



To
Ministry of Environment and Nature
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Greenland

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Standing Non-Detriment Findings for Exports from Greenland of Products derived from Atlantic walrus (*Odobenus rosmarus rosmarus*)

As is required under Article IV, Paragraph 2 of CITES, any export permit shall only be granted when the Scientific Authority of the State of export has advised that such export will not be detrimental to the survival of the species.

In determining the extent to which harvesting of Atlantic walrus in Greenland for trade is potentially impacting natural populations, the following has been considered:

Management

Prior to 5 July 2006 there were no quotas for the catch of walrus in Greenland. New regulations came into the Greenlandic legislation in 5 July 2006 allowing the Greenland Home Rule Government to set quotas for the catch of walrus in Greenland. The quotas and harvest are managed using separate reporting for each walrus catch and a general reporting system that was introduced in 1993 - PINIARNEQ - where each hunter reports his total harvest by month of all species taken by him through the year (September to September).

Quotas are determined by the Greenland Home Rule government based on recommendations from the Directorate for Fishing, Hunting and Agriculture in Nuuk.

Quotas issued for the Greenland catch of walrus for the year 2007 allowed for a catch of a total of 200 walrus in 2006. This quota does not consider non-reported loss¹. Annual quotas have been set for a three-year period (2007-2009) intending a gradual decrease in the catch of walrus from the two subpopulations in West Greenland, but unchanged in East Greenland.

The scientific advice to the Greenland Home Rule management authorities on sustainable catch of walrus in Greenland by population is provided by the Greenland Institute of

¹ In theory, losses of species subject to quotas should be reported. However, legislation concerning walrus is somehow unclear on this respect, and in practice very few walrus losses are reported. It must be mentioned that, since the autumn 2006, it is mandatory to secure the walrus with a harpoon before administering the killing shot. It is expected that this measure will result in reduction of loss rates.

Natural Resources (GINR). GINR bases its advice on sustainable exploitation of walruses on the assessment and advice offered by the North Atlantic Marine Mammal Committee (NAMMCO). NAMMCO's Scientific Committee has twice (1995 and 2005) evaluated information on Atlantic walrus throughout its range and attempted to evaluate its status by subpopulation. However, since the last meeting of the NAMMCO SC, GINR has provided advice to the Greenland Home Rule's management authorities on the sustainable take of walruses in W Greenland based on new information from 2006.

Greenland

Atlantic walruses occur in three more or less separate subpopulations in Greenland: The West Greenland "winter" subpopulation, the North Water subpopulation and the East Greenland subpopulation. Movement studies, genetic analyses, and a disjunct distribution of suitable walrus habitat indicate that there is only very limited if any exchange among these subpopulations.

The West Greenland subpopulation

- Walruses belonging to the West Greenland "winter" subpopulation occur between fall and spring at the shallow water banks along Central West Greenland between ca. 66° and ca. 70° 30' N.
- It has been suggested that this group of walruses has connection with walruses occurring further north in the North Water area (i.e. the Smith Sound region) and/or with walruses at SE Baffin Island in Canada. However, genetic studies indicate that there is a limited exchange between W Greenland and North Water walruses. A recent analysis found no genetic difference between walruses at SE Baffin Island and in W Greenland whereas there were differences between walruses in SE Baffin Island-W Greenland and those occurring in the North Water and those inhabiting Hudson Strait south of SE Baffin Island. During March-April 2005, 2006 and 2007 a total of 13 satellite tags were deployed on walruses in the pack in W Greenland. The majority of tags lasted only for up to 1 month during which time the animals stayed in W Greenland. However, two tags signalled for about 2 months during which time both animals (2005, 2007) moved west across Davis Strait to Baffin Island. Hence, the preliminary conclusion of the genetic studies and the satellite telemetry is that walruses wintering at W Greenland are part of a population that summers at SE Baffin Island.
- During late March – mid April 2006 the GINR conducted an aerial survey over the walrus wintering grounds in W Greenland. The resulting estimate of abundance corrected for animals submerged and hence out of sight was 3085 (90% CI 1239-7681). Between 25 July and 27 September 2006 Department of Fisheries and Oceans Canada (DFO) and GINR conducted six reconnaissance flights along the coasts of SE Baffin Island in order to enumerate walruses their terrestrial haul-outs. Maximum count during one survey was ca. 775 walruses. If

applying a correction factor obtained from studies of walruses elsewhere for animals present at any given time on the haul-outs a crude estimate of ca. 2600 walruses are derived at.

- The reported catch of walruses in West Greenland during 1993- 2004 averaged 151/year (range: 82-284/year). However, during this period the annual catch decreased significantly. The reason for this decrease is not clear.
- In 2005 the NAMMCO Scientific working group on walruses concluded that this subpopulation of walruses was depleted and declining and that the present harvest levels likely were not sustainable.
- Based on considerations about the limited number of primary observations on which the estimate is based, its lower confidence limit, indications of a decrease of walruses in W Greenland historically, the advice of the Greenland Institute of Natural Resources was that the total removal of walruses (including loss) in West Greenland should not exceed 60 walruses/year.
- The quotas in Greenland for the year 2007, 2008 and 2009 for the West Greenland subpopulation are 80, 65 and 50 respectively.
- What is likely the same subpopulation is exploited by hunters living in Iqaluit, Pagnirtung and Qikiqtarjuaq on SE Baffin Island. Data on landed catch of walrus in this area are insufficient but it has been estimated that 20-60 walruses are taken annually (loss not included).

The North Water subpopulation

- Genetic studies indicate that walruses occurring in NW Greenland (i.e. in the eastern part of the North Water area) differ from those in W Greenland.
- Information obtained from satellite telemetry indicates that what was former thought to constitute one coherent subpopulation occupying the North Water and adjacent areas likely are three separate subgroups: (1) The North water proper; i.e. walruses in northern Baffin Bay-Smith Sound-southern Kane Basin, (2) the western Jones Sound and (3) Penny Strait. Substructuring was also indicated by genetic analysis. The “North Water proper” group is exploited by Greenlanders and to an unknown extent perhaps also in Canada.
- There is no information on the abundance of walruses in the North Water subpopulation. An aerial survey conducted in 1998 resulted in only partial coverage of the area occupied by this subpopulation. A rough estimate of a total of 1500 animals has been given for what was thought to be one coherent North Water subpopulation. As mentioned above, later information has indicated substructuring of the North Water subpopulation into 3 sub-groups. Hence, no

estimate of abundance exists for the North Water proper (i.e. Smith Sound) where the Greenlanders catch of walruses is taking place.

- The reported catch of walruses in NW Greenland from the North Water subpopulation during 1993-2004 averaged 161/year (range: 89-229/year). During this period the annual catch decreased significantly. The reason for this trend is not clear.
- NAMMCO (2005) could not come to any firm conclusion about the present status of this stock due to insufficient information but reaffirmed its previous (1995) conclusion that there was no indication that these combined stocks (i.e. the 3 sub-groups indicated) are large enough to support the current harvest levels and therefore expressed concerns that the present are probably not sustainable.
- Assuming a total population size in the order of ca. 1500 walruses GINR recommended in 2006 that the total removals (including loss) in Greenland from this population should not exceed 75 walruses.
- The Greenland quotas for the take of walrus from the North Water subpopulation for the three-year period 2007-09 are 90, 80 and 75, respectively.
- An estimated 10 walruses are taken annually by Inuit living in Grise Fjord in Canada. It cannot be excluded that some of these are extracted from the same group of walruses that are exploited by Greenlanders in the North Water proper.

The East Greenland subpopulation

- Genetic studies and studies of movement involving satellite telemetry indicate that walruses occurring in East Greenland constitute a separate sub-population.
- Due to the lack of population inventories there is no information on the abundance of walruses in the East Greenland subpopulation.
- The reported catch of walruses in East Greenland during 1993-2004 averaged 25/year (range: 4-89/year). In some years anomalous high catches have been reported in PINIARNEQ.
- NAMMCO (2005) found that there are indications that this population is recovering after a period of over-exploitation in the early 20th Century. However, no conclusion about its status could be reached mainly due to insufficient information on abundance. For the same reason NAMMCO could not give advice on the sustainable harvest levels for this subpopulation.
- Assuming a total population size in the order of ca. 1000 walruses GINR in 2006 considered an annual total removal (inclusive loss) of maximum 30 walrus in East Greenland is likely to be sustainable.

- The Greenland quotas for the take of walrus from the North Water subpopulation for the three-year period 2007-09 are 30 in each year.

Trade and Export

- Export of walrus products from Greenland constitute whole skulls, tusks, penis bones and crafted parts of walrus tusks and jaw bone. The most valuable hunting product of walrus in Greenland seen from a trade point of view are the tusks. In all parts of Greenland some tusks are traded and exported. During the three-year period 2003-2005 a total of 97, 139 and 113 export permits for skulls and tusks were issued from Greenland. In addition, export permits for crafted items containing walrus product constituted 466 and 1046 in 2003 and 2005 (no data for 2004). The value of the other products is variable and depending on the price of the handicraft in which they are a part. Trade in other parts than tusks is considered not to be the primary incentive for catch of walrus in Greenland. However, income from selling various products of walrus is part of the subsistence economy in particular Central West, NW and E Greenland, and it cannot be excluded that trade of crafted parts thereof is influencing the harvest of walrus.
- In certain parts of Greenland in particular in the Sisimiut-Disko area in Central West Greenland and in NW Greenland the catch of a walrus is still considered important in the local subsistence economy. The meat is eaten by humans and in NW Greenland hide and meat of walrus is important for feeding the dogs. Providing food is an important incentive of the catch for the subsistence hunters although it cannot be excluded that the economical value of the game is a contributory factor.

Conclusion on non-detrimental findings for export

- Recent information indicates that walrus exploited in W Greenland belong to the same subpopulation that occurs in SE Baffin Island and is exploited there. Abundance estimates from these areas are uncertain. However, during 2007 another attempt is being made of obtaining an abundance estimate for the walrus along SE Baffin Island. The current combined take of 120-140 walrus per year constitute 10-11% of the lower bound of the estimate of the abundance (2006 W Greenland) of walrus in this subpopulation and is likely to high.
- Uncertainty about stock structure in the North Water sub population and lack of information about abundance of the population exploited prevent that conclusions be reached as to whether the current harvest is sustainable.
- Uncertainty about stock structure in the East Greenland subpopulation and lack of information about abundance prevent that conclusions be reached as to whether the current harvest is sustainable.

- A general lack of information on losses during the hunt aggravates the uncertainty about the influence of current exploitation levels on the subpopulations.
- As there is no trade-system in place that will distinguish whether walrus products originate from walruses landed in W, NW or E Greenland it cannot be concluded that the current export of walrus products from Greenland is non-detrimental.
- It must be noted that the Greenland Institute of Natural resources currently in cooperation with Canadian and Danish research institutes puts substantial effort into providing information about stock identity and abundance in the W Greenland subpopulation. Furthermore, plans exist for providing similar information for the North Water and East Greenland subpopulations in 2008 and 2009, respectively. The studies aim specifically at providing information necessary to evaluate whether or not the exploitation of walruses is sustainable.

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