland (the Kane Basin, the Baffin Bay and Davis Strait) and one in eastern Greenland. The populations in western Greenland are shared with Canada and are harvested by locals in both countries. The Davis Strait population is genetically different from the Kane Basin/Baffin Bay populations. Most recent official population estimates publsihed by the Home Rule[11] are:

Kane basin, North of Qaanaaq municipality: 164 polar bears

Baffin Bay: 2,074 polar bears

Davis Strait: 1,400 polar bears (1993 estimate)

East Greenland: Unknown

Greenland has not yet published an official Red list using the IUCN criteria for identifying species in need of conservation (see also the 2003 report, page 14-19). Instead the Greenlandic Institute for Natural Resources published, in 2000, a report: "Status 2000", listing "the important living resources".

In the Status 2000 report the polar bear was classified as an:

> ***Important species with possible problems (due to hunting or other), and where current scientific knowledge to some extent is lacking but sufficient for management initiatives in Greenland***

[11] http://dk.nanoq.gl/tema.asp?page=tema&objno=66764 (2004)

The report uses threat categories that are not coherent with the Red list categories or the definitions recommended by IUCN.

In the Greenlandic status report the four Greenlandic polar bear populations and their status are described as follows[12]:

	Status	**Biological advise**	**Necessary management needs**	**Major unresolved questions**
Kane Basin	Currently possibly overexploited, in decline?	Reduction of hunting	Quota needed for the Greenlandic hunting	Calculation of size of population
Baffin Bay	Currently stable or possibly overexploited	Reduction of hunting	Quota needed for the Greenlandic hunting	Calculation of size of population
Davis Strait	Currently possibly overexploited, in decline?	Reduction of hunting	Quota needed for the Greenlandic hunting	Calculation of size of population
East Greenland	No knowledge	None	None	To get knowledge of distribution and size. Effects of pollution

Clearly knowledge of the Greenlandic polar bear is still very limited. However, polar bears are hunted without quota and in practical terms in an almost unregulated manner.

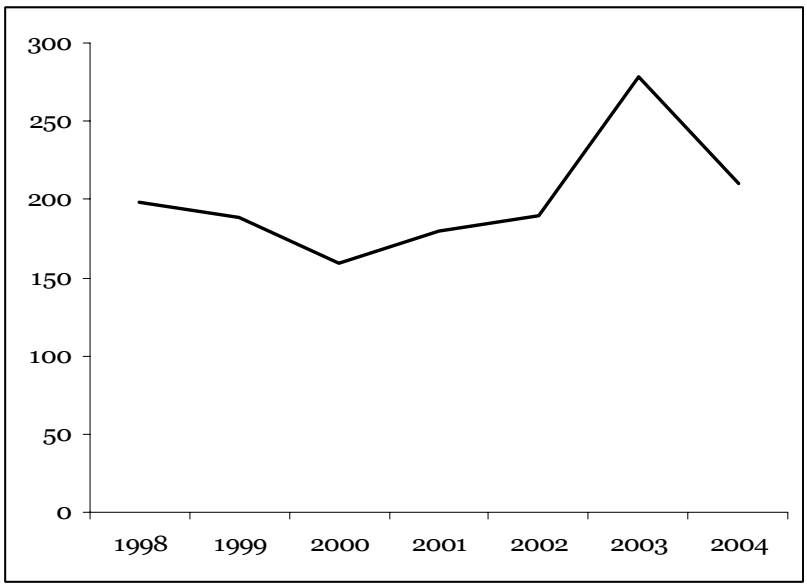


Figure 2: *Total polar bear hunt in Greenland, 1998-2004[13]. Note that 2004-figure only covers from Jan to Sept 2004.*

[12] Grønlands Naturinstitut 2000

4.3 Harvest in Greenland

According to the official Greenlandic hunting statistics Piniarneq, the annual hunting of polar bear shows a slightly increasing trend (Figure 2).

The lack of good population estimates for the Greenlandic population makes it impossible to evaluate the overall effect of the hunt.

Furthermore, the Greenlandic hunting statistics seem to be inadequate in their reporting of the populations from which the bears are hunted, in those areas where populations overlap in western Greenland.

The problem is obvious since the hunting statistics divide the hunting data into four geographical regions based on Municipality limits while the biologists population assessments are based on the distribution limits of the polar bears.

Still, the regional hunting statistics highlight some tendencies during the last few years (see Table 4):

- A sharp increase in hunt in north western Greenland
- An increase in hunt in the rest of western Greenland
- An overall decrease in hunt in eastern Greenland

Table 4: Regional polar bear harvest in Greenland, 2000-2004[14]

	North	Disco	Central/South	East	Total
2000	62	11	10	76	159
2001	92	4	14	70	180
2002	108	19	13	50	190
2003	200	15	20	43	278
2004*	113	21	39	39	210

** 2004-figures only covers from January to September*

If the population estimates are correct, it is evident that the West Greenlandic populations are over-harvested. Hunters from both Canada and Greenland kill on average 11 polar bears annually, from the Kane Basin population. The sustainable quota is calculated to be 7 animals per year. From the Baffin Bay population hunters kill c. 175 polar bears per year (5 year average). This is more than twice the sustainable hunting level, calculated to be at 88 bears per year. In the Davis Strait population 60 animals are hunted on average per year, in

[13] Piniarneq 2005, Heinrich *in litt.*
[14] Heinrich *in litt.*

an area where the sustainable annual quota is estimated to be 50 (Table 5).

In general, it is for the Greenlandic populations estimated that sustainable take is 1.5% of the total population of females older than 2 years, and 3% of males older than 2 years[15].

Table 5: Average hunting of the polar bear populations shared by Greenland and Canada[14]

	Kane Basin	Baffin Bay	Davis Strait
Average annual kill (1999-2003)	10 (GL) 1 (CA) 11 (GL & CA)	115 (GL) 60 (CA) 175 (GL & CA)	1 (GL) 59 (CA) 60 (GL & CA)
Recommended hunting level	7	88	50
Hunting level exceeded by	57%	198%	20%

When looking at 2003, the most recent year with complete hunting statistics, it looks even more troubling. For Greenland it is estimated that in 2003[14]:

- 12 killed polar bears came from the Kane Basin population,
- 206 killed polar bears came from the Baffin Bay population, and
- 1 killed polar bear came from the Davis Strait population.

In comparison Canadian hunters in 2003 killed[14 & 16]:
- 0 polar bears came from the Kane Basin population,
- 61 polar bears came from the Baffin Bay population, and
- 51 polar bear came from the Davis Strait population.

Thus, 2003 hunting totals in the two countries were well above recommended hunting levels:

Kane Basin: 12 polar bears or 71% above sustainable level
Baffin Bay: 267 polar bears or 303% above the sustainable level
Davis Strait: 52 polar bears or 2% above the sustainable level

Looking at older hunting data it is evident that total hunting has increased significantly in Greenland from 1993-2003. This increase was

[15] Born 2005
[16] Stirling *in litt.*

exclusively due to an increase in the catch from the Baffin Bay population[15].

4.4 Current national management

Currently the Greenlandic polar bear is managed by Home Rule Executive Order No. 20 of 11th May, 1994 on the hunting of polar bears in Greenland.

According to the regulations only professional hunters are permitted to hunt polar bears. Hunting of the bears is permitted all year, but females are protected from 1st July till 31st August.

In general cubs less than 2 years are protected from hunting. So are female bears that accompany cubs less than 2 years of age.

However, in the most important hunting areas (major part of region North (Qaanaaq and Upernavik) and Ittoqqortoormiit in eastern Greenland) hunting regulations for polar bears are more relaxed. The season is the same, all year except from 1st July to 31st August, but both sex can be killed in addition to all animals above one year of age. In Ammassalik, eastern Greenland regulations are the same but the closed season is from 1st August to 30th September.

In total, c. 80% of all bears are killed in Qaanaaq, Upernavik and eastern Greenland, where the 1-year age protection limit is enforced.

Thus the 2-year protection of cubs and females has only a very limited effect on the general regeneration capability of the polar bear populations, since just 20% of the bears are killed in areas where this age limit is enforced.

The Department of Fisheries and Hunting is now finalizing a new executive order on the protection of the polar bear, which is planned to come into force 1st July 2005. According to the website[17] of the Home Rule government the plan is to grant full protection to females accompanying young bears and cubs regardless of age.

In addition, separate quotas for the four polar bear populations in Greenland will be introduced. According to the website these quotas will be lower than the average catches (between 1993 and 2003). The quotas will be based on international agreements, scientific advice and traditional knowledge.

[17] http://dk.nanoq.gl/nyhed.asp?page=nyhed&objno=73964

In Greenland, polar bears are totally protected from hunting within the inner zone of the Melville Bay Wildlife Sanctuary, on the northwest coast. Only professional hunters may enter the zone to track down polar bears that were wounded during hunts outside the inner zone of the sanctuary.

Polar bears are covered by CITES appendix II and no export of parts or derivatives may take place without a prior CITES permit, issued by the national CITES management authority[18].

The Greenland Home Rule government, in 2004, approved a new executive order implementing CITES in Greenland. Please refer to Chapter 8.1 for more on the recent initiatives in Greenland on CITES implementation.

In Greenland products form polar bears are widely available in tourist and souvenir shops. A large hide with a skull costs around EUR 2,000 – 2,300 while a single claw, polished and mounted on a necklace, around EUR 80-100.

4.5 Gaps and concerns

Clearly, the current Greenlandic hunting pressure is of great concern. This significant removal of often healthy and reproductive individuals from the populations only add to those other factors that potentially threaten the world's populations of polar bears:

- Global warming
- Pollution
- Habitat disturbance and destructions
- Human disturbance and traffic

According to various recent studies, these factors affect the Greenlandic polar bears. WWF gave special attention to the issue in the report; "Polar Bears at Risk", of May 2002[19,20]. In addition, the Danish National Environmental Research Institute, has made several studies on accumulation of pollutants in polar bears and other marine species in Greenland (see www.dmu.dk for more information). Assessing the impact of these factors on the polar bears in Greenland is out of the scope of this report.

The world population of polar bears is believed to be stable, but some sub-populations are decreasing, especially those on the west-coast of

[18] The Department of Enviroment and Nature, Nuuk
[19] Norris *et al.* 2002
[20] Derocher *et al.* 2004

Greenland. The current hunting level in Greenland will reinforce this negative trend. Thus, hunting quotas are greatly needed for those populations. Such hunting quotas must, as far as possible take into account, projected effects of global warming and pollution.

In addition, knowledge about the Greenlandic polar bear populations is to be lacking, especially from the east coast. When population estimates are uncertain it is of course impossible to set any meaningful quotas.

As early as May 2002 the Greenlandic Home Rule government submitted a draft executive order for the "sustainable management of polar bears" for public hearing. According to the website of the Home Rule government the regulations will enter into force on the 1st July 2005. Furthermore, regional hunting quotas will be set at a level *"lower than the average catches (between 1993 and 2003) (…). The quotas will be based on international agreements, scientific advice and traditional knowledge"*[21]. How much lower the quotas will be set is not yet known.

When setting hunting quotas for polar bear later this year the above issues must carefully be assessed, by Greenlandic wildlife managers. The vulnerability to environmental stress that polar bears experience demands that the quotas are precautious.

From May 2002 to date, no field surveys of the polar bears in Greenland have been conducted, so sustainable quotas based on updated field surveys can probably not be set for years to come. The Greenland Institute of Natural Resources has recently estimated that a field survey of the polar bears will cost c. 600,000 USD[22] but the institute has not announced any specific plans to undertake such survey.

Therefore, recent proposals from the Greenlandic Board of Tourism to introduce trophy hunting on polar bears do not make much sense, since the sustainability of such hunting can not be guaranteed, given current population knowledge.

Under the "Oslo Convention", the five polar bear nations are committed to:

- Protecting polar bear habitat, especially denning areas, feeding areas, and migratory routes;
- Banning the hunt of bears from aircraft and large motorized boats;
- Conducting and coordinating management and research efforts;

[21] http://dk.nanoq.gl/nyhed.asp?page=nyhed&objno=73964
[22] Greenlandic Radio's website, www.knr.gl, 17.01.2005

- Exchanging research results and data; and
- Management of shared populations in accordance with sound conservation practices and the best available scientific information.

Based on the poor state of knowledge regarding the size of Greenlandic polar bear populations, the research efforts during the last 5-10 years is inadequate for the setting of sustainable management objectives.

On the other hand, a lot of research involving Greenlandic and Danish research institutions has been done on the pollution of the Arctic food web. This research has included polar bears.

Although Canada is enforcing a hunting quota system, the Greenlandic hunt is still has almost unregulated. It currently seems almost impossible to coordinate and implement, "management of shared populations in accordance with sound conservation practices and the best available scientific information", as required by the Agreement.

Clearly, Greenland urgently needs to play its part in terms of the common responsibility for the shared polar bear populations and start negotiating sustainable quotas with Canada.

Looking at hunting during the last years, the increased kill has lead individuals to speculate that the number of polar bears has increased. However, this is not supported by science, nor systematic local observations. Some scientists indicate that the increased observations might be linked to changes in the environment, for example reduction of sea ice habitat, which has driven polar bears closer to human communities. According to the Danish polar bear biologist Erik Born, this is apparently the case in Upernavik, Greenland and the possible reason for the increased kill in this area[14].

Very recently this hypothesis was also put forward at the Canadian Polar Bear Technical Committee's meeting in Edmonton[23]. Thus, the increased number of sightings and increased hunting could very likely be the first signs of an Arctic species in trouble due to climatic change. A population increase is not supported by science.

[23] "Nunavut rethinks polar bear quotas" by Bob Weber, Canadian Press, 16th Febr., 2005.

The Canadian hunting regulations for polar bears – in brief

On average around 625 polar bears are killed annually in Canada. Hunting is regulated by all states with hunting quotas that are set annually. Quotas were introduced in 1996. The natural borders of the polar bear populations are the administrative units for these quotas. Quotas are negotiated with local representatives and are based on both scientific and local knowledge. In Nunavut, they no longer set a single quota. Nunavut have a system called "flexible harvest" in which track is kept of how many bears were killed and if quotas were not taken, then there is a system of credits that allow some of the un-harvested quota to be carried over and used in a subsequent year. The management seeks to provide special protection for the female polar bears, which of course represents an important reproductive segment of the populations. Ideally the females should only make up one third of the killed bears.

The sex and age of any killed bear must be recorded by the hunter. In addition, the lower jaw with teeth has to be collected and delivered to the authorities. From killed male bears the penis bone has to be collected also. If penis bones are not present, when a male bear is reported as killed, that bear is counted as a female and future quota will be regulated accordingly.

In some areas the bears pose a security problem for the locals and such bears are regulated, however, episodes where people are attacked are rare.

In Canada the polar bear is classified as "vulnerable", by the national committee for endangered wildlife, COSEWIC.

Sources: Lunn *et al.* 2001, Stirling *in litt.*, www.natur.gl

5. Atlantic walrus

5.1 Global overview

The Atlantic walrus inhabits Arctic waters where moving pack ice occurs. Generally it is distributed along coasts and in shallow waters not deeper than 80 meters. It forages in pebble sea-beds where it feeds on molluscs and other invertebrates. The male can grow to about 3 meters in length and weight up to 2,000 kg, while the females are considerably smaller. Walrus have a lifespan of about 40 years.

The walrus is divided into two separate subspecies, the Atlantic walrus (*Odobenus rosmarus rosmarus*), and the Pacific walrus (*O. r. divergens*).

The Atlantic walrus has a discontinuous circumpolar distribution and is distributed in eight sub-populations (see Figure 3 and Table 6). The Pacific walrus is distributed in the Bering Strait.

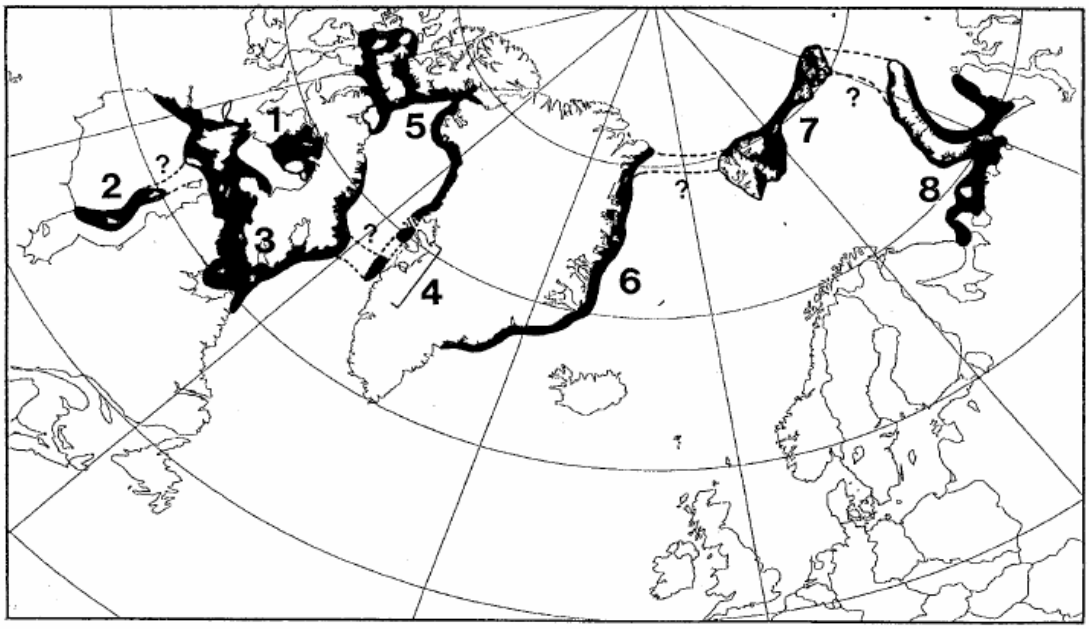


Figure 3: *Distribution of the Atlantic walrus. The Greenlandic populations occur in western Greenland (no. 4), The North Water (no. 5) and in eastern Greenland (no. 6) (Source: NAMMCO 1995).*

5.2 Status in Greenland

Greenland hosts three populations of walrus[24, 25]:

1) The **North Water population** (no. 5 on Figure 3) all year in the polynia of the Baffin Bay and Smith Sound. These walruses are absent from coastal areas during the open water season in

[24] Witting & Born 2005
[25] www.natur.gl

August-September. At this time the population summers in Canada along Ellesmere Island.
It is estimated (2005), that this population consists of about 1,500 animals.

2) The **West Greenland population** (no. 4 in Figure 3) occurs from fall to spring at the edge of the Baffin Bay pack ice, between 66°30'N and 70°30'N, that is from somewhere south of Sisimiut to the Disco Island in the north. In addition a few animals are assumed to spend the winter in open water areas around Uummannaq and Upernavik.
It is estimated (2005), that this population consists of about 1,000 animals.
3) The **East Greenland population** (no. 6 in Figure 3) is resident in the shallow waters along the east coast and is mainly confined to the National Park (see map page 6). It is assumed that interaction with other populations is only very limited.
It is estimated (2005), that this population consists of about 1,000 animals.

Table 6: The Atlantic walrus populations[26]

Populations	**Estimate and certainty**	**Trend**
1) Foxe Basin (CA)	5,500 (2,700-11,200 95% CI)	Stable?
2) Southern and Eastern Hudson Bay (CA)	Unknown	Unknown
3) Northern Hudson Bay to SE Baffin Island (CA and **GL?**)	Unknown	Unknown
4) West Greenland (**GL**)	1,000 (estimate[27])	Declining
5) North Water (**GL** and CA)	1,500 (estimate[22])	Declining?
6) East Greenland (GL)	1,000 (estimate[22])	Stable?
7) Svalbard and Franz Josephs Land (NO and RU)	2,000	Increasing
8) Kara Sea to Novaya Zemlaya (RU)	Unknown	Increasing

Genetic studies and information on migration supports the view that the three Greenlandic walrus populations represent separate units and should be managed accordingly[28].

[26] NAMMCO 95
[27] Witting & Born 2005
[28] NAMMCO 1995

Table 7: International conservation efforts

Red list category (IUCN): Not listed. Only the walrus populations named as the Laptev walrus in Russia is listed: Data Deficient (1994) **CITES**: Walrus has been listed on CITES Appendix III by Canada in 1975. In 1987 CITES concluded that the international trade level did not warrant an increased level of protection[29]. **EU wildlife trade regulations**: Annex B.	**NAMMCO**: This is a regional multi-lateral agreement, which focuses on the management of marine mammals in the North Atlantic, the member states Greenland, the Faeroe Islands, Norway and Iceland. NAMMCO has issued research and management recommendations for the walrus, e.g.: In 1995 the Management Committee recommended that Greenland take appropriate steps to arrest the decline of the walrus along its west coast, and encouraged Canada toconsider working co-operatively with Greenland, to assist in achieving this objective. In 2004 a workshop on walrus hunting methods was held in Copenhagen.

Historically the walrus was much more abundant in Greenland. In a new study by Witting & Born (2005)[30], abundance estimates for a period approximately100 years ago, are calculated by extrapolating historical hunting statistics and recent abundance estimates. The study suggests the following historical pre-harvest populations:

The North Water: about 15,000 animals in year 1900 (CI 90%: 7,800-22,300)
West Greenland: about 16,000 animals in year 1900 (CI 90%: 10,500-21,500)
East Greenland: about 1,600 animals in year 1889 (CI 90%: 941-2,860)

Although, the data is uncertain, it indicates much higher walrus abundance in western and north-western Greenland for the period roughly 100 years ago. The current populations are fragments of such previously abundant populations. Historical and current hunting is the main cause for this decline.

[29] Hall 2003
[30] See also Born (2005b)

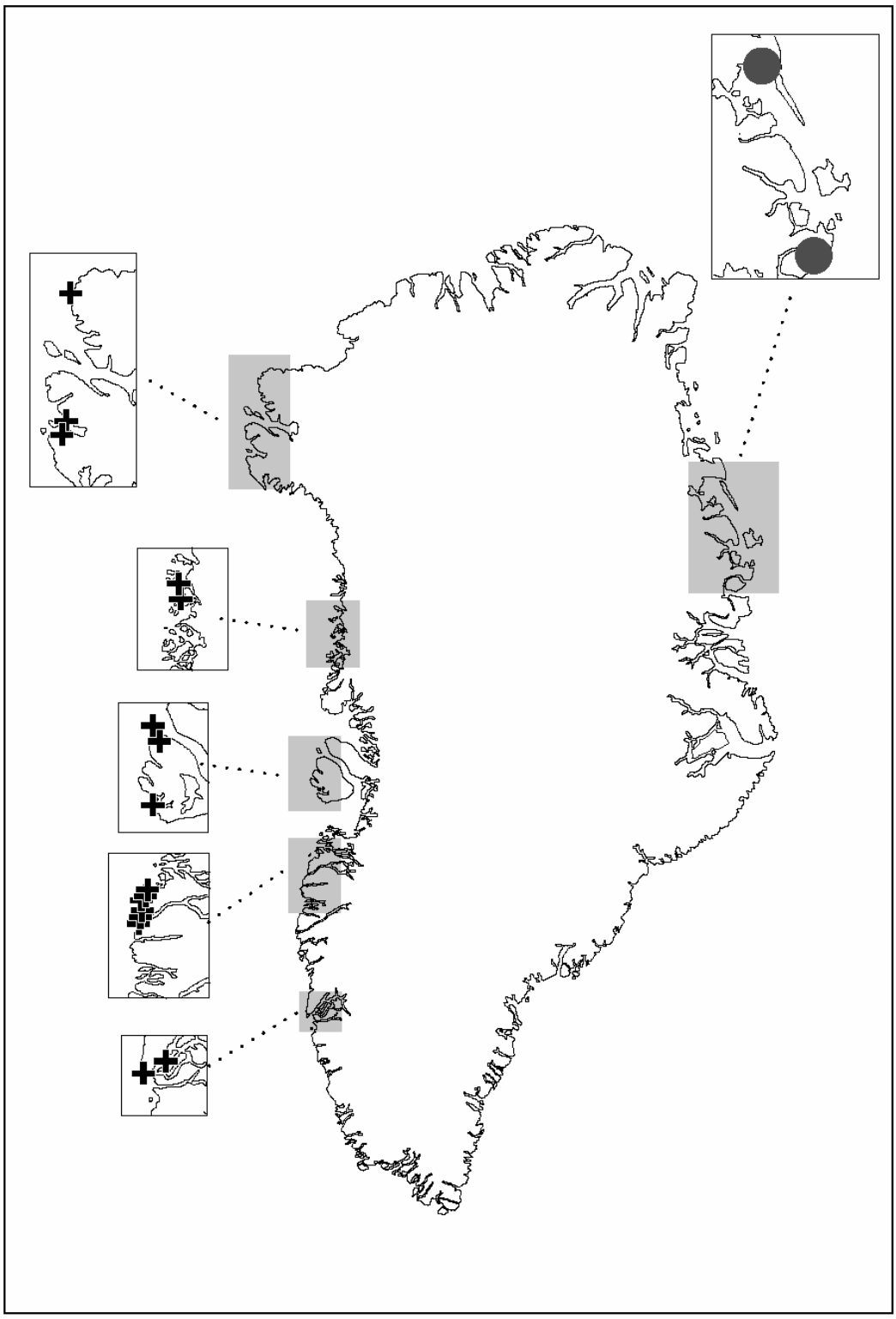


Figure 4: *Historical and current walrus haul-out sites in Greenland. Since the early part of the 20th century, walruses have, due to human disturbance, abandoned all of the west coast (crosses). They are now found only at two sites in the National Park (dots)* *(From: Hansen 2002. Used with permission).*

Opposite, the eastern Greenland population is today very close to its pre-harvest abundance probably, due to the absence of hunters in eastern Greenland since the mid-20th century. In 1956 the walrus was also declared totally protected north of Ittoqqortoormiit. Today the hunt in eastern Greenland is limited and is assumed to be well below sustainable harvest levels (see Chapter 5.3).

This trend is also reflected by the walrus' retreat further and further north along the western Greenlandic coast over the last century. Today the walrus has left all haul-out sites on the west coast and only come ashore in north eastern Greenland, in the remote and un-inhabited National Park (see Figure 4).

Greenland has not yet published an official Red list using the IUCN criteria for identifying species in need of conservation (see also the 2003 report, page 14-19).

The Greenlandic Institute for Natural Resources has, in 2000, instead published a report "Status 2000", listing "the important living resources". In the status report the walrus, along with the polar bear, is classified as an:

> ***Important species with possible problems (due to hunting or other), and were current scientific knowledge to some extend is lacking but sufficient for management initiatives in Greenland***

The report however uses threat categories that are not in line with the Red list categories. Moreover the report does not provide any definitions for its classifications, nor does it indicate how such classification should impact on management.

Since walrus forage on molluscs and other invertebrates that are at a low trophic level in the food chain, pollutants do not seem to accumulate in the blubber or organs. Therefore inorganic pollution of the Arctic ecosystem is not believed to be a threat to walrus as it is to other carnivorous arctic marine mammals (polar bears, seals and cetaceans).

In the Greenlandic status report the three Greenlandic walrus populations and their status are described as follows[31]:

[31] Grønlands Naturinstitut 2000

	Status	Biological advise	Necessary management needs	Major unresolved questions
North Water population	Decline	Reduction of hunting. Advised in 1998	Possibly quota setting, limit losses during hunting	Connection with Walrus population at SE Baffin Island
West Greenland population	Possible excessive harvest, decline?	Reduction of hunting. Advised in 1998	Possibly quota setting, limit losses during hunting	Knowledge on size of population is needed
East Greenland population	Stable or increasing	None	Limit losses during hunting	Monitor population development

5.3 Hunting and sustainable harvest

Walrus have been hunted in Greenland traditionally by Inuit custom and later by European whalers and fur hunters over the last four centuries. In more recent years Greenlandic hunters have been responsible for the kill.

In the early part of the 20th century the walrus occurred abundantly along the Greenlandic coasts, however from 1911 the hunt was intensified at the haul-out sites in western Greenland and just 20 years later most sites where abandoned[32]. The population in western Greenland has newer recovered and ongoing hunting has made such recovery impossible.

In eastern Greenland kills made by European sealers and hunters between 1889 and 1955 severely reduced the population[33].

Hunting statistics in Greenland have previously been unreliable but since 1993 a new system was introduced; Piniarneq, where hunters annually must submit rather detailed reports.

The latest hunting figures for walrus are shown in Table 8.

[32] Born *et al.* 1994
[33] Born *et al.* 1997

Table 8: Hunting of walrus in Greenland, 1997-2004

Year	Western Greenland and the North Water	Eastern Greenland	Annual total
1997	229	1	230
1998	211	7	218
1999	285	26	311
2000	322	7	329
2001	333	10	343
2002	336	104*	440
2003	282	10	292
2004	126	4	130**

Notes: * 104 reported killed in eastern Greenland is assumed to be an error (O. Heinrich, *pers. comm*.). ** Only reports up to September 2004 were received by February 2005.

The official hunting statistics do not include walruses that are lost during hunting. This is assumed to be a significant stock reducing factor. Due to the current hunting technique where walrus are approached in motor-powered boats and shot at with rifles a significant number of animals are wounded and die later or sink dead, before they can be secured by the hunters. Therefore, the actual loss due to hunting is estimated to be c. 25-33% higher than the reported kill[34].

In fact the number of walruses lost in this way is assumed to have actually increased during the last century. From 1900 to c. 1950 such losses are estimated to have been just 5% of the total kill. The reason for the much lower rate of such losses, earlier in the 20th century, is because the walruses were then mainly taken by traditional means using harpoons before the animals were shot[35].

Witting & Born (2005) have projected the population trend of the Greenlandic walrus populations. Furthermore the authors have estimated the sustainable hunting level for the populations to be 2% in western Greenland and 4% in eastern Greenland[31]. The actual hunting level, including the losses referred to above, which of course must be added to the "human caused removal", is many times higher than the estimated sustainable harvest – see Table 9.

[34] www.natur.gl/dyrplanter/havpat/hvalros/dk.hvalros.asp (Febr. 2005)
[35] Witting & Born 2005

Table 9: Current average removal and estimated sustainable harvest of walrus in Greenland

Population	Current annual human caused removal*	Estimated sustainable harvest[31]
North Water and western Greenland	356-379	50 (2%)
Eastern Greenland	12-13	40 (4%)

*1997-2003 average incl. losses

Clearly, the two walrus populations on the west coast of Greenland could be significantly over-harvested.

This conclusion is also confirmed by the recent work of Witting & Born (2005), where the populations are assessed as "*being at best only a few percent of the historical abundance*". The biologists are outspoken in their conclusion: "*The [West Greenland] population is still being exploited far above a sustainable level*", and with regard to the North Water population, they also find that: "*the current removal is apparently unsustainable, with a drastic reduction in the removal required if this population should increase again.*"

The message is unmistakeable. This is however not the first time a warning sign was placed at the desks of the Home Rule government officials and politicians. 10 years ago, in 1995, the Greenlandic Home Rule authorities could read the following in the meeting minutes of the NAMMCO committees:

"The Scientific Committee compared the stock sizes required for sustainability with the abundance estimates and made the following conclusions about the status of the stocks:
1. The southern sub-unit of the Central West Greenland stock (which is probably "shared" with Canada via south eastern Baffin Island) is being over-exploited.
2. The Baffin Bay (North Water) stock (understood to probably include the northern sub-unit of the Central West Greenland stock) is probably also being over-exploited."

And in 1996 NAMMCO made the following reference in a report.):

"At its last meeting in Nuuk in 1995, the Management Committee:"[W]hile recognizing the over all priority of further work to clarify and confirm the delineation and abundance of walrus stocks in

the North Atlantic area, ... "[recomends] that Greenland take appropriate steps to arrest the decline of walrus along its west coast." Greenland reported that the Home Rule Government had implemented new legislation in1994 limiting the number of people permitted to hunt walruses in Greenland. Only full-time hunters were permitted to hunt walruses, and only from vessels below 40 gross tons. All catches must be reported to the authorities. It is also forbidden to catch walruses in certain areas of Greenland. Greenland authorities were also considering how to further limit the take of walruses."

However as the Witting and Born study show, the current legislation is apparently insufficient.

5.4 Current national management

Hunting methods used for walrus hunting differ in different parts of Greenland. In Qaanaaq in north-western Greenland, hunting of the North Water population is mainly done from small boats or fishing vessels in May-July and October. In general the animals are wounded by rifle shots and then they are secured with harpoons. Afterwards the animals receive lethal shots preferably in the head region. In western Greenland the hunt takes place more often further inshore and larger fishing vessels are used from which the walruses are shot with rifles. In eastern Greenland the walruses are generally shot from small boats or from land, while they are resting on the ice[36].

The hunting of walrus in Greenland is currently regulated by Home Rule Executive Order No. 7 of 26th February, 1998 regarding the protection and hunting of walrus. According to the regulation:

- There is no hunting quota for walrus.
- Only hunters with a professional hunting license may hunt walruses, however, in Qaanaaq (Thule) and Ittoqqortoormiit any hunter may hunt for walrus.
- Walrus may only be hunted from dog sledge, or from boats and vessels of less than 40 tonnes.
- On-shot walruses must be harpooned to prevent loss because of sinking[37].
- South of 66°N walruses are totally protected[38].
- Between 66°N and 70°30'N, in western Greenland, hunting is allowed from 1st January to 31st May.

[36] Jensen 1999

[37] However, the majority of walruses are on-shot on purpose, as described previously and losses are significant (25-33%) since harpoons are not used as required by regulation.

[38] This regulation has almost no conservation effect, since the walrus only very rarely occur south of 66°N – see also Chapter 5.2.

- In western Greenland north of 70°30'N and in eastern Greenland south of the National Park walrus hunting is open all year.

In May 2002 the Greenland Home Rule government's Department for Fisheries and Hunting submitted a proposal, for revised walrus regulations, for public hearing in Greenland. A number of hearing-responses were received but the draft regulations have never been approved by the Home Rule government.

The proposal would in operation, provide increased protection for the walrus population, by making it possible to set local hunting quotas based on advice from scientists and hunters. In addition the following changes to the hunting season are suggested:

- Western Greenland: 1st March to 30th April ("out of Sisimiut and Attu" – no definite coordinates or hunting area stated)
- North-western Greenland: 1st October to 30th June ("including Qaanaaq municipality")
- Eastern Greenland: 1st October to 30th June.

However, it would appear that the proposals may be revived, according to an e-mail from the Home Rule Department of Fisheries and Hunting send to WWF Denmark's investigator[39]:

"Concerning the walrus regulation we probably can not get around finishing it in the Spring [2006?]. *NAMMCO's working group on walrus has just had a meeting but we will not see the recommendations before the Autumn after the Scientific Committee of NAMMCO has discussed the issue.(…) We have also asked the Greenland Institute of Natural Resources to asses the effects of the clam fishery on the walruses since this kind of fishery has increased in the preferred walrus feeding grounds between Sisimiut and Attu* [in West Greenland]."

5.5 Gaps and concerns

Clearly, a major part of the walrus populations in Greenland seem to be significantly over-harvested by hunters. This poses the most significant threat to the western Greenland walrus population. Although serious concerns were already raised 10 years ago, no effective sustainable management system has yet been introduced.

Today, due to unregulated hunting and a disturbing stock depletion over the last decade, the Atlantic walrus in western Greenland is probably one of the most threatened marine mammal species in Greenland.

[39] Heinrich *in litt.*

No management agreement between Canada and Greenland dealing with the shared populations of walrus is in place. However, walrus management issues are discussed during meetings of the Joint Commission on Narwhal and Beluga/JCNB[40]. Clearly, if quotas are to be set in Greenland the shared populations have to be looked upon as a bi-lateral responsibility.

Trade in walrus tusks and skulls are probably significant but no reliable CITES trade data from Greenland has yet been evaluated by the CITES Animals Committee. The CITES database, hosted by the World Conservation Monitoring Centre (WCMC), does not yet hold Greenlandic CITES export data from later than 1999 (by 1st of April 2005).

In Greenland several cases have been reported where walruses have been killed only for their skulls and tusks, although this is illegal. The latest case reported in the Greenlandic press[41] was in June 2001, where as many as 100-150 animals was reported illegally killed in the Attu settlement on the west coast. The case was reported to the police who could not find any evidence that could lead to a prosecution. Local hunters denied the incident in the Greenlandic press.

Printed copies of the official 2000-2003 CITES Annual Reports of Greenland were available for this study. In general it is very difficult to assess the number of animals involved in the trade, since a lot of the exports refer to small carved pieces of walrus tusk. However, it is estimated that one animal produces from 0.7-0.9 kg of tusk depending on sex and age[42]. Unfortunately the Greenlandic CITES Annual report is, in many cases, lacking details regarding the weight of exported items. Thus, it is impossible to estimate the number of walruses involved in the trade. However, if the number of CITES export permits granted annually for walrus products is counted, a significant increase in export is evident (Table 10).

It should be noted that Greenland changed and decentralised the CITES permit issuing procedures around 2000-2001. The intention was to decrease the number of previously unrecorded exports of CITES specimens. In order to meet this objective, a system was introduced whereby tourist shops for example, give a pre-issued permit to customers. Therefore the increased figure in Table 10 also reflects better recordkeeping. However, all statistics from the tourist sector also show an increasing number of travellers to Greenland and shops report

[40] www.nanoq.gl
[41] AG Grønlandsposten, 19th July 2001
[42] Witting & Born 2005

high and increasing demand for Inuit art, such as carvings made in walrus and whale ivory[43].

If one considers the hunting levels, the decline in West Greenlandic populations and the development in export of walrus ivory, it becomes apparent that the Atlantic walrus populations in Greenland need both improved national and international protection.

Therefore, with regard to the populations in western Greenland, all evidence would suggest that the Atlantic walrus should be:

- Listed as Endangered, or maybe even Critically Endangered[44] according to IUCN's Red list categories

- Added to the CITES Appendix II, or maybe even on CITES Appendix I until it is clear that hunting and trade is not detrimental to the survival of the population.

Table 10: Number of Greenlandic CITES permits issued for export of walrus souvenirs

Year	Number of export permits
2000	130
2001	365
2002	632
2003	567

After several years of CITES management without any legal framework (see also 2003 report), Greenland in September 2004 at last approved a CITES regulation. However, the management has been and still is in contradiction of Article IV of the convention, which requires parties to have made non-detrimental findings, for any Appendix II species, before export is permitted (see also Chapter 8.1). Such research has not yet been undertaken by the scientific authority on CITES, i.e., the Greenlandic Institute of Natural Resources[45].

[43] Hjarsen 2004
[44] "…estimated [and] projected population size reduction ≥ 80% (…) over three generations (…) up to a maximum of 100 years (…) and where the reduction or its causes may not have ceased … (www.redlist.org)
[45] Thaulow *in litt*.

An illegal gift! An endangered gift? *A walrus skull was given to the Danish Minister of Foreign Affairs, Mr. Per Stig Møller during his visit to Greenland in May 2003 (left the Greenlandic Premier Minister Mr. Hans Enoksen). In March 2005 a WWF investigator asked for a copy of the Minister's CITES permit with reference to the Danish transparency act. The minister's office informed the investigator that the skull had been imported to Denmark without a CITES permit and had been in the Minister's office since. The skull was then handed over to the CITES M.A. of Denmark (Photo: Carsten Lind).*

Complete NAMMCO notes on Greenlandic walrus management

Extracts from NAMMCO Annual Report 2003

LIST OF PAST PROPOSALS FOR CONSERVATION AND MANAGEMENT

1. Atlantic walruses

Proposal for conservation and management:

The Management Committee examined the advice of the Scientific Committee on Atlantic walrus and noted the apparent decline which the Scientific Committee identified in respect of "functional" stocks of walrus in Central West Greenland and Baffin Bay.

While recognising the overall priority of further work to clarify and confirm the delineation and abundance of walrus stocks in the North Atlantic area, the Management Committee recommends that Greenland take appropriate steps to arrest the decline of walrus along its west coast.

Taking into account the views of the Scientific Committee that the Baffin Bay walrus stock is jointly shared with Canada and that the West Greenland stock might be shared, the Management Committee encourages Canada to consider working co-operatively with Greenland to assist in the achievement of these objectives (*NAMMCO Annual Report 1995*: 49).

Management measures/response by member countries:

Greenland provided the Management Committee with information on further measures recently implemented through legislation by the Greenland authorities for conservation of the West Greenland stock. These regulations include: the restriction of walrus hunting to people with valid professional hunting licences only; a year-round ban on walrus hunting south of 66° N; limitations on the means of transport used in connection with walrus hunting to dog sleds and vessels of 19.99 GRT/31.99 GT or less; and the sale of walrus products limited to direct sales at open markets or for personal use only. Municipal authorities now also have the possibility of implementing further restrictions if circumstances require. (*NAMMCO/8*)

Greenland noted that in addition to the regulatory measures that were taken in 1999, it had been decided to introduce quotas on walrus. A new regulatory proposal has been drafted and public hearings will be held in the near future. The final regulatory proposal will take these hearings into account. (*NAMMCO/11*)

Greenland informed the Committee that the regulatory initiative to introduce quotas and other hunting regulations for this species had been delayed, and comprehensive public hearings have been conducted. The draft regulations have now been submitted to the Council of Hunters. It is expected that a final decision on the initiative will be taken later in 2003 (*NAMMCO/12*).

6. Narwhals

6.1 Overview

The narwhal (*Monodon monoceros*) is a medium sized toothed cetacean endemic to Arctic waters. An adult male can reach 5 meters in length and weigh up to 1,600 kg. The male is easily identified by a 1.5-3 meter long tusk. The tusk is the prolonged left incisor that has penetrated the upper-lip.

Narwhals have a pronounced annual migratory cycle and three 'centres of distribution' are recognised: Baffin Bay/Davis Strait and adjoining channels, northern Hudson Bay/southern Foxe Basin, and the Greenland Sea/Svalbard area[46]. Little information exists about the basic biological parameters of narwhals, such as reproduction rates and natural mortality. In fact, scientists use data from the partially sympatric beluga, to estimate key life history parameters for the narwhal. On average a beluga female give birth every third year.

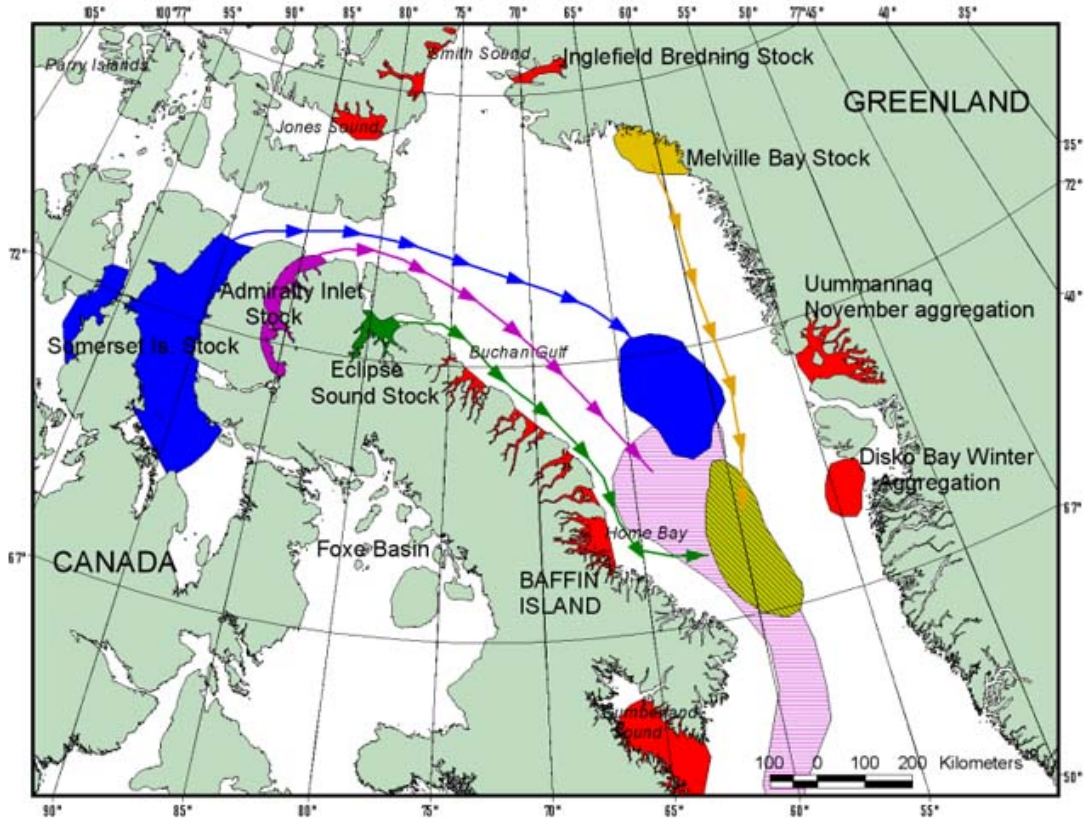


Figure 5: *Distribution and migration patterns of the Canadian-Greenlandic narwhal populations. It is not yet certain where the narwhal populations marked with red spend the summer. In the blue area in the Baffin Bay c. 50,000 narwhals congregate in the pack ice during winter (Source: www.natur.gl/print.asp?lang=dk&num=452).*

[46] IWC 2001

Table 11: Narwhal populations in the Baffin Bay, Davis Strait and adjacent areas[43,45&46]

Populations	Estimate	Trend
Inglefield Bredning Stock (**GL**)	c. 1,500*	Declining**
Melville Bay Stock (**GL**)	Unknown*	Unknown
Uummannaq aggregation (**GL**)	Unknown*	Unknown
Disco Bay aggregation (**GL**)	c. 3,000*	Declining**
Somerset Island Stock (CA)	c. 45,000	Not threatened
Admiralty Inlet Stock (CA)	c. 15,000	Not threatened
Eclipse Sound Stock (CA)	c. 3,200	Uncertain
Smith Sound Stock (CA)	>1,500	Unknown
Jones Sound Stock (CA)	Unknown	Unknown
Parry Island Stock (CA)	Unknown	Unknown
East Baffin Small Stock (CA)	Unknown	Unknown
Cumberland Sound Stock (CA)	Unknown	Unknown

* A population model estimates total West Greenlandic population to be 5,500 to 7,800 animals[43]

** The populations have decreased by 50% within the last 20 years[43].

Table 12: International conservation efforts for narwhal

Red list category (IUCN): Data Deficient (1994) **CITES**: Appendix II – exports only permitted if this is non-detrimental to the survival of the populations harvested. **EU wildlife trade regulations**: Annex B. **IWC:** In 1992 the IWC's scientific committee expressed continuing concern about the harvest from the Baffin Bay stock. In 2003 the committee reiterated the assessment[47]. **JCNB***: "(…) recommend that the total removals should be reduced to no more than 135 individuals"[48].	**NAMMCO:** "The Management Committee noted its previous concern about the sustainability of harvest in some areas[49]. Assessments were made of the stocks of narwhals in West Greenland, to estimate their current status and the sustainable levels of harvest (…) and they considered that, given the rapid decline in numbers suggested by the assessments, the main goal must be to halt the decline in the short term[50]." "There are (…) continuing concerns about the sustainability of the catch and the effects of the new management measures will be followed closely" (2005 press release).

*The Canada/Greenland Joint Commission on Conservation and Management of Narwhal and Beluga

[47] Report of the International Whaling Commission 43
[48] JCNB/NAMMCO 2004
[49] NAMMCO 2002
[50] NAMMCO 2003

6.2 Status in Greenland

The narwhal is distributed in both western and eastern Greenland:

Western Greenland: Summer aggregations occur in Inglefield Bredning and the Melville Bay. In Ingefield Bredning the whales are hunted by villagers in Qaanaaq municipality. These narwhals migrate south/southwest and winter out in the Disco Bay and in central Davis Strait. In the autumn these whales often gather close to the settlements in Upernavik and Uummannaq where hunting takes place (refer also to Figure 5).

The total western Greenlandic population of narwhals is therefore estimated to range from 5,500 to 7,800 animals[51]. This is based on several field surveys during the last years. The winter congregation of 50,000 narwhals in the Baffin Bay does apparently not contribute to the West Greenlandic populations[43].

Based on aerial digital photo surveys, in 2001 and 2002, the Inglefield Bredning and adjacent fjords summer aggregation is estimated to be; 1,478-2,297 animals. Total observed abundance in 2002 was less than one fifth of the total estimated abundance in 1986, when an earlier survey took place[52].

Ingefield Bredning fjord area is unprotected and narwhal hunting there is almost unrestricted (see below).

The Inglefield Bredning stock is assumed to consist of the same whales that occur further south in the fall and winter at Uummannaq, Upernavik and the Disco Bay, supplemented by some whales from other stocks. Thus, JCNB and NAMMCO have recommended one common harvest quota for these stocks. In 2004 the advice from JCNB/NAMMCO was[47]:

"[The] annual catches from the Inglefield, Uummannaq and Disco Bay stock [should be]: 135 whales, if the immediate goal is to halt the decline. A harvest at this level will provide a 70% possibility for "some stock recovery within 10 years". If all of the West Greenland catch along the cost is taken from what is the Inglefield Bredning summer stock, the annual harvest should be reduced to just 20 animals to achieve the same result. Although the stock dynamics are not fully understood JCNB/NAMMCO agreed to recommend an annual harvest of 135 whales in West Greenland excluding Melville Bay."

[51] http://www.natur.gl/print.asp?lang=dk&num=452
[52] JNCB/NAMMCO 2004

For Melville Bay, JCNB reports[47] that satellite tagging has shown that the narwhals do not winter in the Disco Bay and are not available for harvest once they leave the Melville Bay area in the fall. The size of this summer aggregation of narwhals is unknown. A survey in 2003 was unable to detect any narwhals despite considerable effort and JCNB has been informed that local hunters have noted a decline in narwhal numbers in the area. Thus, it is strongly indicated by field observations that narwhal numbers are very low in the Melville Bay area. In 2004 the joint working group of JCNB/NAMMCO directly *"recommended a cessation of narwhal hunting in the Melville bay area"* assuming that the summer stock is discrete[47].

Eastern Greenland: Stock is unknown. No advice.

To summarise, current biological advice regarding the annual narwhal catch in Greenland is:

Inglefield Bredning, Uummannaq and Disco Bay, West Greenland:	135 narwhals
Melville Bay, West Greenland:	No harvest
East Greenland:	No advice

Based on an estimated average decline of 6% annually from 1985 to 2002, increasing to 10% in recent years the narwhals in western Greenland have been reduced by 50% over the last 25 years. Using the IUCN Red List categories, the West Greenlandic narwhal population should correctly be classified as Endangered. Today it is still classified as Data Deficient. Clearly, a revision of the IUCN Red List is needed.

6.3 Harvest

Over the last 50-100 years, technical developments and improved hunting efficiency in Greenland have not been responded to by adequate wildlife management. The introduction of motorboats, rifles, radios and mobile phones have continously improved hunters efficiency in Greenland. This combined with a lack of quotas, has been the driving force for many marine mammals decline. The increased number of motorboats is a good reflection of s this phenomenon[53]:

1939	**1949**	**1999**
73	288	1,469

[53] Wildlife protection in Greenland. Technical report no. 29, 2000, Institute of Natural Resources of Greenland

At the same time the human population has grown significantly from c. 10,000 people around year 1900 to c. 56,000 in 2000. Today, no place along the coast of southern, western and north-western Greenland is left undisturbed, everywhere can be reached by boat from the nearest settlement within hours. This presents a challenge that has yet to be met by the Home Rule Government's wildlife management.

From 2005 to 2004 the average annual catch of narwhals in Greenland was 683. In average 609 narwhals where caught in western Greenland alone (see Table 13). Apparently hunting has increased since 1970's and 80's where total catch has been estimated at c. 500 narwhals annually. It is worth noting that these figures do not include losses during hunting because of on-shooting or the sinking of killed animals. This is estimated to be around 15-30% but is not reflected in the hunting statistics (see below).

Table 13: Narwhal catch in Greenland, 1995-2004*

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	554	738	790	817	863	600	673	684	666	523
West	485	691	739	770	745	561	550	572	575	399
East	69	47	51	47	118	39	123	112	91	124

* Source: Heinrich, *in litt*.
**Quota enforced by 1st July, 2004 and all catch for 2004 is assumed to be reported by April 2005 where these data were received.

Only in Qaanaaq (Thule) are narwhals caught using traditional methods, i.e., from kayaks with harpoons. Technical "improvements" have been employed in the rest of Greenland. Catch and drowning in gill nets, or shooting of the cetaceans with rifles from the sea ice edge, are legal hunting methods and are used along the West Greenlandic coast. Hunters also encircle and shoot the whales from small motorboats.

Rates for narwhals killed but lost during hunts is regionally different and depends on hunting methods and factors such as techniques and experience. NAMMCO has agreed on the following correction factors[54]: 1.05 for Qaanaaq, 1.15 for Upernavik, 1.30 for Uummannaq and Disko Bay. A correction factor higher than 1.30 for open water hunts was discussed, but there is little data to support this. The total removal of narwhals is without doubt higher than the figures given in Table 13 – probably by 15-30%.

[54] NAMMCO Annual Report 2003

6.4 Current national management

Until 2004, the catches of narwhal have not been subject to any quotas. However, that year the Home Rule government adopted a new executive order regarding quotas for narwhals (and belugas): Greenland Home Rule Executive Order No. 2 of 12 February 2004 on the Protection and Hunting of Belugas and Narwhals.

In June 2004, local quotas were set for the following year, valid from 1st July to 30th June 2005 (Table 14). No hunting quota was however set for eastern Greenland where both professional and leisure hunters may hunt narwhals. The executive order states that the total harvest in 2004-2008 may not exceed the total catch from 1997-2001. That catch was 748 narwhals annually (Table 13). There is no closed season but juveniles and females accompanying juveniles are totally protected.

Table 14: Hunting quotas in western Greenland, 2004-2005

Municipality	Quota	Main stocks harvested	Recommended harvest
Qaanaaq	100	Inglefield	
Uummannaq	88	Uummannaq	
Qeqertarsuaq	21	Disco Bay	
Aasiaat	23	Disco Bay	
Kangaatsiaq	5	Disco Bay	
Subtotal	237		135
Upernavik	63	Melville	0
Maniitsoq	0	-	-
Sisimiut	0	-	-
Total	**300**		**135**

6.4 Gaps and concerns

The North Atlantic Marine Mammal Commission (NAMMCO) held its 13th meeting from 2 - 4 March 2004, in Tórshavn, Faeroe Islands. Following that meeting NAMMCO released the following statement:

"Narwhal and Beluga: Grave concern was expressed over the preliminary conclusions on the status of the West Greenland narwhal, where substantial reductions in harvesting will be required to reduce the decline of this stock. Greenland has recently taken regulatory measures to protect both narwhal and beluga off West Greenland"[55].

Following the current harvest level, the imposed quota in western Greenland and the negative trend of the population narwhals in

[55] http://www.nanoq.gl/nyhed.asp?page=nyhed&objno=62450

Greenland are still not safe. Further reduction of the harvest is needed. This means that Greenlandic politicians and decision makers must address the problem of creating alternative incomes for Greenland's professional hunters.

***Narwhal tusks exported in pieces**. Various items carved from narwhal tusk are sold to tourists in Greenland and exported. No one knows how many narwhal tusks are used in this trade (Photo: Thor Hjarsen/EcoAdvise).*

The decreasing populations have probably increased the prices of narwhal tusk, which is in high demand from Greenlandic tourist shops. In February 2005 prices on raw tusks had reached EUR 170 per kg. A complete undamaged tusk easily fetches EUR 2,000 to 2,500 depending on length. The hunter's earnings from these tusks are a significant contribution to their income.

Although Greenland had adopted a new regulation and set hunting quotas, the EU Scientific CITES Committee decided in December 2004, to impose a ban on the importation of narwhal products to the EU. Apparently EU scientists are not convinced that the recent Greenlandic initiative is sufficient to halt the decline so in March 2005 EU extended the import ban.

However, the EU ban does not cover personal specimens or effects ("P") (i.e., tourist souvenirs, personal gifts, etc.). Table 15 shows the purpose of the Greenlandic CITES permits issued in 2000-2002. During these three years 98% of all narwhal transactions were declared as personal items. In general the major part of the trade in CITES specimens in Greenland relates to what tourist buy as souvenirs. Accordingly, the EU ban will unfortunately, probably, not have any conservational or practical effect.

Table 15: Purpose of narwhal exports from Greenland, 2000-2002

	2000*	2001**	2002***
Total no. of CITES permits for narwhal	255	551	1312
No. of "P" permits	228 (89.4 %)	540 (98 %)	1290 (98.3 %)
No. of "T" permits	24 (9.4 %)	10 (1.8 %)	21 (1.6 %)
No. of "S" permits	0	1 (0.2 %)	0
No. of "E" permits	0	0	1 (0.1 %)
No. of "Q" permits	3 (1.2 %)	0	0
No of complete tusks according to "Type"	121+	113	156

* Source: 2000 Annual Report – Greenland. Greenland Home Rule Government
** Source: 2001 Annual Report – Greenland. Greenland Home Rule Government
*** Source: 2002 Annual Report – Greenland. Greenland Home Rule Government

Notes:

Personal effects (P): Covers in Greenland mainly tourist related exports. Pre-issued permits are handed out by tourist shops.
Trade (T): Covers commercial export/import between traders.
Scientific (S): Covers scientific transactions.
Educational (E): Transactions for educational purposes.
Circus (Q): Covers transactions between commercial exhibitions.
+: One permit (no. 175/2000) states "80" in units. However the quantity stated is "6000" (g.). Another entry (permit no. 53/200) states 170 in units, that also could be an error. These 80+170 tusks have not been included due to doubt of correctness. However, the 2000 export of tusks is still high compared to the no. of issued permits.

7. Belugas

Photo: (c) WWF-Canon / William W. Rossiter

7.1 Overview

The beluga is a high arctic tooth cetacean with a circumpolar distribution. Total world population size and overall status is uncertain and data is lacking from a large part of the species' distribution range. Belugas reach 4-5 meters in length (males are largest) and weight up to c. 900 kg. The whales keep together in family groups and return to the same wintering areas. Females ovulate for the first time at 4-7 years and give birth every third year.

In Greenland the beluga is mainly distributed along the west coast where two main stocks are shared with Canada. The beluga is rare along the east coast of Greenland.

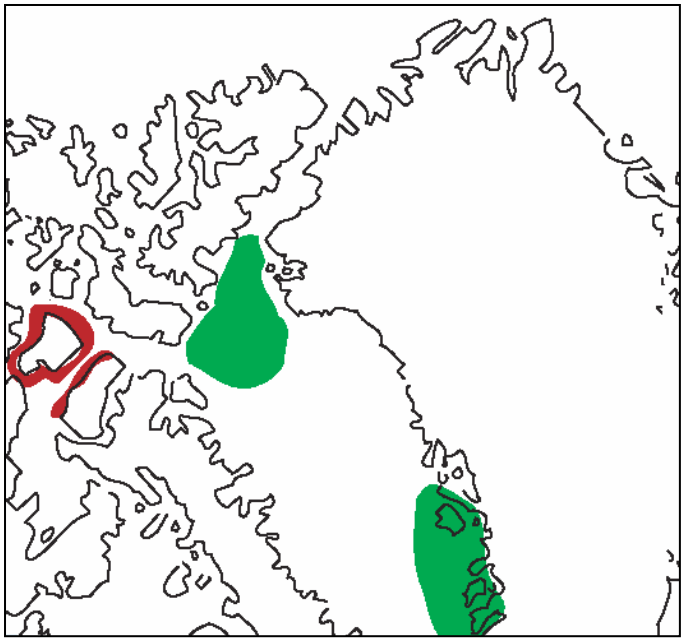


Figure 6: *Distribution of belugas in North Eastern Canada and West Greenland (Map courtesy of ulugaq/Greenland Home Rule).*

In 1996, the summer distribution of belugas in the Baffin Bay was surveyed and the population was estimated at c. 21,000 whales (95% CI = 10,985-32,619)[56].

The western Greenlandic winter population has been surveyed several times in the 1990's and the total abundance was estimated to be c. 8,000 animals (95% CI = 4,262-14,789) in 1998-1999[52].

Table 16: International conservation efforts

Red list category (IUCN): Vulnerable (1994) **CITES**: Appendix II. **EU wildlife trade regulations:** Annex B. **JCNB**: "There was a general agreement to recommend that the total removals should be reduced to no more than 135 individuals"[52].	**NAMMCO**: The Committee has advised on 2 occasions (2000 and 2001) that the stock is substantially depleted, that present harvests are several times the sustainable yield, and must be substantially reduced if the stock is to recover. The Committee stressed that the apparent delay in reducing the catch to about 100 animals per year, will result in further population decline and will further delay the recovery of this stock[57].

7.2 Status in Greenland

The number of wintering belugas in western Greenland has declined significantly. The winter distribution area has moved northwards (Figure 7) and a recent analysis estimates that the current population is as little as 20% of the abundance in the early 1950's[52].

This analysis also indicates that the catches during the 1990's will have depleted the stock further and cannot be sustained even if hunting is reduced significantly.

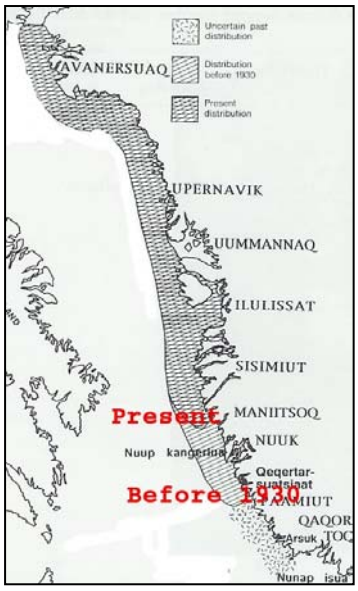


Figure 7: The southern limit of the beluga in western Greenland has moved northward since 1930 (from Born *et al.*, 1994).

[56] JCNB/NAMMCO 2004
[57] NAMMCO 2002

7.3 Harvest and use

Beluga hunting is mainly concentrated to western Greenland. The species is rare in eastern Greenland and the catch is therefore very limited. The low abundance in eastern Greenland has not led to any protective measures. Previously hunting went on also in southern Greenland and even in the Nuuk Fjord belugas were landed. Today this is history.

The whales are hunted from motorboats and small fishing vessels and often several vessels participate in hunting events. The whales are shot at with large calibre rifles. In some areas the whales are also caught with gill nets. These whales either drown or are killed with rifles or harpoons.

The meat is used for human consumption or as sledge dog food. The blubber (mattak) is very popular and expensive. When shipments of blubber reach Greenlandic supermarkets it is often sold out within hours, although the retail price is high, about EUR 25.00 per kg.

Catches are low in Canada compared to estimated population size at c. 21,000 whales – see table 18. The Canadian harvest is regulated by local quotas and is regarded as sustainable.

Table 17: Beluga catch in Greenland, 1995-2004*

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	673	542	569	694	482	605	460	428	429	188
West	673	542	568	694	482	603	455	428	417	182
East	0	0	1	0	0	2	5	0	12	7

* Source: Heinrich *in litt*.
**Quota enforced by 1st July, 2004 and all catch for 2004 is assumed to be reported by April 2005 when these data were received.

Table 18: Beluga catch in Eastern Canadian Arctic, 1999-2003*

1999	2000	2001	2002	2003	5-year total	5-year average
33	22	50	22	43	170	34

* From JCNB/NAMMCO 2004

7.4 Current national management

Until 2004 anyone with a hunting license could hunt beluga in Greenland. Thus, potentially several thousand hunters could participate in the catch.

From 2004 hunting quotas were introduced and hunting licenses are distributed between both professional and leisure hunters.

After negotiations with the hunters associations, the quotas were distributed among the municipalities in western Greenland (Table 19).

Table 19: Greenlandic beluga hunting quota and recent hunting
Quota valid 1.7.04-30.6.05

Municipalities	Quota	Recent hunting*	
		2001	2002
Maniitsoq	7 animals	19	6
Sisimiut	32 animals	64	7
Kangaatsiaq	12 animals	6	2
Aasiaat	3 animals	27	1
Qasigiannguit	9 animals	1	5
Ilulissat	78 animals	124	75
Qeqertarsuaq	15 animals	37	28
Uummannaq	10 animals	26	16
Upernavik	134 animals	89	144
Qaanaaq	20 animals	-	-
West Greenland quota	**320 animals**		
Ittoqqotormiit	Unlimited	0	0
Ammasalik	Unlimited	1	0
East Greenland quota	**Unlimited**		

* 2001and 2002 hunting figures before quotas were established.

7.5 Gaps and concerns

Based on a population model NAMMCO's scientists in 2001 stressed that: "*…the total number of belugas killed by hunters must be reduced to about 100 animals per year to have any significant chance of stopping the decline in the stock within the next 10 years. Delay in implementing harvest reductions increases the risk of continuing stock decline*"[58].

In February 2004 the Greenland Home Rule Government at last approved a new hunting regulation for beluga and narwhal. The regulations make way for hunting quotas for the two species for the first

[58] JCNB/NAMMCO 2001

time in Greenland. However, for both species, the quota set for the season 2004-2005 still exceeds the recommended hunting levels significantly. Biologists at the Greenland Institute for Natural Resources, JCNB and NAMMCO all agree that no more than 100 belugas should be harvested annually on the west coast. In addition the summer hunt should be banned. The recommended quota includes losses due to on-shooting, sinking, etc. Still, the quota was set at 320 belugas for the first hunting season 2004-2005. The quota only covers landed animals. Greenlandic hunters do not report all whales lost during hunting. Accordingly the removal of belugas could be as high as 400-450 during the first season with a quota.

Closed seasons could make way for recolonisation of south-western Greenland. But such an instrument was not introduced in the 2004 regulations. In 2000 NAMMCO's Scientific Committee recommended the following regional closed seasons[59]:

Northern area (North of 72°N): June through August
Central area (67°30'N to 72°N): June through October
Southern area (65°N to 67°30'N): May through October

South of 65°N a total closure was recommended by the scientists.

These regional closed seasons would, according to NAMMCO's Scientific Committee not halt or reverse the recent decline in western Greenlandic belugas but would merely increase the possibility of re-colonisation of areas where the whales previously occurred.

A beluga-hunting quota for 2005-2006 has yet to be set by the Home Rule government.

[59] NAMMCO 2000

8. Implementation of important nature conventions

8.1 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between Governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. The convention entered into force in Denmark on the 24th of October 1977. At that time no reservations were made for Greenland[60] and accordingly the convention also covers this part of the Danish Kingdom.

WWF Denmark analysed the implementation of CITES on Greenland in 2003[61]. Recommendations made by WWF Denmark then were:

- Greenland should as soon as possible introduce a legal framework for a national implementation of CITES.

- Greenland must as soon as possible start the process of having all CITES species evaluated by biological experts, to determine whether the trade and/or export currently affects, or in future may affect, the wild populations.

The background to these recommendations was the lack of both an appropriate legal framework and the formal establishment of a Greenlandic CITES Scientific Authority.

In September 2004, the Greenland Home Rule government at last approved a CITES regulation and thereby created a legal framework for a national implementation of CITES. The approval was made just two weeks before the CITES Conference of the Parties in Thailand in October.

The initiative was followed later that year, by the distribution of revised information leaflets.

The new CITES regulation appoints the Greenlandic Institute of Natural Resources as the Scientific Authority. However, the institute has not yet

[60] Denmark negotiated a reservation for the Faeroe Islands and the convention did not enter into force on the islands as the Faeroe Home Rule government first had to implement a legal framework. However, this has newer happened and today, more than 25 years later, CITES is still not implemented on the Faeroe Islands. This situation made it possible to import 9 tonnes of minke whale meat from Norway in 2003. Whale meat from whales hunted in contravention of the International Whaling Commission where Denmark holds the Chair.

[61] Hjarsen 2003

assessed the influence of the trade on the wild population as required by the convention (see box). The CITES Management Authority wrote in an e-mail to WWF in late February 2005, stating that this work would be initiated during the spring of 2005[62].

Over the past 4 years Greenland has issued a large number of CITES export permits, and distributed these permits to tourist and souvenir shops in Greenland, without any scientific assessments. In 2000 a total of 562 CITES export permits were granted. In 2002 the figure had increased to 2473 permits and in 2003, to 2769 permits.

Greenland has not yet released a CITES Annual Report for 2004. Thus, the most recent trends in CITES trade in Greenland are unknown. However, in a letter to WWF Traffic International the CITES M.A. of Greenland (April 2004) writes[63]: "*…the number of issued CITES permits [have increased] between 5 and 10 times as compared with earlier years*". This increase reflects not only that less export without permits take place, but also an increase in trade since more tourists are coming to Greenland each year[64].

Convention on International Trade in Endangered Species of Wild Fauna and Flora

Signed at Washington D.C., on 3 March 1973
Amended at Bonn, on 22 June 1979

Article IV, 3.

A scientific Authority in each Party shall monitor both the export permits granted by the State for specimens of species included in Appendix II and the actual exports of such specimens. Whenever a Scientific Authority determines that the export of specimens of any such species should be limited in order to maintain that species throughout its range at a level consistent with its role in the ecosystems in which it occurs and well above the level at which that species might become eligible for inclusion in Appendix I, the Scientific Authority shall advise the appropriate Management Authority of suitable measures to be taken to limit the grant of export permits for specimens of that species.

Increasing concern about Greenlandic capability to implement CITES and to ensure a non-detriment trade in teeth, tusks and meat from narwhal (Appendix II, EU Annex B), lead the EU in December 2004 to ban all import of narwhal products to the community. The ban only covers shipments that require an EU CITES import permit, mainly shipments for commercial purposes and is therefore almost without any effect (see also Chapter 6.4 and Table 15 in this report).

[62] Thaulow *in litt*.
[63] Jensen *in litt*.
[64] Number of tourists have increased with c. 10% per year in recent years (www.gt.gl)

Desirable sperm whale teeth
- organised fraud in the trade of Inuit art

Over the last few years several smuggling incidents in Danish airports have indicated organized fraud in the trade of Inuit art. Apparently, raw whale teeth are smuggled to Asia and carved into "Inuit" figures (tupilaks) and then smuggled back to Denmark and perhaps even Greenland. A recent case has also shown that raw teeth are smuggled to Greenland where they are carved and presumable are sold as "pre-conventional" tupilaks.

***Top row**: In October 2002 106 raw sperm whale teeth and 3 walrus tusks were confiscated from a Danish citizen travelling from Denmark to Indonesia. An investigation showed that the smuggler had previously lived in Greenland. In February 2003 the same person was again stopped by the Customs. This time he came from Bali and was carrying 9 carved figures made of Sperm whale ivory.*
***Bottom row**: In May 2003 another Danish citizen was coming from Bali. He tried to import 20 carved figures in sperm whale ivory. The figures where hidden inside a hollow Buddha statue. (Photos used by permission from the Danish customs authority).*

Several of the incidents are supposed to be linked to a Danish web site, www.inuit.dk operated by a Danish citizen currently living on Bali. This web site offers to buy raw sperm whale teeth for c. EUR 135/kg.

Furthermore, at www.inuit.dk carvings made of sperm whale teeth are also offered for sale for about EUR 180-190. The trade is an obvious violation of CITES and EU's wildlife trade regulation[65], but Danish police and the Danish CITES M.A. have not yet closed the website, although the trade has been going on for more than 2½ years.

The International Whaling Commission (IWC) reports that sperm whales have not been whaled in Greenland since early 1970s[66]. However, sperm whale carvings are still available in Greenland and Denmark and a significant number have been exported from Greenland during the 1990's (Table 20). In June 2002, the Danish CITES M.A. wrote to the CITES Secretariat[67] and explained that the sperm whale teeth "*where imported raw from Japan and other countries and sat for sale in the 1970ies (…) some teeth may come from strandings within the last few years*". In the letter the CITES M.A. of Denmark mentions 7 stranded whales between 1998 and 2001. A sperm whale has 36-50 teeth.

Table 20: Reported export from Greenland of sperm whale teeth and carvings made of teeth (tupilaks), 1975-2003
Total number of teeth, 4717, corresponds to 95-130 sperm whales.

Type	Unit	1975-1985	1986-1995	1996-2003
Carvings	Sets	2	16	3
Carvings	Pcs	90	4085	335
Teeth	Pcs	5	152	29
Totals		**97**	**4253**	**367**

Sources: http://www.cites.org/eng/resources/trade.shtml, and Greenlandic CITES Annual Reports 2000-2002

A WWF investigator was in 2002 told by souvenir traders in Greenland that the old stocks from the 1970s where sold out long ago and that sperm whale teeth reappeared in Greenland during the 1990's. This is confirmed by the CITES exports (Table 19). Thus, it is more likely that old stocks of sperm whale teeth from abroad are carved into figures and have entered the trade in Greenland and Denmark as "antique" or pre-conventional items. CITES M.A.'s in Denmark and Greenland has for years issued CITES permits for such teeth and tupilaks without ensuring legal provenance, as required by the convention.

[65] http://www.eu-wildlifetrade.org/index.htm
[66] Kapel 1979
[67] Letter from the CITES MA of Denmark to the CITES Secretariat dated 10th June 2002. File no.: SN 86732/GRL-0001

***Above**: In February 2005 Danish customs confiscated sperm whale teeth. This time a parcel mailed from Denmark to Greenland contained several raw teeth (Photo used by permission from the Danish customs authority).*

Following the new Greenlandic CITES regulations Appendix I-specimens may only be exported as personal items by residents moving from Greenland to, for example, Denmark. However, CITES export permits even for such legal transactions are issued without controlling whether the sperm whale teeth involved are of legal origin, i.e. belonging to the claimed pre-conventional stocks in Greenland. The CITES M.A. of Greenland has never kept any register of such claimed pre-conventional stocks, so in reality control today is impossible.

Today, several traders in Greenland and Denmark offer Inuit carvings and sperm-whale tupilaks for sale, also on the Internet, e.g.:

http://www.soelberg-antik.dk/gronland.html
http://inuitsales.dk/tupilak.htm
http://www.tupilakshop.dk/index.html
http://www.turistqaanaaq.gl/ultima1.htm
http://www.antikvitet.net/annie/katindex.asp?kukat=692
http://www.jamerantik.dk/inuit.htm
http://www.inuit.dk/inuit_index_5.html

8.2 The Convention on Wetlands (The Ramsar Convention)

The Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty which provides the framework for national action and international cooperation regarding the conservation and wise use of wetlands and their resources. There are presently 144 contracting parties to the Convention, with 1421 wetland sites, totalling 123.9 million hectares designated for inclusion in the Ramsar List of Wetlands of International Importance.

In 2003 WWF Denmark identified the following main problems with Greenland's fulfilment of the Ramsar Convention[63]:

- Only an insignificant percentage of the 11 "Ramsar Sites" (Wetlands of International Importance) are protected by conservation regulations which manage human disturbance and ensure sustainable use.
- No management plans have been developed for any of the Greenlandic Ramsar Sites.
- Regardless of negative developments in relation to several Ramsar Sites in Greenland, no proper reporting has been made to the convention secretariat and no serious attempts have been made to address these developments.

WWF Denmark analysed the implementation of the Ramsar Convention in Greenland in 2003[68]. Recommendations made by WWF Denmark at that time were as follows::

1) WWF Denmark recommends that Greenland implement the Ramsar Convention without further hesitation with regard to beginning the process of developing management plans, and improve the conservation of the ecosystems of the designated Ramsar Sites.

2) A report from the Danish National Environmental Research Institute[69] gives highest priority to the following current and potential Ramsar Sites and WWF Denmark recommends that Greenland initiates the appropriate action to improve wise-use of these areas in line with the objectives of the Ramsar Convention:
    - Qinnquata Marraa and Kuussuag (international Ramsar no. 386)
    - Kitsissunnguit/Grønne Ejland (international Ramsar no. 388)
    - Naternaq (international Ramsar no. 389)
    - Eqalummiut and Nassutuup Nunaa (international Ramsar no. 390)
    - Ikkattoq and archipelago (international Ramsar no. 391)
    - Kitsissut Avaliit/Ydre Kitsissut (international Ramsar no. 392)

[68] Hjarsen 2003
[69] Egevang & Boertmann 2001

- Itsako in Uummannaq municipality (71°45'N, 54°05'W) (potential new Ramsar site)
- Umiiarfik in Upernavik municipality (72°05'N, 54°60'W) (potential new Ramsar site)
- Qilangaarsuit and archipelago in Nuuk municipality (63°55' N, 51°40'W) (potential new Ramsar site).

Progress since 2003 seems to have been very limited. No improved protection has been introduced for in the Ramsar areas, or identified wetlands that fulfil the Ramsar designation requirements.

The Danish government has funded a development project were Danish consultants will assess "*which initiatives should be made to implement the convention and develop instruments for such implementation of the Ramsar convention*". The expected outcome of this assessment is formulation of management plans for three Ramsar sites in the Disco Bay.

Various ornithological studies have been made in some of the Ramsar areas in the Disco Bay. A study on the arctic tern colonies in the Ramsar site of Grønne Ejland (important sea bird area in the southern Disco Bay in western Greenland) has contributed to knowledge of the biological values of this area. But protection of these and other important wetlands has not yet been improved.

WWF Denmark finds the current implementation of the Ramsar Convention unsatisfactory and will here repeat the 2003 concerns and recommendations.

8.3 Convention on Biological Diversity (CBD)

In 2003 WWF Denmark identified the following main problems with Greenland's fulfilment of the Ramsar Convention[65]:

- Greenland has not made any "Red Lists" on wild species that could help contribute to a more objective assessment of the state of fauna and flora in Greenland,
- Greenland has failed to make a strategy for sustainable use of, for example, marine mammals and sea birds hunted and used commercially. The Home Rule Government promised such strategy in April, 2002 but (…) it has still not been published. The convention requires such plans,
- Greenland has not submitted the required progress reports to the CBD,
- The current Greenlandic Nature Protection Act (1982) is clearly outdated in terms of fulfilling the requirements of the convention,

- Unsustainable hunting of a number of marine mammals and sea birds takes place in Greenland in contradiction of both national and international scientific recommendations.

WWF Denmark analysed the implementation of the Biodiversity Convention on Greenland in 2003[70]. Recommendations made by WWF Denmark were at that time:

1) Greenland is urged to compile and publish a national Red List using the internationally recognised classifications of IUCN.

2) Greenland is urged to take national and international scientific advice on hunting levels into account as soon as possible. This advice has called for a reduction of hunting pressure on the following species in decline: beluga whale, narwhal, walrus, polar bear, Brünnich's guillemot, common eider and king eider.

Status by March 2005 is:

Since 2003 the Greenland parliament has approved a new Nature protection act. This happened in December 2003, a few weeks after WWF's first report was published. The act sets the legal framework for improved nature protection. The new CITES executive order has been the only legal initiative following the act.

According to a CBD notification (SCBD/I&O/NR/MC/43988) dated 23 July 2004, parties are requested to submit their third national reports by 15 May 2005. Greenland has not yet submitted the first or second national reports that should had been submitted by 1st January 1998 and 15th May 2001 respectively.

As described in the previous chapters of this report, species management in Greenland is in several cases not adequate and harvests are still biologically unsustainable. Such management can not be said to be in line with the convention. Major concerns relate to: polar bear, Atlantic walrus, narwhal and beluga. The effect of the bird hunting regulations is still not known and should be monitored closely.

Protection of narwhal and beluga has improved since 2003 after the approval of a new executive order on the hunting of these species, but the hunting quotas set are still significantly higher than the estimated sustainable harvest (see Chapters 6 and 7). An executive order on bird protection approved in January 2004, has improved protection of several bird species by reducing open seasons but many

[70] Hjarsen 2003

important breeding sites still lack appropriate protection. Both initiatives are important, but we still need to see how the hunting statistics are affected by the regulations.

Polar bear and walrus still await improved protection as outlined above.

In November 2003 the Greenlandic Home Rule Ministry for Environment and Nature informed WWF/EcoAdvise[71] that a national strategy for biodiversity will be made. In addition the ministry promised that biodiversity management plans will be drafted by the beginning of 2004. None of these management plans, or strategies have yet been published by the Home Rule government. Instead the Danish government funded two CBD capacity building projects in 2004-2005[72]. The outcome has yet to be seen.

Finally Greenland has not yet published a Red List. This is required by the CBD. The use of IUCN's red list categories will provider managers and decision makers with a tool for the prioritization of conservation efforts. Apparently data has improved during the last years with regard to several of the species so a red list would now be possible to produce.

Work has very recently been initiated to make such a national red list and again it is the Danish government that is funding this initiative. The Danish National Environmental Research Institute will be responsible for the planning of the work[67].

[71] Slettemark *in litt*.
[72] Vilshammer *in litt*.

9. Conclusions

Since 2003, when WWF issued its first report regarding Greenland, improvements in wildlife management and nature conservation have indeed been made. A table in the appendix of this report summarise these efforts and clearly Greenland is in the process of establishing a framework for more sustainable and up-to-date management of its nature and wildlife.

In December 2003 the Greenlandic parliament approved a national nature protection act, which was followed, in 2004, by a number of executive orders, improving the protection of:

- Birds (January 2004)
- Narwhal (February 2004)
- Beluga (February 2004)

In addition, an executive order on CITES also came into force in September 2004.

WWF acknowledges that these important initiatives demonstrate Greenland's attempts to address declining wildlife populations, offset international criticism and to move the country towards a more sustainable policy.

However, there are still some serious gaps in Greenlandic wildlife management and it is our hope that this new report will be of use to politicians, authorities and others, helping them to prioritize and fill in these gaps.

The most important issues and gaps are:

Management of polar bear
The polar bear are still hunted in an almost unregulated manner in Greenland. The sustainability of this hunt can not be guaranteed since population knowledge is fragmentary. It will be impossible to set any meaningful hunting quotas before populations have been assessed. However, all current data points towards an over-harvested polar bear population in western Greenland. Furthermore, climatic stress due to global warming could have an effect on the polar bear populations in the Baffin Bay and Davis Strait. The bears seem to respond to the decreasing ice coverage by foraging along the shores and thereby come closer to human settlements. This apparently makes the bears more exposed to hunters and is the likely explanation for the increased hunting of them over the last few years in both Canada and Greenland.

If this is true, these trends and signs would necessitate an immediate improvement of protection and maybe even a temporary ban on polar bear hunting in some areas. At least until our knowledge has been improved significantly.

Management of Atlantic walrus
The pattern is more or less the same as for the polar bear: Populations in Greenland have been in decline and population knowledge is scarce and mainly based on uncertain estimates. Therefore it will be impossible to set a biologically sustainable quota until knowledge is improved.

The Atlantic walrus seems almost to have been "forgotten" by Greenlandic wildlife managers and decision makers. All estimates point towards a seriously over-harvested population (see also the very new book on the Greenlandic walrus (Born 2005b)). Along the western Greenlandic coast as many as 356-379 walruses are killed annually (the figure is the annual average based on 1997-2003 hunting data including estimated losses). Biologists recommend a maximum hunt of 50 walruses including deaths due to losses during the hunt. Concern about this hunting level was expressed already in 1995 by NAMMCO but no initiatives have yet been taken by the Greenlandic Home Rule authorities to decrease the hunting level.

Greenlandic export of walrus tusks and carved ivory is significant and the number of issued CITES export permits has increased from 130 in 2000 to a current level at 500-600. The effect of this trade has newer been assessed.

Management of narwhal and beluga
As mentioned above the Home Rule government approved new hunting regulations for narwhal and beluga in February 2004. For the first time the hunting of these two species is regulated by quotas. This was an important step although the quotas set for the first hunting year were well above biologist's recommendations:

	Recommended harvest	**Hunting quota for 2004-2005**
Narwhal	135 for western Greenland No hunting in the Melville Bay	300 for western Greenland with no special protection in the Melville Bay
Beluga	100 for western Greenland and closed season: North of 72°N: June-Aug 67°30'N-72°N: June-Oct South of 67°30'N: May-Oct	320 for western Greenland and no closed seasons

Trade in ivory from narwhal has increased from 255 issued CITES export permits in 2000 to 1550 in 2003. Part of this increase is due to a new CITES system that provides a better reflection of actual exports. However, tourist demand for Inuit art is high in Greenland and there is a shortage of ivory from narwhals and walrus. Since one single complete tusk fetches more than EUR 2,000 on the market, the economic value of the trade is considerable.

CITES has not assessed the significance of the trade in narwhal or beluga products in Greenland for a number of years. The last time the trade was properly examined was in 2003 when the CITES Animals Committee decided not to include the beluga in the Significant Trade Process. However these decisions were all based on out-dated trade data which did not reflect the true trade level. Only trade data from the last two years (2002 and 2003) can be said to come close to a true reflection of trade levels. Thus, a new impact assessment study of the trade in these small cetaceans is needed.

Implementation of CITES, Ramsar Convention and the Convention on Biologcal Diversity

With the Greenlandic parliament's approval of the Nature Protection Act in December 2003, the legal framework regarding the implementation of the three major nature conventions has improved significantly. The act has since then been followed by a CITES regulation and three regulations that improve the legal situation with regard to the conservation of birds, narwhal and beluga.

However, there are still some gaps, which give cause for concern:

- The Greenlandic Home Rule authorities have issued and continue to issue CITES export permits, without any scientific assessment of the effect on the wild populations of such exports.
- The poor implementation of the Ramsar Convention has not improved with regard to bird regulations, because the protection of Greenland's 11 Ramsar sites has not been improved.
- The approval of new hunting regulations regarding narwhal and beluga has not yet lead to the establishment of sustainable hunting quotas. The current quotas are about 3 times higher than the recommended sustainable hunting level.

LATEST NEWS!
Re-introduction of spring hunt on birds?

Upon finishing this report WWF Denmark was informed that the Home Rule plans to re-introduce spring hunting. The details of the proposal are not yet known to WWF Denmark but hunting of Common Eiders in the breeding season in May is feared to be allowed.

The decision is very problematic and completely in the opposite direction of the initiatives during the last 1-2 years in Greenland.

After a long preparation process the Greenlandic Home Rule at last banned the spring hunt on birds in January 2004. The spring hunt and illegal egging was in 2002 assessed by the Greenlandic Institute of Natural Resources to be the main reason for an approximately 70-80% decline in Common Eiders in western and north-western Greenland over the last about 40 years (see also the websites of the Greenland Home Rule[73] - in Danish only).

If this change of the regulation is approved by the Home Rule government it is a very wrong signal to send to the Greenlandic hunters.

This news is very concerning and in direct contradiction with many of the positive initiatives made by Greenland during the last few years.

The Danish government need on this background to reconsider its environmental support programme that seems to be of limited effect if Greenlandic policy is not fully backing a process towards a more sustainable management of wildlife.

For more details on the Greenlandic bird management please refer to the 2003 WWF report.

The website of WWF Denmark will contain updates on this issue as soon as more information is received.

26th April, 2005

[73] http://www.nanoq.gl/udskriv.asp?page=tema&objno=54915 or Merkel 2002

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11. Appendices

Official list of international nature protection agreements and conventions that Greenland has joined (from www.nanoq.gl).

Name	Type	Purpose
Convention on Biological Diversity (CBD)	International convention	Sustainable use of biodiversity
The Convention on Wetlands (The Ramsar Convention)	International convention	Sustainable use and protection of important wetlands
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	International convention	Regulation of trade with wild animals and plants
The International Whaling Commission (IWC)	Management and research agreement between 40 member states	Setting quotas for minke and fin whale catch in Greenland
Joint Commission on Narwhal and Beluga (JCNB)	Advisory body between Canada and Greenland	Coordination of research and providing advise on management of narwhal and beluga.
North Atlantic Marine Mammal Commission (NAMMCO)	Management and research cooperation between Greenland, Norway, Iceland and the Faeroe Islands	Coordination of research and management of marine mammals in the North Atlantic
The Oslo Convention	Agreement between Greenland/Denmark, Norway, Canada, Russia and USA	Protection of polar bears
North West Atlantic Fisheries Organization (NAFO)	Agreement between 14 countries	Fishery agreement for the Northwestern Atlantic outside the 200 nm limit
International Council for the Exploration of the Sea (ICES)	Advisory council and scientific body	Advises on fishery and quotas in the sea between Greenland and Iceland
International Murre Conservation Strategy, CAFF/Arctic Council	Circumpolar management agreement between Denmark, Norway, Sweden, Finland, Iceland, USA and Russia	Sustainable management of guillemots
Circumpolar Eider Conservations Strategy, CAFF/Arctic Council	Circumpolar management agreement between Denmark, Norway, Sweden, Finland, Iceland, USA and Russia	Sustainable management of Common eider

A summary of Greenlandic nature protection efforts, 2002-2005

The matrix covers initiatives directly relevant for the implementation of international conventions, agreement and single-species management. Scientific studies or projects are not included.

	2002	2003	2004	2005
		November: WWF publish report on Greenlandic fulfilment of international conventions		
Polar bears	**May**: Public hearing of proposal for new executive order on sustainable use of polar bears			**January**: Gov. propose trophy hunting **July**: Approval of new executive order planned
Walrus	**May**: Public hearing of proposal for new executive order on sustainable use of walrus			**Spring**: Approval of new executive order planned
Narwhal	**May**: Public hearing of proposal for new executive order on sustainable use of narwhal		**February:** Executive order on narwhals approved **September**: Hunting quotas set for 1.7.04-30.6.05	
Beluga	**May**: Public hearing of proposal for new executive order on sustainable use of beluga		**February:** Executive order on belugas approved **September**: Hunting quotas set for 1.7.04-30.6.05	
CITES	**2002-04:** Danish government fund CITES implementation project		**March**: Annual reports for 2000-2002 issued **September**: Executive order on CITES approved **October**: Greenlandic first time participation in CITES COP	**March**: CITES Annuals reports 2003-2004 still not issued **2005**: Danish government funds planning of Customs training and information campaign
Ramsar		**December**: Greenlandic Parliament approves Nature Protection Act **2003-05**: Danish government funds management plans for three Ramsar sites	**January**: Executive order on bird protection approved (no improved protection of the 11 Ramsar sites)	
CBD		**December**: Parliament approves Nature Protection Act	**January**: Executive order on bird protection approved (better species protection) **2004-05**: Danish government funds two CBD capacity building projects **2004-05**: Danish government funds planning of Greenlandic Red List	

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