

UTILIZATION OF LARGE WHALES IN GREENLAND

A NEED STATEMENT

Addendum to:

IWC/64/ASW7 White Paper on Management and Utilization of Large Whales in
Greenland (May 2012)



**THE GOVERNMENT OF GREENLAND
MINISTRY OF FISHERIES, HUNTING & AGRICULTURE
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1. Introduction to whaling in Greenland

In June 2009 *Kalaallit Nunaat*/Greenland obtained status as a Self-Governing part of the Kingdom of Denmark with full legislative and executive responsibility in a substantial number of fields. The responsibility of the management of natural living resources was obtained per January 1st, 1985. Foreign Policy remains the responsibility of the Danish Government, including international organisation of which the Kingdom of Denmark is a member, in consultation with Greenland.

The population of Greenland still depends on marine resources, including subsistence hunting. It has a population of app. 56,600 people living in 18 towns and 60 settlements (2014, West Greenland: 52,792 and East Greenland: 3,490, table 1). The size of Greenland is 2,166,086 square kilometres, covering an area from Norway to Sahara, and with a coastline of 44,087 kilometres (plate I). Inuit is about 90 % of the total population. Greenlanders have maintained a lifestyle connected to the sea, land and the harsh nature and environment.

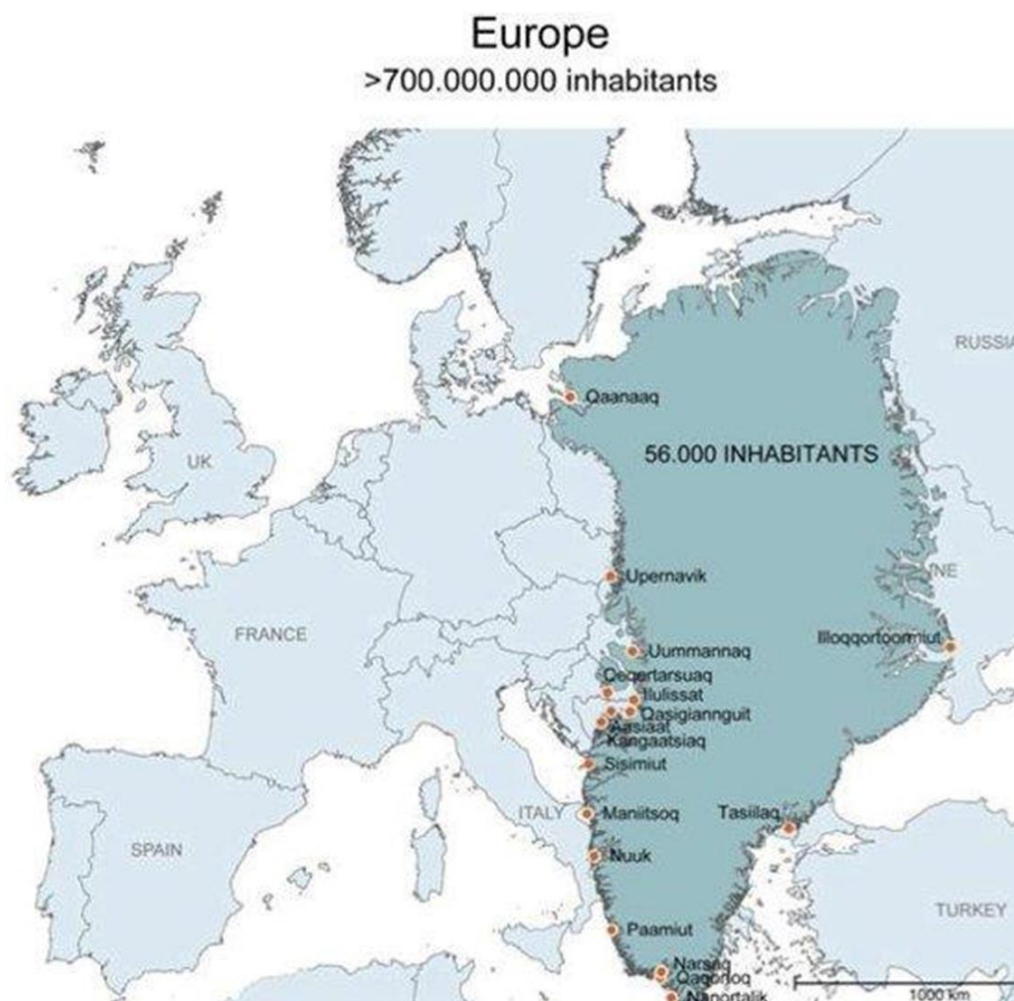


Plate I. Map of Greenland compared to Europe.

The hunting of large whales is a vital component of everyday life and culture in Greenland. It is an important part of the Greenland food security system and provides a significant amount of nutritious food and income to families living in the towns as well as in the remote coastal settlements. The baleen whales are important species, and hunted in every part of Greenland during the year as an activity from small boats or by the use of fishing vessels with harpoon canons. The skin / *mattak* and lower jaw meat; and the ventral groves / *qiporaq* are used as a delicacy, the meat for celebration and for everyday food. The baleens are also used as a beautiful part of modern jewellery and design.

Therefore, whaling and Greenland are inseparable. There are still parts of Greenland where whaling is one of the more important component of people's livelihood, combined with other forms of hunting (see importance of whaling in the individual communities. Table 3, p. 15). Whaling acts as a supplement to fishing activities and is an economic buffer for families when no other income sources are available. It is documented that whale meat and other whale products such as organs, blubber and *mattak* are a vital source of proteins and omega-3 fatty acids. So what may not be so obvious for everyone is that consuming whale meat has a huge advantage for the environment, for the health of *Kalaallit* / Greenlander in Greenland and as food security.

Archaeological investigations and discoveries have shown that the old Greenlandic cultures in part have been based on the harvest of humpback and bowhead whale in addition to other marine mammal species. The introduction of fisheries in certain areas normally covered by ice during winter has not reduced the importance of whaling in any way, particularly not in the remote coastal communities.

2. Aboriginal Subsistence Whaling (ASW)

Within the IWC context

Greenland's hunt of large whales falls within the category of Aboriginal Subsistence Whaling (ASW) together with the Chukotka hunt of gray and bowhead whales, the Bequia hunt of humpback whales and the Alaskan hunt of bowhead and gray whales.

The legal binding ASW obligations within the IWC are defined by the Convention, the Schedule, and contain some obligations on the Governments and areas managing ASW. They are to be found in relevant paragraphs of article V of the Convention and paragraphs 13 and 14 of the Schedule. For further information please see appendix IV.

Following non-binding resolutions are relevant in the Greenland context, in particular:

- Resolution 1978 - 3 Capture of Humpback Whales in Greenland Waters, requesting the Danish Government to attempt to substitute fin whales for humpback whales in meeting the Schedule set that year for West Greenland waters.

- IWC Resolution 1978-4 Reporting Data Relative to Humane Killing, requesting 2 specific types of information on each whale taken
- IWC Resolution 1980-3 (as later adjusted) Resolution on the Documentation of Aboriginal Need, requesting information on utilization of the meat and other products
- IWC Resolution 1982-3 Resolution Concerning Aboriginal Subsistence Whaling, which agreed to implement the Aboriginal Subsistence Whaling Management Regime.
- IWC Resolution 1985-3 Resolution on Humane Killing in Aboriginal Subsistence Whaling, requesting that ASW areas adopt more efficient methods in order to reduce cruelty and inhumanity (which in Greenland lead to the introduction of the exploding grenade)
- IWC Resolution 1992-1 Resolution on Humane Killing, encouraging collection and presentation of struck and lost rates and time to death records
- IWC Resolution 1993-1 Resolution on Humane Killing
- IWC Resolution 1997-1 Resolution on improving the humaneness of Aboriginal Subsistence Whaling
- IWC Resolution 1999-1 Resolution arising from the Workshop on Whale Killing Methods, requesting regularly 7 specific types of information in order to minimize time to death.

The relevant IWC decisions include:

IWC definition for aboriginal subsistence whaling (1979, 1981, referenced in):

“Aboriginal subsistence whaling means whaling for the purpose of local consumption carried out by or on behalf of aboriginal, indigenous, or native peoples who share strong community, familial, social, and cultural ties related to a continuing traditional dependence on whaling and the use of whales.”

“Local aboriginal consumption means the traditional uses of whale products by local aboriginal, indigenous, or native communities in meeting their nutritional, subsistence, and cultural requirements. The term includes trade in items which are by-products of subsistence catches.”

“Subsistence catches are catches of whales by aboriginal subsistence whaling operations.”

Objectives for managing aboriginal subsistence whaling (1982, referenced in):

“To ensure that the risks of extinction to individual stocks are not seriously increased by subsistence whaling.”

“To enable aboriginal people to harvest whales in perpetuity at levels appropriate to their cultural and nutritional requirements, subject to other objectives.”

“To maintain the status of whale stocks at or above the level giving the highest net recruitment and to ensure that stocks below that level are moved towards it, so far as the environment permits.”

Definition of subsistence use (1979, 2005, referenced in):

“1. The personal consumption of whale products for food, fuel, shelter, clothing, tools, or transportation by participants in the whale harvest.

2. The barter, trade, or sharing of whale products in their harvested form with relatives in the harvest, with others in the local community, or with persons in locations other than the local community with whom residents share familial, social, cultural, or economic ties. A generalized currency is involved in this barter and trade, but the predominant portion of the products from each whale are ordinarily directly consumed or utilized in their harvested form within the local community.”

In the Schedule, there is a single reference to “subsistence needs” – but it is not defined (Schedule §13a – “..establish catch limits” “to satisfy aboriginal subsistence needs ..”). The Convention does not mention aboriginal subsistence needs. Thus there is no objective agreed basis in the Treaty instruments for setting aboriginal subsistence needs, especially in an opportunistic¹, multi-species hunt in the difficult conditions faced in Greenland.

In the 1980 IWC resolution on the documentation of Aboriginal “Needs Statements” (resolution 1980-3) it was indicated that the Contracting Governments should document annually, for the information of the Commission, the utilization of the meat and other products, taken for the aboriginal/subsistence purposes. Later (as the quota block period expanded in time in 1997-2002) it was decided that it was sufficient to provide this information only once in a quota block period.

In a Greenlandic Context

Observations of relevance when considering “need”:

- The great variability in the catch of all animals during any one given year (due to climatic variations or variations in the size of the individual groups of animals).
- The substitution possible and often necessary between the various prey animals.

¹. To be a whaler is to be a combination of hunter of large whales, of other mammal / bird species and to be a fisherman. The hunters have to evaluate a complex number of abiotic and biotic factors before setting out to catch large whales. These factors include weather conditions, tide and seasonal variations in the availability of whales, time and crew. Also to be taken into consideration is that the vessel and crew has to be available for other activities such as fishing for snow crab and a number of other fish species that are regulated by quotas, fishing seasons and market forces. Finally the hunting season for caribou and muskoxen can play an important role.

- The opportunistic nature of the hunt.
- The nutritional superiority of traditional Greenlandic diet.
- Food security.

The Government of Greenland is the political responsible organization in defining the needs of the people in Greenland, in general and in relation to whales subject to IWC management rules. The government is the only organization having sufficient knowledge to determine such “needs” and ensure food security. The political decisions in Greenland are based on scientific knowledge and will have to take account of the changing size of the population living in West and East Greenland. There has been an increase of 19 % of the West Greenlandic population since the period 1965-1985; the number of people born in Greenland has increased with app. 26 % in the same time period, table 1 and figure 1.

In 1979 (resolution 1979-4 on Bering Sea Bowhead whales) the IWC unanimously acknowledged its intention that the needs of the “aboriginals of the USA” should be determined by the Government of the USA. That Resolution contains a second pre-ambular paragraph which recognises the importance of accommodating the subsistence and cultural needs of aboriginal people in general not simply those in the USA. Thus as long ago as 1979, the IWC considered that it was a national prerogative and the competence of the government to define the needs of its relevant population.

The Government of Greenland must secure the food supply of the Greenland society including distribution to settlements or towns not able to cover their own needs of whale products. This means that distribution channels within the local area and between municipalities had to be established and later on to be kept open.

During the period 1923-58 the whale catcher *Sonja* was tasked with securing food supply in whale products because the hunt for other animals had failed and because, at that time, there was only one Greenlandic owned vessel with harpoon cannon (1948-). This failure to secure sufficient supplies was the situation in the years 1916-23 after which *Sonja* was commissioned by the Danish State to avoid starvation. When *Sonja* was decommissioned in 1958 the idea of equipping more fishing vessels with harpoon cannons emerged – again in order to secure the meat supply of the population.

The distribution and sharing of whale meat within a community, having taken a whale, is in Greenland based on an assumption of reciprocity. It was and is expected that the successful hunters shares the result of their hunt and that they will receive meat gift later. This was, in the old time, a suitable kind of “mutual insurance” system in a society without monetary means. When it comes to sharing with other communities the barter economy prevailed, but also here we have found the idea of “insurance” between the Communities. Finally, the sharing with more distant communities (which only became possible when organised

transport was introduced) would have to include money – or as stated in the 1982 definition “a generalized currency.” This acquisition of money helps to pay for those commodities that cannot be bought in the barter trade. Money secures full utilization of the whale and money is necessary to buy and operate the means of production (boat, motor, harpoon cannon, payment of crew and insurance) and to transport the whale products from the flensing sites and between settlements and even municipalities.

According to the Greenland Government rules, the large whales cannot be taken without the use of the explosive whale-grenade. The Greenland Government banned the use of the “cold harpoon” in 1991 following a request by the IWC (Resolution 1985-3). It will have to be noted that the indigenous societies are not required by IWC rules to use the explosive whale-grenade. It is in accordance with IWC rules for an indigenous society to take a whale with the “cold harpoon” or with other means, but that would mean a longer time to death (TTD) for the whale. In Greenland the explosive whale-grenade was introduced for animal welfare reasons. This was the answer to criticism for using the cold harpoon. However, the current 2014 price for such an exploding whale-grenade is very high – approx. 1000 US dollars and some whales require multiple grenades.

Indigenous subsistence whaling cannot function in Greenland without money involved as described. The involvement of money was already agreed to in the 1982 definition and money helps to keep the channels of distribution open to areas where no whaling takes place or where whaling has failed in order to fulfil the obligation of the Government to secure the food supply of the population.

The function and importance of money in Greenland in relation to whale meat is definitely different to the importance of money in the commercial whaling previously known. In an IWC context, the commercial whaling was a business enterprise with the purpose to generate an economic surplus to the owners of the whaling fleets. The aboriginal whaling in Greenlandic waters has the purpose of contributing to secure the food supply of the Greenlandic population and this purpose is helped along by a limited involvement of money.

An alternative, which is not considered feasible today, would be to introduce a whale catcher (like the before mentioned historic vessel *Sonja*) to secure the food supply of the population. However, the costs of such a vessel would have to be covered either by sale to consumers or by the taxpayers. There would thus be no difference in substance between the present system and a new one. The current policy of the Greenland Government is to minimize or eliminate all kinds of subsidies.

The products from indigenous hunting intend to meet both immediate nutritional requirements and to provide food for the winter period as well as satisfying important cultural and socioeconomic needs.

It has been argued by some that the Greenland hunt is “commercial” or “semi-commercial”. Direct or indirect accusations that the Kingdom of Denmark engage in commercial whaling contrary to the IWC moratorium or attempts to question whaling in Greenland by claiming commercial intentions or practices is un-acceptable.

It is correct that a very limited sale of whale meat takes place in local restaurants in Greenland accessible to the Greenlandic population as well as people visiting Greenland. Following accusation at IWC-64 of this sale being disproportionate to the amount of products caught, the Greenland authorities have reviewed the situation and concluded that in 2010-2012 an estimated average of 13 restaurant meals per day through out Greenland contain whale products. This equates to approximately 1,600 kg of whale meat per year.

Given that the vast majority of visitors to restaurants are members of the Greenlandic population, the consumption by foreign tourists are considered to be insignificant. The small number of restaurant meals consumed probably reflects the fact that most local people prefer to prepare and cook the whale products in their own home in the traditional way. The few hotels and restaurants which have whale products on their menu prepare the dish in a non-traditional way.

Future considerations

The question on “Needs Statements” is part of the agenda of the ASW-Working Group (ASW WG) due to the fact that considerable divergences on the content of Needs Statements and the different requirements in the individual ASW societies exist. From our initial point of view, the only legitimate requirements of ASW countries are that the hunt is undertaken by people living in an ASW country, that the hunt is based on a tradition, and intended for local consumption.

Greenland will continue to engage constructively in the discussions on the question of Needs Statements and other associated questions raised in the ASW WG. There is no acceptance of any ASW member being subjected to special demands beyond IWC requirements prejudging the outcome of those deliberations and the ASW WG’s on-going work. Greenland is of the view that all ASW areas should be treated equally in accordance with the Convention, Schedule and resolutions thereunder. For further information, please see appendix IV.

3. The future of whaling in Greenland

The reasons for whaling being important for Greenlanders include:

- Whales and whaling are fundamental part of the culture and the history
- Large whales are a substantial source of food for a great part of the population
- The selling, sharing and distribution of whale meat provide a necessary source of food security and income for many people
- There are well documented health reasons to promote the consumption of whale products
- In a country surrounded by highly productive seas, where the climate seriously restricts farming and agriculture, whaling provides large amounts of food at very low costs for the local and global climate and the environment.

For these reasons, the Greenland Government is committed to continue harvesting large whales in a sustainable way to meet the needs of its people in the foreseeable future.

Greenland's need of whale meat

ASW aims at satisfying the local need (food security) of whale products and to secure the continuation of cultural practices. Therefore ASW quotas are limited by the sustainability of the catches and by the needs of local subsistence. As a result, the IWC requires an evaluation of the local need of whale meat before allocating ASW quotas. For a quota only based on sustainability reference are given to pages 36-40 in the White paper from 2012 (IWC/64/ASW7), where the interim AWMP allows for catches up to 2, 3 and 35 times higher than present quotas depending on the species.

The discussion of Greenlandic need for whale products and its multispecies component dates back to discussions within the IWC from the late 1970s and considerable documentation has been presented over the years and discussed at the IWC Annual Meetings, initially in the discussions of the Commission's Aboriginal Subsistence Whaling sub-committee (appendix I and IWC/64/ASW7).

The West Greenlandic hunt is a multispecies hunt and for this reason, the 'need' statement (documentation of the cultural and nutritional requirements of the population) has traditionally been expressed in terms of tons of meat / edible products of large whales, rather than in individual animals by species. The catch of individual species varied over the years due to a number of factors (ice and climatic conditions, weather, availability). If the result of the hunt, on one individual species, lead to an unsatisfactory result, then the hunt on other species might help to attain the objective of overall food security or an approximation to that objective.

It should be noted that external factors mentioned at times do have a significant influence on quota utilisation. Over the last two quota-blocks (2003-2012) the utilisation of quotas has

varied with more than 25 % (76 % quota utilization in 2008; 103 % quota utilization in 2006) in relation to minke whales and 50 % (47 % quota utilization in 2003; 100 % quota utilization in 2006) in relation to fin whales. Under such circumstances it is necessary to have sufficient quotas of the various species to neutralize the misfortunes of nature. Normally, when the hunt for one species fails, the hunts for the other species don't fail. Substitution thus takes place in order to archive the necessary result of the hunt.

The East Greenlandic hunt of large whales is only focusing on one species, which is the minke whale from the Central Atlantic stock. Up to 1985, takes from the Central Atlantic minke whale stock had not been considered under aboriginal subsistence whaling. In 1985 the quota had been 242. For the 1986 season it was 0. The Kingdom of Denmark was asked at the 1985 meeting to make a submission concerning the Central stock. Thus a needs statement was developed for the Annual Meeting in 1986 (IWC38) and an aboriginal subsistence catch limit established. The continuing need for 12 animals per year from this stock has been recognised by the Commission without discussion since 1986, for further information see appendix III. The size of the quota is considered sustainable and not to harm the stock as stated by the last IWC Scientific Committee meeting in 2014.

The minke whale hunt in East Greenland is operated from small skiffs with the use of high powered riffles. It is comparable to the same type of hunt (the collective hunt, page 52-53 in our White paper from 2012 (IWC/64/ASW7)) taken place in West Greenland. In East Greenland there is no vessels mounted with harpoon cannon, and in fact, there are no vessels that can be authorized to be mounted with an harpoon cannon.

The minke whale catch is shared within the settlements and limited sale of the products occurs. No processing plant for whale products exists in East Greenland. The usage of the catch is for local consumption. The limited numbers of skiffs and vessels in the two management areas (Ittoqqortoormiit and Tasiilaq and its surrounding settlements) and the ice conditions are the reasons for the limited use of the quota.

The effect of the Government's policy of food security (covering all living resources) has turned out to be a success. A recent (2010) study by Memorial University, St. Johns, Canada concludes on the question of food insecurity in a Greenland Society (Qeqertarsuaq) that the "prevalence of food insecurity (8%) is low. However, interviews reveal a more nuanced picture, with women, adults aged 55+, and non-hunters reporting constrained access to Greenlandic foods. Barriers restricting traditional food access include changing sea ice conditions, reduced availability of some species, high costs of hunting and purchasing food, tightening food sharing networks, and hunting and fishing regulations."

It should furthermore be noted that the Scientific Committee's advice on catch limits not harming the stock is based first on whether hunting levels meet the Commission's

conservation objectives and secondly whether they meet the needs of people. In an ideal world, both objectives are met, but where this is not possible, the Greenland Government has given priority to long-term sustainability. To determine how need can be met in terms of long-term sustainable catches, then a conversion factor is required by species that turns 'strikes' (which may or may not result in a landed animal but which the Scientific Committee assumes always results in death) into tons of edible products.

West Greenland's need of meat from large whales was evaluated and endorsed by the IWC in 1990 and 1991, with basis on the catches previous to 1986 (IWC 1989, IWC 1991a, b, IWC 2007b). The rationale behind this evaluation was that catches of large whales off West Greenland were severely reduced by quotas in 1985, when the humpback whale quota was eliminated and the quota for minke whales was reduced from 300 to 130 whales. Thus, catches previous to 1986 were based on the population size in the same time period and were limited by the demand of whale meat and by the logistic limitations for catching whales, rather than by restrictive quotas (IWC 1989, IWC 1991a, b, IWC 2007b).

According to the estimates accepted by the IWC, the average yearly catches in West Greenland in a 20 year period before 1986 (1965-1985) were 14 humpback whales, 10 fin whales and 240 minke whales. The average population size in the same time period is available in table 1. Using different sources of information, the IWC Aboriginal Subsistence Whaling Subcommittee agreed that the best available estimates for conversion of number of whales to weight of whale meat in this area were 8 metric tonnes for humpback whales, 10 tons for fin whales and 2 tons for minke whales (table 2A; IWC/41/22 submitted to the 1989 meeting of the Commission presented the Greenlandic information on conversion factors and need, subsequently expanded in TC/43/AS3 ADD, IWC 1989, IWC 1991a,b).

Using this conversion factor, the yearly catches of West Greenland, before 1986, yielded 112 tons of humpback whale meat, 90 tons of fin whale meat and 464 tons of minke whale meat. This means that previous to 1986, approximately 670 tons of meat of large whales was consumed yearly in West Greenland by the approx. 44,400 inhabitants (table 1 and 2A). The aggregated "need for whale meat" as such has never changed. However the ways to attain the objective of 670 tons meat could and can be fulfilled by a number of various combinations of the catch.

With the acceptance for the West Greenland hunt to include Bowhead whales in 2007 (effectively from 2008) and Humpback whales in 2010, the establishing of catch limits expressed in numbers of whales, which will satisfy the underlying need for food security can be even more diversified. Only very high quotas for the individual species could justify a permanent change alone to numbers of whales, as the availability of whales change every year, whereas the need remains fixed in a food security context.

The established need for whale meat has been based on historical catches in West Greenland. The different species can normally substitute each other and consequently Greenland has had to establish a common definition of needs, i.e. tons. The need for whale meat is administratively, during the IWC process, changed back into the normal catch limits for the different species and that only after the Scientific Committee has had the opportunity to review the possibility of the various species to sustain a certain hunting pressure. So, the catch limits is expressed as number of whales and not as tons.

The need of meat from large whales for West Greenland has increased since the 20 year period of 1965-1985, because Greenland's ability to locally produce alternative sources of meat has remained stable, and there has been an increase in the population size of 19 %. The increase of population size in West Greenland is more substantial when considering the number of people born in Greenland, which is approx. 26 % (table 1 and fig. 1). The people born in Greenland are the ones that are primary consumers of marine mammal products, including meat from large whales. However, as there is no domestic regulation on who can eat whale products in Greenland, further calculations are made on the total population size in West Greenland. As baseline is used the same 20 year catch period of 1965-1985 as the original West Greenlandic need was based on (TC/43/ AS3 ADD, IWC 1989, IWC 1991a,b). For present time need update is an average of the West Greenlandic population size during the last quota block from 2008-2012 used, as this is the same time frame used for the calculation of the actual use of the four whale species per given strike limit. Hence in a future perspective in updating Need Statements and conversion factors, this is a solid data based approach.

Table 1. Population size in West Greenland in 1965-1985 and in the last quota block 2008-2012 and corresponding need in tons.

Source: Statistics Greenland.

	Population Born in Greenland	Population Born outside Greenland	West Greenland Population Total	Need in tons	Per capita consumption in kg.
Average for the period 1965-1985	37,301	7,141	44,442	670	15
Average for the period 2008-2012	46,935	6,051	52,986	799	15
Increase of population	9,634	-1,090	8,544		
% increase of population	26	-15	19		
Need of 670 ton multiplied with the % increase of the population	843		799		

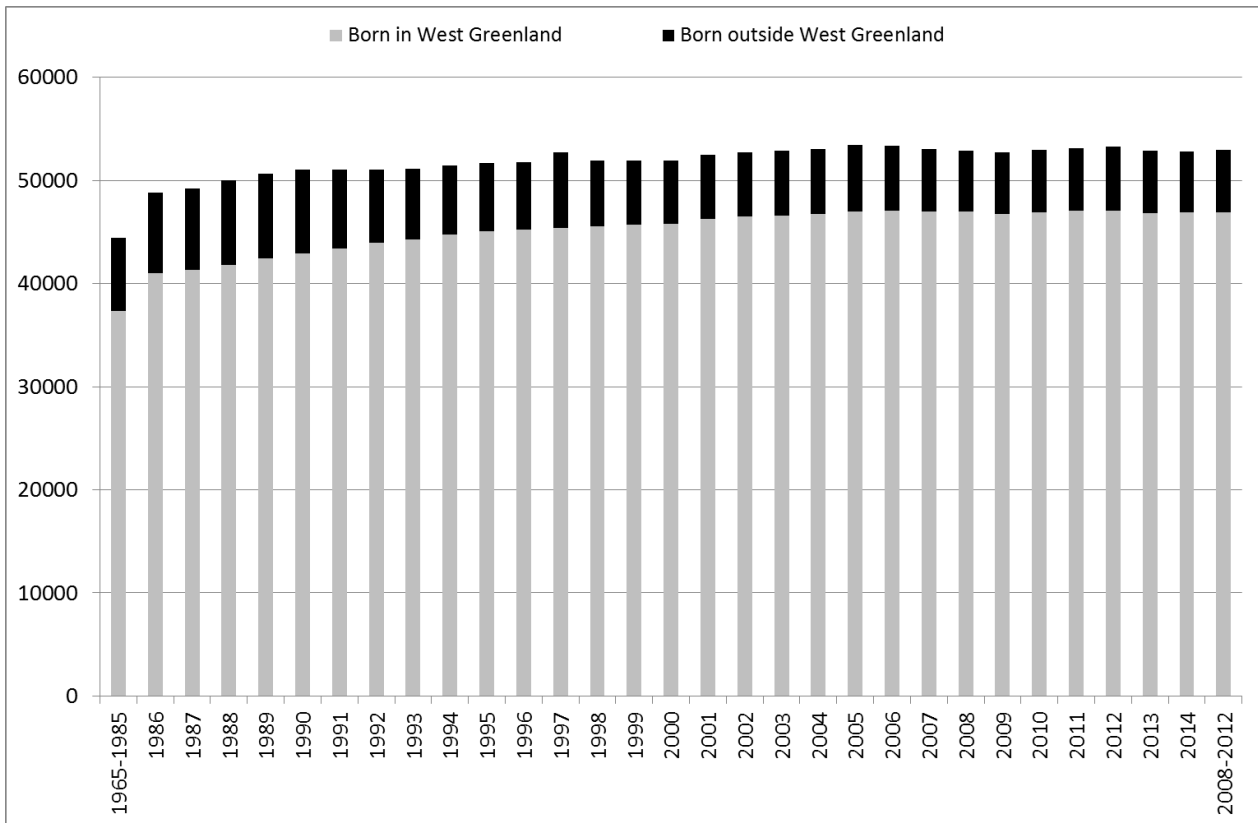


Figure 1. The number of people residing in West Greenland from January 1965-85 to January 2014. Bottom: people born in Greenland. Top: people born outside Greenland. Source: Greenland Statistic.

The 19 % increase in the population size in West Greenland corresponds to an increase of 129 tons of edible products from large whales with a need of 670 tons, giving a **total need of 799 tons in present time West Greenland.**

Applying the same principle to the potential catches given by the recommended quotas from the Scientific Committee in 2014 (IWC/65/Rep01) of 164 minke whales, 19 fin whales, 10 humpback whales and 2 bowhead whales for the period 2015 - 2018 and by using the new conversion factors from the report from “the small working group on conversion factors” (from whales to edible products) for the Greenlandic large whale hunt of 2010 (Donovan et al. 2010), a potential total of 654 tons of large whale edible products is obtained (table 2B), but in reality based on actual landed number of whales as seen in the last quota block of 2008-2012, it amounts only to 594 tons (table 2C).

The quotas from the Scientific Committee for 2015-2018 give a potential and actual yield in tons of edible products of approx. 145-205 tons less than the documented need for West Greenland of 799 tons (table 2A-2C).

Table 2A. The documented yearly need of meat from large whales for West Greenland. Based on the catches previous to 1986 (1965-1985). Traditional conversion factors. I.e. per capita consumption kg. 15. Population (1965-1985): 44.400.

Species	Tons of meat per whale	Average yearly catches before 1986 (1965-1985)	Tons of meat form large whales consumed yearly in West Greenland previous to 1986
Humpback whale	8	14	112
Fin whale	10	9	90
Minke whale	2	232	464
Bowhead whale	0	0	0
Total			666

Table 2B. The potential amount of edible products from large whales for West Greenland based on the recommended quotas for 2015-2018 from the Scientific Committee in 2014 and adopted conversions factors from 2010. The quotas from the Scientific Committee 2015-2018 give a potential yield in tons of edible products of app. 145 tons less than the documented need for West Greenland of 799 tons. I.e. per capita consumption kg. 12.4. Population (2014): 52.800.

Species	Tons of edible product per whale	Scientific Committee recommended quotas 2014	Tons of edible products form large whales available per year from 2015-2018 quotas
Humpback whale	11.6	10	116
Fin whale	10.9	19	207
Minke whale	1.9	164	308
Bowhead whale	11.0	2	22
Total			654

Table 2C. The actual amount of edible products from large whales for West Greenland based on the values corresponding to the recommended quotas for 2015-2018 from the Scientific Committee in 2014. Using adopted conversions factors from 2010 and based on average number of landed whales in the last quota block 2008-2012, the actual use for minke whale is 96 %, for fin whale is 83 %, for humpback is 89 % and for bowhead is 100 % per given strike limit (Appendix II).

The quotas from the Scientific Committee for 2015-2018 give an actual yield in tons of edible products of approx. 205 tons less than the documented need for West Greenland of 799 tons. I.e. per capita consumption kg. 11.3. Population (2014): 52.800.

Species	Tons of edible product per whale	Annual quota 2015-2018. Actual utilisation including the recent struck and lost rates		Tons of edible products form large whales available per year from 2015-2018 quotas
Humpback whale	10.3	10	89%	103
Fin whale	9.0	19	83%	171
Minke whale	1.8	164	96%	298
Bowhead whale	11.0	2	100%	22
Total				594

The regional distribution and the average yearly catches in kg pr. citizen pr. municipality (Colum 6 to the right) are shown in table 3. There is large diversity in the availability of edible products pr. citizens in the cities and settlements spread along the cost (Colum 5). From 1.3 kg. pr. year in Qaanaaq (due to the distribution of the relevant species and ice coverage for the most of the year) to 28.8 kg in Maniitsoq having more open water during the year. The capital, Nuuk, has low availability of edible products with only 2.5 kg pr. citizen despite the fact, that Nuuk has many whaling vessels and “open water” in the fiords most of the year. The main part of all products (> 95% in 2013) are sold at the local market, public institutions and finally through distribution to family / crew etc. (the informal economy). Just a small amount (<5% in 2013) is purchased by the retail and restaurants via the two processing plants respectively Maniitsoq and Ilulissat.

Both in the 20 year period of 1965-1985 and in present time the need of respectively 670 tons and 799 tons corresponds to consumption from large whales of 15 kg annually per capita (table 1). However, as seen in table 3, the actual average annual consumption per capita in West Greenland based on actual catches (482 tons of edible products landed) in the previous quota block 2008-2012 was 9.2 kg.

Table 3. Average population size per cities in West Greenland in the last quota block 2008-2012 with corresponding average catches in tons in 2008-2012 and actual per capita consumption. 373 people are without registered location and not included here. Source: Statistics Greenland.

City with corresponding settlements	Municipality	Number of vessels with harpoon canons	Population number	Kg edible products / population number	Kg edible products / population number
Nanortalik		0	2,138	4.3	
Qaqortoq		3	3,494	10.7	
Narsaq	Kujalleq	3	1,934	4.9	7.4
Paamiut		4	1,786	22.5	
Nuuk	Sermersooq	8	15,854	2.5	4.5
Maniitsoq		6	3,403	28.8	
Sisimiut	Qeqqata	7	6,259	10.0	16.6
Kangaatsiaq		1	1,318	11.8	
Aasiaat		1	3,192	11.5	
Qasigiannnguit		0	1,272	12.3	
Ilulissat		8	5,009	12.3	
Qeqertarsuaq		1	944	22.6	
Ummannaq		0	2,336	8.7	
Upernavik		0	2,864	4.7	
Qaanaaq	Qaasuitsup	0	809	1.3	10.5
Total		42	52,613	9.2	

Environmental and health reasons for consuming whale meat in Greenland

It is clear that hunting and consuming large whales have a cultural importance in Greenland. It is also clear that whale meat and other whale products, such as *mattak* are a vital source of proteins and a very welcome source of income, either as cash from sales, or as savings for those who acquired whale meat through non-commercial transactions or by sharing. What is not so obvious for everyone is that consuming products from large whales in Greenland has huge advantages for the protection of the environment and for the health of Greenlanders.

Harvesting large whales from local waters has a relatively low cost for the local and global climate and the environment. In contrast, the amount of gas emissions, production of waste and use of land needed to farm western meat, and to transport this meat to Greenland is enormous and contrary to any national or international policy on CO₂ emissions. As mentioned above, the current IWC quotas are short of fulfilling the need of meat from large whales in West Greenland. The buffer in the food supply and the consequence of this food shortage of is an increased import of western meat from overseas, because agricultural activities in Greenland are minimal not covering the nutritional need at all.

In a country like Greenland, surrounded by highly productive seas and with a climate unsuitable for traditional agriculture and farming (as known in Europe and North America), it would be environmentally irresponsible not to satisfy the demand of meat by hunting large whales, as long as such hunts are sustainable.

For Greenlanders, consuming baleen whale meat has further advantages in terms of health. Several studies (IWC/64/ASW7) have confirmed the nutritional value of marine mammal products compared to imported and westernised food such as chicken, beef and pork. Whale *mattak* contains rich sources of vitamin A and C, thiamine, riboflavin and niacin. These are known to provide excellent protection against scurvy. Whale meat and blubber are considered beneficial due to their high concentration of selenium. In addition, marine mammal lipids are low in saturated fats and high in the omega-3 polyunsaturated fatty acids that give protection from the cardiovascular diseases common in North America and Europe (e.g. IWC/64/ASW7).

There is evidence that Inuit traditional diet protects against several serious diseases, including some types of cancer, thrombosis and atherosclerosis. There is also evidence that Greenlanders depend on traditional food to obtain vitamin D. The Board of Nutrition in Greenland recommends Greenlanders not to stop eating traditional food because the effects of stopping are not known. It is believed that a reduction of traditional diet would lead to an increase in the number of western diseases (IWC/64/ASW7).

Biological advice on catches of large whales in Greenland

It is important that the IWC quotas can satisfy the documented need of meat from large whales of 796 tons for West Greenland. During the last 20 years, the knowledge about the status of the stocks of large whales was insufficient to grant optimal allocation of quotas. Fortunately, surveys for large whales were successful during 2005 and 2006, and the IWC was in 2007 in a better position to approve new quotas.

Humpback, sei and bowhead whales had all become numerous enough to allow for well regulated sustainable catches and in 2007 the IWC Scientific Committee evaluated assessments of humpback and bowhead whale. Using a newly developed approach to provide safe interim advice on catch limits for a period of up to 10 years, the Scientific Committee agreed that annual strike limits of two bowhead whales and ten humpback whales off West Greenland (numbers first requested by Denmark at the 2007 Annual Meeting - (IWC, 2007a, IWC 2008)) would not harm the stocks (IWC, 2009). The quota advice given in 2007, 2009 and repeated in 2010, 2012 and 2014 on all four species of large whales was valid for a period of two quota blocks and the advice from the Scientific Committee is as such still valid until 2017/2018. It should be noted that the Scientific Committee has completed the first Strike Limit Algorithm (SLA) in the Greenlandic ASW for humpback whales off West Greenland. The SLA provides an even more robust basis for providing long-term management advice to the Commission on the subsistence hunt of humpback whales off West Greenland.

The Scientific Committee advised in 2014 that catch limits of 164 minke whales, 19 fin whales, 2 bowhead whales and 10 humpback whales in West Greenland would not harm the stocks. When presenting a catch limit proposal the work and advice of the Scientific Committee will be respected, giving a potential total of 654 tons of large whale meat, and hereby with full utilization almost satisfies the traditional target of 670 tons endorsed by the Commission in 1991 for West Greenland.

Quota system

Whaling in Greenlandic waters is the competence of the Greenland Government and is managed by the Ministry for Fisheries, Hunting and Agriculture. The management and hunting of living resources are based on scientific advice.

The quota year follows the calendar year with different hunting periods: minke whale and bowhead whale 1 April to 31 December, fin whale and humpback whale 1 January to 31 December.

Catch limits set by the IWC apply to all four large whale species taken in West Greenland and one large whale species in East Greenland. Thereafter, according to the executive order on hunting of large whales, the Ministry of Fisheries, Hunting and Agriculture of Greenland decides the maximum number of large whales that can be taken from each municipality. This

decision is taken every year after consulting with the municipalities and with the hunter's organisation. The municipal authorities provide numbered licences that allow the owner to hunt whales with a specified boat during the running year.

Since 1994, the fin whale quotas have been set "free" internally in West Greenland, meaning that quotas are not allocated to any specific municipalities. Hunters who have obtained a licence to take fin whales can hunt freely until the Ministry of Fisheries, Hunting and Agriculture stop the hunt when the catches approach the quota. This system has worked satisfactorily.

At the beginning of the season, about 25 % of the quota for minke whales for West Greenland is distributed among the municipalities to be used in the **collective hunt**. The municipality has the responsibility to allocate this quota among the settlements where there are not enough boats with harpoon cannon.

As a rule, the quotas for minke whales taken with **harpoon cannon** are also set free in April, at the beginning of the season and redistributed during August or September, depending on the progress of the hunt. In some years however, a proportion of the Greenland quota is distributed through fixed quotas among the municipalities at the beginning of the season, and the remaining Greenland quota is distributed later during the season.

The Ministry of Fisheries, Hunting and Agriculture stops the hunt of minke whales when the catches approach the quota. This is usually between September and December. The Ministry of Fisheries, Hunting and Agriculture can reduce the quota for the running year, or for the following year, if the quotas have been exceeded. Other factors that may lead to redistribution of quotas, or the moving or cancelling of licences include quota overruns, incorrect reporting and the infraction in the taking of whales of protected species². The Ministry also coordinates and are in cooperation with the municipalities on a redistribution of the quotas if the allocated municipal quotas are not reached during the early fall season.

As a rule, the current system works satisfactorily. The catch progress of the quota block 2008-2012 has been followed thoroughly by the Ministry of Fisheries, Hunting and Agriculture and no overrun has taken place for any of the four species. There have been changes of the quotas during this 5-year period decided by the IWC (IWC 61: bowhead whale and IWC 62: humpback whale, fin whale and minke whale).

Because whalers are a combination of hunters of large whales, hunters of other species and fishermen, the hunters have to evaluate a complex number of factors before setting out to catch large whales. These factors include weather conditions, seasonal variations in the availability

² Executive order number 4 of 7. February 2013 on Protection and Hunting of Large Whales

of whales and time available for other activities such as fishing for snow crab and a number of fish species that are regulated by quotas, fishing seasons and market forces. This explains why some years the quotas for large whale are not fully utilised (figures 1-4 in IWC/64/ASW7).

Distribution of whale products

At the first high tide after a hunt, whale carcasses are usually dragged into shallow waters, where they are flensed during low tide. Thereafter, the meat and other edible products are distributed among those who participated in the hunt and in case of a surplus; this can be sold at the local market. In two of the more isolated communities in West Greenland, only raffle hunting occurs and thus only common minke whales can be taken; in such cases all products are consumed within the village. In the other communities where multiple species can be taken, products are distributed via direct sharing, bartering or sales at local open markets *Kalaaliaraq* and in some cases, transportation and sales to other towns and settlements that do not have direct access to whale products or for which there is a shortage. This may be via a co-operative supermarket chain or two distribution companies that are partially owned by the Greenlandic Government; Greenland is a very large island and any sharing is within Greenland. No export of whale products is allowed. Sometimes the meat is also sold directly to institutions, such as hospitals or nursery homes, when the Veterinary authority has given the necessary permission. In East Greenland the minke whale hunt is only possible with skiffs and small vessels with the same distribution methods as described above.

4. Concluding remarks

Greenlandic whaling is the continuation of a very old tradition performed according to needs in a contemporary society. Hunting in general and hunting of large whales in particular are integral parts of the culture and the economy of the country. A Greenland without whale hunting is therefore unimaginable. For this reason, Greenland has the intention to hunt large whales both in the near-term and in the long-term future.

When considering catch limits proposals for 2015 – 2018 the following positive developments should be taken into consideration:

- The IWC scientific committee (SC) has recently for the first time approved reliable estimates of abundance for all the relevant stocks and the first long-term strike limit algorithm (SLA) for a Greenland hunt has been completed for the humpback whale.
- The SC at the latest meeting in 2014 thanked Greenland for its work on conversion factors, which responded appropriately to the committee's recommendations last year for a full report.
- The SC noted that the provisional conversion factors from the 2010 study appear to overestimate the amount of edible products actually obtained.
- The SC recognising the fact that the new data, albeit few, did not suggest that the provisional conversion factors from the 2010 study required major modification and

agreed that annual update reports are unnecessary for the work of the Scientific Committee.

- The struck and lost rates are kept at a low level as commented by the Scientific Committee.
- The control and monitoring systems within Greenland are functioning well and the block quotas for the period 2008 – 2012 have not been exceeded, both in West and East Greenland.
- The main part of all products (> 95% in 2013) are sold at the local market, public institutions and finally through distribution to family / crew etc. (the informal economy). Just a small amount (<5% in 2013) is purchased by the retail and restaurants via the two processing plants respectively. Maniitsoq and Ilulissat.
- It is correct that a very limited sale of whale meat takes place in local restaurants in Greenland accessible to the Greenlandic population as well as people visiting Greenland. The Greenland authorities have reviewed the situation and concluded that in 2010-2012 an estimated average of 13 restaurant meals per day through out Greenland contain whale products. This equates to approximately 1,600 kg of whale meat per year.
- Both in the 20 year period of 1965-1985 and in present time the need of respectively 670 tons and 799 tons corresponds to consumption from large whales of 15 kg annually per person living in West Greenland.
- Taking both the quota usage and the struck and lost rates into account the annual average landing of large whales in West Greenland in the previous quota block 2008-2012 was 482 tons of edible products, corresponding to the average consumption of just under 10 kg per person living in West Greenland.
- With the most recent catch limits and scientific advice from 2014, Greenland is in practice 100 tons short of the documented need of 670 tons of meat from large whales that was approved by the IWC in 1991 and 142-202 tons short of the present need of 796 tons documented in this paper.
- Catch limits have been lowered with 14 minke whales from and including 2014 without Greenland compensating for the loss in whale products by asking for higher quotas on any of the other three species in West Greenland.

With such a robust advice from the Scientific Committee, the IWC should be able to approve catch limits for Greenland that are biologically sound. Such catch limits would be sustainable and the hunt would be well regulated. Furthermore, Greenland will continue working actively on improving the welfare aspects of whale hunting.

The Greenland Government hopes that the IWC will be able to take management decisions based on the best available scientific knowledge and with respect for the cultural, nutritional and economical needs of Greenlanders and in this respect also fulfil the obligations of the IWC Convention. Allowing Greenland to obtain sufficient whale meat to fulfil the documented

need will be a way to protect the global climate and the environment by rationally utilising the natural resources at hand.

5. References

- IWC Resolution 1978- 3 Capture of Humpback Whales in Greenland Waters.
- IWC Resolution 1978-4 Reporting Data Relative to Humane Killing.
- IWC Resolution 1979-4 Bering Sea Bowhead Whales.
- IWC Resolution 1980-3 Resolution on the Documentation of Aboriginal Need.
- IWC Resolution 1982-3 Resolution Concerning Aboriginal Subsistence Whaling.
- IWC Resolution 1985-3 Resolution on Humane Killing in Aboriginal Subsistence Whaling.
- IWC 1989. Greenland Subsistence Hunting. IWC/41/22.
- IWC 1991a. Conversion Factors for Minke Whale Meat (Denmark). TC/43/ AS 3 Add.
- IWC 1991b. Chairman’s report of the forty-second annual meeting. Rep. int. Whal.Commn. 41:31-32.
- IWC Resolution 1992-1 Resolution on Humane Killing.
- IWC Resolution 1993-1 Resolution on Humane Killing.
- IWC Resolution 1997-1 Resolution on improving the humaneness of Aboriginal Subsistence Whaling.
- IWC Resolution 1999-1 Resolution arising from the Workshop on Whale Killing Methods.
- IWC 2007a. Report of the Scientific Committee. IWC/59
- IWC 2007b. White Paper on Hunting of Large Whales in Greenland. IWC/59/ASW8rev.
- IWC 2008. Report of the Scientific Committee. IWC/60
- IWC, 2009. Report of the Scientific Committee. J. Cetacean Res. Manage. 10 (Suppl.)
- IWC, 2010. Report of the Scientific Committee. Annex E. Report of the Standing Working Group on the Aboriginal Whaling Management Procedure (AWMP). J. Cetacean Res. Manage. 11 (Suppl.)
- IWC, 2012. Report of the Scientific Committee. J. Cetacean Res. Manage. 13 (Suppl.)
- IWC/64/ASW7 White Paper on Management and Utilization of Large Whales in Greenland (May 2012)
- IWC/65/Rep01(2014) 2014 Scientific Committee Report.

Appendix I

Documentation on Greenland Whaling submitted by the Kingdom of Denmark/Greenland to the IWC, 2011 – 2013³

In the period 1979 – 2013 143 documents has been submitted on all aspects of Greenland whaling. The full list until 2011 can be found in IWC/64/ASW7 White Paper on Management and Utilization of Large Whales in Greenland (May 2012).

Marked in bold is submitted documentation on sustainable yield in Greenland Whaling

2011

124) IWC/63/9 Summary of Activities Related to the Action Plan on Whale Killing Methods (based on Resolution 1999-1)

125) IWC/63/INF/4 Summary of Infraction Reports received by the Commission in 2011 / Report on infractions of the International Convention for the Regulation of Whaling, 1946 and summary information on catches

126) IWC/63/INF Checklist of Information Required or Requested under Section VI of the Schedule

127) IWC/63 Denmark. Progress report on cetacean research, March 2010 to March 2011, with statistical data for the calendar year 2010

128) IWC/63/12rev Proposal to Establish an Ad Hoc Aboriginal Subsistence Working Group (Denmark, Russian Federation and USA)

129) J. CETACEAN RES. MANAGE. 13 (SUPPL.), 2012, appendix 4, page 153. The Ministry of Fisheries, Hunting and Agriculture, Government of Greenland 2011. Greenlandic response to " 9.1 Conversion factors for edible products for Greenland fisheries from the IWC SC meeting 2010."

2012

130) IWC/64/WKM&AWI7 Summary of Activities Related to the Action Plan on Whale Killing Methods (based on Resolution 1999-1)

131) IWC/64/INF4 Summary of Infraction Reports received by the Commission in 2012 / Report on infractions of the International Convention for the Regulation of Whaling, 1946 and summary information on catches

132) IWC/64/INF Checklist of Information Required or Requested under Section VI of the Schedule

133) IWC/64 Denmark. Progress report on cetacean research, March 2011 to March 2012, with statistical data for the calendar year 2011

134) IWC/64/12 Proposed Schedule amendment (Greenland catch limits)

135) IWC/64 Greenland Power Point Presentation IWC 64, 2012

136) IWC/64/ASW7 White Paper on Management and Utilization of Large Whales in Greenland

137) IWC/64/ASW8 Note on the Greenland needs statement

138) IWC/64/ASW10 Progress on Conversion Factors for the Greenland Hunt

2013

3 Scientific Committee Papers not included, except for doc number and 143).

- 139) IWC/65/x Summary of Activities Related to the Action Plan on Whale Killing Methods (based on Resolution 1999-1)
- 140) IWC/65/INF/x Summary of Infraction Reports received by the Commission in 2013 / Report on infractions of the International Convention for the Regulation of Whaling, 1946 and summary information on catches
- 141) IWC/65/INF Checklist of Information Required or Requested under Section VI of the Schedule
- 142) IWC/65 Denmark. Progress report on cetacean research, March 2012 to March 2013, with statistical data for the calendar year 2012
- 143) SC/65a/AWMP07 Malene Simon, Greenland Institute of Natural Resources and The Ministry of Fisheries, Hunting and Agriculture, Government of Greenland 2013. Progress on Conversion Factors for the Greenlandic Hunt.**

Appendix II

West Greenlandic catches 2008-2012 submitted to the IWC database

Table 4. In the most recent five year strike limit period (2008-2012), the average proportion of landed animals relative to all struck animals (landed plus lost animals) is 96% for Greenlandic minke whales, 83% for Greenlandic fin whales, 100% for bowhead whales and 89% for humpback whales																
	2008			2009			2010			2011			2012			Actual use 2008-2012
Species	Landed animals	Struck and lost animals	Struck animals	Landed animals	Struck and lost animals	Struck animals	Landed animals	Struck and lost animals	Struck animals	Landed animals	Struck and lost animals	Struck animals	Landed animals	Struck and lost animals	Struck animals	Proportion
Minke whale	146	5	151	153	11	164	180	7	187	173	6	179	144	4	148	0.96
Fin whale	11	3	14	8	2	10	5	1	6	5	0	5	4	1	5	0.83
Bowhead whale	0		0	3	0	3	3	0	3	1	0	1	0		0	1.00
Humpback whale	0		0	0		0	9	0	9	8	0	8	7	3	10	0.89

West Greenlandic catches 2003-2007 submitted to the IWC database

Table 5. In the last five year strike limit period (2003-2007), the average proportion of landed animals relative to all struck animals (landed plus lost animals) is 97% for Greenlandic minke whales and 84% for Greenlandic fin whales.

Species	2003			2004			2005			2006			2007			Actual use 2003-2007
	Landed animals	Struck and lost animals	Struck animals	Landed animals	Struck and lost animals	Struck animals	Landed animals	Struck and lost animals	Struck animals	Landed animals	Struck and lost animals	Struck animals	Landed animals	Struck and lost animals	Struck animals	Proportion
Minke whale	178	7	185	175	4	179	173	3	176	175	6	181	161	6	167	0.97
Fin whale	6	3	9	11	2	13	12	1	13	9	1	10	10	2	12	0.84

West Greenlandic catches 2013 submitted to the IWC database

Table 6. In the present six year strike limit period (2013-2018), the average proportion of landed animals relative to all struck animals (landed plus lost animals) is only available for 2013; hence no calculations have been made yet.

Species	2013			2014			2015			2016			2017			2018			Actual use 2013-2017
	Landed animals	Struck and lost animals	Struck animals	Landed animals	Struck and lost animals	Struck animals	Landed animals	Struck and lost animals	Struck animals	Landed animals	Struck and lost animals	Struck animals	Landed animals	Struck and lost animals	Struck animals	Landed animals	Struck and lost animals	Struck animals	Proportion
Minke whale	166	9	175																
Fin whale	9	0	9																
Bowhead whale	0		0																
Humpback whale	7	1	8																

Appendix III

East Greenland documentation of need from large whales

ASW Sub-committee (IWC/38/14)

- Denmark submitted document TC/38/AS 3 that described two villages in East Greenland (Angmagssalik and Scoresbysund) giving their histories, the population at the time, occupation, hunting statistics, occurrence and pattern. It concluded that it was necessary to seek provision for the continuation of the minke whale hunt as this formed a natural part of the aboriginal subsistence hunting of these areas.
- The Sub-committee concluded that the hunt could be regarded as aboriginal/subsistence in nature. It recognised that a need had been demonstrated but noted that since a multi-species hunt was involved, the dependence was not totally on minke whales. The Sub-committee wished to record this conclusion noting that it was based on its discussions during which it had noted in particular that all whales were used for local consumption and did not enter into commercial trade. It was also noted that there was a tradition of whaling in a hunting economy based on species including sea mammals, and the villages were subsistence communities.

Technical Committee (IWC/38/5)

- Denmark requested that a catch limit of 12 minke whales from [this] Central Atlantic stock should be permitted, available to be taken by aborigines pursuant to paragraph 13(b)(3) of the Schedule. It was encouraging Greenland authorities to initiate improved monitoring of the catches and data collection and was establishing procedure by which the struck and lost rates could be studied and improved. The TC supported the proposal.

Commission (Rep. Int. Whal. Commn 37: 17-19)

The Commission adopted by consensus the proposal.

Appendix IV:

Management of Aboriginal Subsistence Whaling / Reflections on Issues Raised During the Dialog

Addendum to:

IWC/64/ASW7 White Paper on Management and Utilization of Large Whales in Greenland (May 2012) and

IWC/65/X Utilization of large whales in Greenland / A Need Statement (July 2014)

MANAGEMENT OF ASW

Reflections on Issues Raised During the Dialog

Over the past year Denmark and Greenland have conducted consultations with the aim of improving the Aboriginal Subsistence Whaling (ASW) management of the IWC and reaching a decision at the IWC65 on aboriginal subsistence whaling in Greenland. The Kingdom of Denmark appreciates the kind assistance of the Chair of the IWC and the Secretariat in facilitating the process advised by the Bureau.

The initial comments received have been very welcome and helpful to the process. Denmark and Greenland believe the comments can guide the IWC towards more solidly based ASW management in the future.

The proposals forwarded to the IWC, has been influenced to a large degree by the initial comments, questions and suggestions received.

Denmark and Greenland wish in addition to the proposals to add a few comments on some central issues raised. It has become evident to us during the process that a high degree of uncertainty still prevails among IWC members as to the obligations of contracting governments managing ASW, in particular in relation to Greenland. Such uncertainty underlines the grave need for an internationally more coherent view of ASW management and continued work by the ASW working group (ASWWG) over the coming years.

The network of obligations in an IWC context consists of legal and other, less binding, obligations. There are very few legally binding obligations relating to ASW on the Governments and areas managing ASW in the Convention and the Schedule. They are to be found in relevant paragraphs of article V of the Convention and paragraphs 13 and 14 of the Schedule.

In addition, the following non-binding resolutions are particular relevant in the Greenland context:

- Resolution 1978 - 3 Capture of Humpback Whales in Greenland Waters, requesting the Danish Government to attempt to substitute fin whales for humpback whales in meeting the Schedule set that year for West Greenland waters.
- IWC Resolution 1978-4 Reporting Data Relative to Humane Killing, requesting 2 specific types of information on each whale taken
- IWC Resolution 1980-3 (as later adjusted) Resolution on the Documentation of Aboriginal Need, requesting information on utilization of the meat and other products
- IWC Resolution 1982-3 Resolution Concerning Aboriginal Subsistence Whaling, which agreed to implement the Aboriginal Subsistence Whaling Management Regime.

- IWC Resolution 1985-3 Resolution on Humane Killing in Aboriginal Subsistence Whaling, requesting that ASW areas adopt more efficient methods in order to reduce cruelty and inhumanity (which in Greenland lead to the introduction of the exploding grenade)
- IWC Resolution 1992-1 Resolution on Humane Killing, encouraging collection and presentation of struck and lost rates and time to death records
- IWC Resolution 1993-1 Resolution on Humane Killing
- IWC Resolution 1997-1 Resolution on improving the humaneness of Aboriginal Subsistence Whaling
- IWC Resolution 1999-1 Resolution arising from the Workshop on Whale Killing Methods, requesting regularly 7 specific types of information in order to minimize time to death.

We have studied the legal obligations and agreed policy Resolutions of the IWC and have respected their implications in the following pages.

During the consultations it has also become clear to us that some important concepts relating to ASW are not interpreted equally by everyone in relation to Greenland. These are the areas to which we wish to respond:

- The concept of aboriginal
- The question of Commercialization
- The question of Subsistence Needs

These are all issues that are currently being considered by the ASWWG and we are confident that once the results of the Group's deliberations are available it will be possible to build consensus around them. In the meantime, Denmark and Greenland offer the following views on these concepts.

Re The concept of aboriginal:

It has been suggested that only "aboriginals" can have a share of the catch – not other nationals of the Kingdom of Denmark, visitors or others. This concept – aboriginals - was first mentioned in relation to whaling more than 80 years ago (in 1931) and it has never been explained nor defined within the IWC, as it was taken for granted that the concept covered people living in the areas, where whaling took place to the benefit of these people.

Under Danish or Greenlandic law there has never been a legal or administrative distinction in Greenland or Denmark between individuals based on ethnicity or culture, or attempts to distinguish "indigenous" from "non-indigenous".

These facts have left their footprint in the wording of the Schedule. For Greenland (Schedule §13,b,3) and St Vincent (Schedule §13,b,4) it is written that the whale products are for "local consumption",

whereas in Schedule § 13,b,1 and 2 for other geographical areas there is a more specific requirement that the products "...are to be used exclusively for local consumption by the aborigines."

It is fortunate that the modern Schedule does not try to restrict the consumption of whale products in Greenland to "aborigines", since this would require the introduction of a legal framework and implementing rules on ethnic identification and registration. We cannot provide a definition of aboriginal in Greenland, not only because of the legality of the matter, but also because the IWC has not managed to settle the issue of a definition of "aboriginal". Greenland only has the concept of Kalaallit (Greenlandic translation of "Greenlander", meaning any person who lives in Greenland for so long, that they feel and are acknowledged as Greenlanders). Establishing a definition of "Inuit" has been tried internationally many times and has always failed.

In Greenland there is no register of who is "Inuit", "Non-Inuit" or "Kalaallit" in Greenland. Instead, there is a registration of people living in Greenland and registration of who is born in Greenland and who is not. Following centuries of external contacts many Greenlanders have mixed Greenlandic, Danish or other origin. At present an estimated 18.000 Greenlanders study or live temporarily or permanently in Denmark. Every Greenlander is a national of the Kingdom of Denmark. Defining "Aboriginal" - is not legally, politically or practically possible.

This is why the Schedule § 13,b,3 speaks only about "local consumption" without defining which individuals can consume the whale products locally. Since aboriginal cannot be defined, an effort to restrict the consumption of whale products to parts of the population of Greenland is not possible, reasonable or legally acceptable nor required by the IWC.

Nevertheless, Denmark and Greenland has always sought to provide information to the IWC to explain and justify its subsistence whaling for local consumption as an integral part of Greenland's ability to exist as a small community under harsh Arctic conditions with few and limited natural resources whose harvest comes at high cost.

Re The question of Subsistence Needs

This is perhaps the most contentious issue in the IWC's current consideration of ASW. There is a long history to the IWC's deliberations on the matter and it may be helpful to recall some of that. Denmark and Greenland also consider that the ASWWG's work to be of great importance in this context and Denmark and Greenland are contributing actively to it. In doing so Denmark and Greenland hold the view that all ASW areas should be treated equally in accordance with the Convention, Schedule and Resolutions thereunder.

The original 1946 Schedule adopted along with the Convention contained a very brief paragraph 2 referring to aborigines since all other whale stocks could be hunted to varying degrees. The paragraph did not include catch limits on aboriginal hunting but read:

- It is forbidden to take or kill gray whales or right whales [this included bowheads], except when the meat and products of such whales are to be used exclusively for local consumption by the aborigines.

Subsequently the Schedule was reordered several times but the concept of the 'aboriginal' exemption for local consumption remained.

The adoption of the moratorium on commercial whaling in 1982 coincided with adoption of Resolution 1982 - 3 responding to a Report of a Technical Committee Working Group on Management Principles and Guidelines for Subsistence Catches of Whales by indigenous (Aboriginal Peoples). These two developments modified the Schedule, including, at Denmark's suggestion, the insertion of the Management Principles (current Schedule §13a - "...establish catch limits" .. "to satisfy aboriginal subsistence needs ..").

However, this single reference to "subsistence needs" has never been defined in the Schedule. Thus there is no objective agreed basis in the Treaty instruments for defining subsistence needs, especially in an opportunistic, multi-species hunt in the difficult conditions faced in Greenland.

Nevertheless, two Resolutions from just before the adoption of the Management Principles are relevant to the concept of subsistence needs as is the final part of Resolution 1982 - 3 itself.

In 1979 there was considerable controversy over the Bering Sea hunt of Bowhead whales. In adopting Resolution 1979-4 on the matter, the IWC unanimously included a second preambular paragraph which recognised the importance of accommodating the subsistence and cultural needs of aboriginal people in general not simply those in the USA. In the operative part of the Resolution, which is specifically directed at the USA, the Resolution states the intention of the IWC that the needs of the 'aboriginals of the USA' should be determined by the Government of the USA while putting forward a number of reporting requirements that should be covered in a Needs Statement to be documented annually to the Technical Committee. Thus as long ago as 1979, the IWC considered that it was a national prerogative and the competence of the government to define the needs of its relevant population.

In the 1980 IWC resolution on the documentation of Aboriginal "Needs Statements" (resolution 1980-3) it was indicated that the Contracting Governments should document annually, for the information of the Commission, the utilization of the meat and other products, taken for the aboriginal/subsistence purposes. Later (as the quota block period expanded in time in 1997-2002) it was decided that it was sufficient to provide this information only once in a quota block period. Thus the detailed guidance given in 1979 on factors to be covered in the Needs Statement was not repeated in the general Resolution 1980 - 3 addressed to all Contracting Parties with aboriginal/subsistence whaling.

It should be noted that although the detailed resolution 1979-4, which put forward a number of reporting requirements (importance of whaling in traditional diet, adverse effects of shifts to non-native foods, other food sources, historical takes, risks to community identity if restrictions, ecological considerations) was not addressed to Greenland, these issues have none the less been covered in our Need papers.

Greenland has, time and again, demonstrated what is needed in West Greenland (i.e. 670 tons of whale products on the West Coast based on the number of whales caught in a defined time interval before the implementation of quotas and inhabitants in Greenland at that time, and latest in 2014 796 tons). Greenland has been working with the Scientific Committee (SC) on the conversion factors it uses for translating tons into whales. The latest reporting from Greenland on its progress was positively accepted by the SC, who recommended no further reports to the SC.

Through Resolution 1982 - 3 adopting the aboriginal subsistence management regime the IWC also established a standing sub-committee of the technical Committee to consider documentation on nutritional, subsistence, and cultural needs relating to aboriginal subsistence whaling and the uses of whales taken for such purposes, and to provide advice to the Technical Committee for its consideration and determination of appropriate management measures. This Resolution did not make the IWC responsible for reaching a unanimously agreed view of aboriginal subsistence needs in particular cases. This has led to a number of different individual interpretations of the concept with no legal basis within the IWC.

Previous Schedule language limiting Russia's aboriginal whaling to situations where "traditional aboriginal subsistence and cultural needs have been recognised" was waived by consensus as a discriminatory practice in 2004. "Cultural needs" are therefore not anymore taken into consideration.

Some countries request for information from Greenland goes far beyond what other ASW contracting governments have previously provided, including demands for information on "regional and national population trends and demographic, regional differences in consumption pattern - other sources of subsistence meats" just to mention a few.

The question on "Needs Statements" is part of the agenda of the ASWWG due to the fact that considerable uncertainty on the content of Needs Statements and the different requirements in the individual ASW societies exist. From Denmark's and Greenland's initial point of view, the only legitimate requirements of ASW countries are that the hunt is undertaken by people living in an ASW country, that the hunt is based on a tradition and is intended for local consumption.

Greenland and Denmark will continue to engage constructively in the discussions on the question of Needs Statements and other associated questions raised in the ASWWG.

Re The question of Commercialization

It has been argued by some that the Greenland hunt is “commercial” or “semi-commercial”. Denmark and Greenland cannot accept any direct or indirect accusations that the Kingdom of Denmark is engaged in commercial whaling contrary to the IWC moratorium or attempts to question whaling in Greenland by claiming commercial intentions or practices.

It is noted and appreciated of the fact that no official documentation has been submitted by contracting government to substantiate such allegations of commercial whaling which are usually made by civil society organisations based outside Greenland.

Following are responses to concerns that have been expressed:

Greenland’s hunt is – as unanimously agreed by the IWC Commission characterised not as commercial whaling but is covered by § 13 in the Schedule and acknowledged as aboriginal subsistence whaling.

Neither the Convention nor the Schedule prevent the involvement of money in the taking and distribution of ASW products, nor do they impose restrictions on where and how the products can be distributed or consumed locally. In our view, this is a national responsibility.

Commercial operations are usually defined as being driven by market forces to maximize catches in economic terms. The Greenlandic hunt is limited, within the framework of a local quota system adopted and managed by the Government of Greenland, so that the hunters only take what is available and required to satisfy local needs, for food consumption, in line with the prevailing opportunistic gathering of food in Greenland. In the IWC Special Issue 4, 1982, reporting on a meeting in the Cultural Anthropology Panel (February 1979) it is mentioned that a definition was developed on “subsistence use” at the meeting, relating to “the barter, trade or sharing of whale products”. Money had a place in this definition, but was not of primary importance. The Report was later accepted by the IWC in 1982.

In the 35 years since the meeting of the Panel, the world has changed considerably, not least in the areas where whaling takes place by indigenous societies. In 2004 the IWC reaffirmed not only the Panel's 1979 conclusion but also by consensus that some transactions beyond the aboriginal whaling community under the current Schedule language are acceptable. Furthermore, the introduction of new catch methods (decreasing time to death, but requiring money for the equipment) has fundamentally changed the importance of the involvement of money and its socio-economic importance, especially in remote areas.

In the Greenlandic hunt, the money involved is intended to allow the recovery of costs (grenades, boats, salaries, equipment, storage, distributions etc.) as well as to ensure optimal use of any animal and as an integral part of the modern functioning of the local society. Grenades in particular are costly (the equivalent of 1000 US dollars for one and some whales require multiple grenades). The

Greenland hunters are not obliged by IWC-rules to use the exploding grenade as the “cold” harpoon would be legitimate in accordance with IWC-rules (the cold harpoon is only outlawed in relation to commercial whaling covered by § 10 in the Schedule).

The IWC Commission has in 1979 (Technical Committee) and again in 1985 (Resolution 1985-3) urged that areas where aboriginal whaling took place should promptly adopt more efficient methods of killing whales in order to reduce cruelty and inhumanity. In Resolution 1999-1, with a view to minimise time to death, the Commission requested 7 specific types of information which Greenland has consistently provided since then.

In the delicate balance between animal welfare, costly grenades and reporting requirements, the Greenland Government has taken the decision to enforce the use of the exploding grenade, where this is feasible. And that means that money has a high importance in the effort to reduce time to death and effective killing. Greenland remains committed to improving those aspects of the hunt.

A very limited sale of whale products takes place in local restaurants in Greenland accessible to the Greenlandic population as well as people visiting Greenland. Following accusations at IWC-64 of this sale being disproportionate to the amount of products available from the hunt, the Greenland authorities have reviewed the situation and concluded that an estimated average of 13 restaurant meals per day throughout Greenland, contain whale products. This equates to approximately 1.600 kg. whale products pr. year. Given that the vast majority of visitors to restaurants are members of the Greenlandic population, the consumption by foreign tourists is considered to be insignificant. The small number of restaurant meals consumed probably reflects the fact that most local people prefer to prepare and cook the whale products in their own home in the traditional way. The few hotels and restaurants which have whale products on their menu prepare the dish in non-traditional ways.

Transfer of small quantities of minke whale products within our Kingdom for private consumption by the Greenland community in Denmark is allowed on a purely non-profit basis, through members-only associations in compliance with international commitments. No permits for such transfer have been issued since the summer of 2012. Greenland and Denmark are discouraged by the repeated attempts to spread disinformation through the media and some civil society representatives about these transfers. Denmark and Greenland encourage contracting governments, IWC commissioners as well as citizens and NGOs to contact Denmark and Greenland directly for further information.