

## Annex D

# Report of the Sub-Committee on Aboriginal Subsistence Whaling

Wednesday 23 May 2007, Anchorage, Alaska

### 1. INTRODUCTORY ITEMS

The list of participants is given as Appendix 1.

#### 1.1 Appointment of Chair

Halvard Johansen (Norway) was appointed as Chair.

#### 1.2 Appointment of Rapporteur

Philip Burgess (Australia) was appointed as Rapporteur, with assistance from Greg Donovan (Chair of the SWG).

#### 1.3 Review of documents

The documents for discussion included:

IWC/59/ASW

1. Revised draft agenda (and annotations)
2. List of documents
3. Rationale for needs of aboriginal people of the Russian Federation for gray and bowhead whales harvest in 2008-2012 (submitted by the Russian Federation)
4. Studies of Sea Ice Condition in the East Siberian, Chukchi, Bering and Beaufort Seas (1979-2006) (submitted by the Russian Federation)
5. Aboriginal harvest of gray and bowhead whales in Russian Federation in 2006 (submitted by the Russian Federation)
6. Quantification of subsistence and cultural need for bowhead whales by Alaska Eskimos: 2007 update based on 2000 US Census data (submitted by the USA) (This document is supported by document IWC/54/AS1)
7. Considerations of management implications of 'stinky' gray whales for the eastern North Pacific stock (submitted by the Russian Federation)
8. White paper on hunting of large whales in Greenland (submitted by the Greenland Home Rule Government)
9. Whale Hunting and the Makah Tribe: A needs statement, April 2007 (submitted by the USA)

IWC/54/AS1

Quantification of subsistence and cultural need for bowhead whales by Alaska Eskimos: 1997 update based on 1997 Alaska Department of Labor Data (submitted by the USA)

IWC/59/Rep 1 (extract)

Report of the Scientific Committee

### 2. ADOPTION OF THE AGENDA

The adopted agenda is given as Appendix 2.

After the Agenda was adopted, a statement was made on behalf of the Aboriginal Subsistence Whaling Caucus. This caucus is made up of representatives of aboriginal subsistence whaling (ASW) groups, including the Alaska Eskimo Whaling Commission (AEWC), the Makah Tribe, the whale hunters of Chukotka, the Organisation of Fishermen and Hunters of Greenland, and St. Vincent and The Grenadines. Their statement is given in full in

Appendix 3. *Inter alia* it called for the IWC to respect their way of life and to make decisions based on reason and science that meet the Commission's conservation objectives and aboriginal subsistence needs. It also referred to the issues of the use of the term 'aboriginal subsistence whaling', safety, the humaneness of the hunts and 'stinky' whales.

In response, Brazil noted that it and several other developing countries have consistently supported the rights and needs of aboriginal whaling communities and the allocation of adequate quotas for the provision of such needs. Brazil stated that it and other countries were therefore deeply disappointed that some ASW countries have consistently acted in the IWC against the needs and wishes of its coastal communities, actively fighting against the approval of measures such as new sanctuaries and the discussion of non-lethal management issues, which are essential to ensure that these coastal communities can profit from the appropriation of whale resources with the same legitimacy and pride as the ASW communities have done. In this context, Brazil invited the ASW communities to learn more about its concerns and their own delegations' approach to the needs of coastal communities in Brazil and other Southern Hemisphere countries, in order to ensure that the IWC treats all community rights in a fair and equitable manner.

### 3. ABORIGINAL SUBSISTENCE WHALING MANAGEMENT PROCEDURE

#### 3.1 Progress with the Greenlandic Research Programme

##### 3.1.1 Report of the Scientific Committee

The Chair of the Scientific Committee's Standing Working Group on the Development of an Aboriginal Whaling Management Procedure, Greg Donovan (hereafter Chair of the SWG), reported on the Scientific Committee's work in this regard.

As it has stated on many occasions, the Committee has never been able to provide satisfactory management advice for either the fin or common minke whales off West Greenland. This has reflected a lack of information on stock structure which precluded a proper interpretation of the few available abundance estimates, and the absence of appropriate assessments. It has viewed this matter with great concern and was the primary reason the Committee first called for the Greenland Research Programme in 1998.

The Committee was pleased with the new information and analyses received this year. With respect to stock structure, a good number of samples were collected this year. A strategic decision on the most appropriate analyses for these samples will be taken next year, after a decision is taken on whether we can use the sex ratio data for common minke whales to form the basis of an assessment.

This subject formed a major part of the discussions this year. Progress was made on this issue at a Workshop in Copenhagen and further data and analyses were received here in Anchorage. Despite this progress, further analyses of the catch data are needed before it can be determined whether the data provide a sufficient basis for an assessment (and ultimately a *Strike Limit Algorithm* or *SLA*). An intersessional workplan has been developed to ensure that work is completed.

In receiving the new abundance estimates for West Greenland last year from the aerial survey, it was recognised that they were underestimates and we identified a number of analyses that could be undertaken to improve them. The Committee was pleased to receive these updated analyses this year. The main aim of the new analyses was to correct for two kinds of bias, both of which lead to underestimates in abundance. The first relates to the fact that whales are underwater a lot of the time and the second relates to the fact that observers can miss whales, even if they are at the surface.

With respect to common minke whales, it was possible to correct for both of these kinds of bias. The resultant estimate was 10,800 whales with a wide 95% confidence interval from 3,600-32,400. The wide confidence intervals reflect the uncertainty in the elements making up the correction factors. For fin whales, data were only available to correct for the second type of bias. The new estimate is of 3,200 whales in 2005 with a 95% confidence interval of 1,400-7,200. These estimates were adopted by the Committee.

Finally, no direct progress was made with the development of management procedures, because efforts have focussed on obtaining satisfactory assessment methods. However, the Committee re-emphasises the importance it attaches to developing satisfactory *SLAs* for the Greenlandic fisheries as soon as possible, so that it can provide robust long-term management advice (and see IWC/59/Rep1 Items 9.4 and 9.6). The multispecies nature of the fishery will form part of any considerations of *SLAs*.

### 3.1.2 Discussion and recommendations

The Sub-committee endorsed the report of the Scientific Committee and its recommendations.

## 3.2 Implementation Review for bowhead whales

### 3.2.1 Report of the Scientific Committee

The Chair of the SWG reported on the completion of the *Implementation Review* this year.

The Committee has been working on an extensive *Implementation Review* for bowhead whales since 2005 with a focus on issues relating to stock structure. The accepted *Bowhead SLA* was developed and tested for a single stock. The review process has involved work by both the SWG on the AWMP and the sub-committee on bowhead, right and gray whales. Two intersessional Workshops have been held since the 2006 Annual Meeting. The process has benefited tremendously from the considerable effort that had been extended in field and laboratory work, and in analyses of genetic and other data related to stock structure.

The first Workshop was held in Seattle in January 2007. At that Workshop the SWG considered a tremendous amount of genetic and other information and agreed four stock structure hypotheses that were sufficient for testing the *Bowhead SLA* and its robustness to stock structure

uncertainty. Three of the four involved either two stocks or feeding ground site fidelity. The relative plausibility of the hypotheses was not considered as this was to be the focus of discussions at the Annual Meeting. The second Workshop was held in Copenhagen and was primarily a technical workshop to finalise the simulation trials and the computer program to run them. A major part of the work was to assign past catches to the hypotheses and to ensure that uncertainty in this process was also captured within the trials.

At the present Annual Meeting, the Committee reviewed the results of the trials. The Committee agreed that the results showed that the *Bowhead SLA* performs adequately for all of the stock structure hypotheses and all trials. The *Implementation Review* had been extremely thorough and the Committee commended the efforts of all of the scientists involved in the process. It strongly recommended that the *Bowhead SLA* continues to be used to provide management advice.

In addition to the work on simulation trials, the Committee had undertaken a final examination of the information on stock structure. After extensive discussions of the genetic and other information, the Committee agreed that the evidence supports a single-stock hypothesis (the one originally used to develop the *Bowhead SLA*). The experience of the *Implementation Review* process will be used to refine the Committee's guidelines on data availability and the use of genetic data.

The Chair of the SWG concluded that it was particularly pleasing to have completed the long and complex *Implementation Review* for B-C-B bowhead whales. He paid tribute to the hard work of all the scientists who participated in the review and recognised the tremendous field, laboratory and analytical effort involved, as well as the sterling work undertaken by Allison and Punt with respect to computing. Completion of the Review will allow more time to address the important issue of moving from interim management advice to more thorough *SLA*-based advice for other aboriginal subsistence fisheries.

### 3.2.2 Discussion and recommendations

The Sub-committee endorsed the report of the Scientific Committee and its recommendations.

## 3.3 Preparation of the Implementation Review for gray whales

### 3.3.1 Report of the Scientific Committee

The Chair of the SWG noted that this review is scheduled for 2009 and the Committee is beginning its preparations so that a full discussion can occur next year with the review being completed in 2009. The Committee also received information on the issue of 'stinky' whales. The paper dealt with the issue of 'stinky' whales and the need for (1) a definition of such whales for inclusion in the Schedule and (2) a proposal to be made as to how such inedible whales can be taken into account when setting catch limits where advice is provided by the *Gray whale SLA*. The Committee agreed that this matter should be referred to the Commission's ASW Sub-committee. It noted that the *SLA* approach provides advice on the 'need' requirements agreed by the Commission. If the question of 'stinky' whales was incorporated in a need statement then this could be dealt with by the *SLA*. It also agreed that the Committee (and the Commission) would be interested in

receiving a document reviewing the annual occurrence of stinky whales in the catch in recent years.

### 3.3.2 Discussion and recommendations

The Sub-committee endorsed the report of the Scientific Committee and its recommendations.

## 4. ADVICE ON OTHER GREENLANDIC STOCKS

### 4.1 Report of the Scientific Committee

The Chair of the SWG recalled that this item had been included on the agenda in response to a request made at the last Commission meeting by Denmark, and the Commission had agreed that this topic could be added to the Committee's workplan.

He noted that the Committee wished to draw the Commission's attention to the following concerns. It noted that it had done its best to provide this advice in the time available. However, it emphasised the difficulties surrounding the provision of *ad hoc* interim advice on catch limits. This is particularly true for new populations for which there has been relatively short notice that advice would be required and for which the Committee has not recently assessed their status. It believes that it is inappropriate to provide *ad hoc* interim advice for long time periods. That should be done through the development of *SLAs* that have been thoroughly tested for robustness to uncertainty and for which it has been agreed that they can meet the Commission's stated long-term management objectives. Any *ad hoc* interim advice must not be seen as a replacement for *AWMP SLAs* and its provision should not slow down their development. Given these concerns, he noted that the important question of time spans and *ad hoc* interim advice will be considered further at next year's annual meeting.

#### 4.1.1 Humpback whales

The Committee agreed that the appropriate management unit was the West Greenland feeding aggregation. This is part of the larger West Indies breeding population. The Committee received an abundance estimate from the 2005 aerial survey of 1,218 (95% CI 423-3,508). There was considerable discussion of this estimate and the analytical methods used in the Committee. Noting the negative biases as a result of not incorporating perception or availability bias, however, the Committee agreed that the new data suggest that West Greenland humpback whale abundance is probably higher than previously believed. It looks forward to the results from new surveys this year. The Committee also considered an assessment method. The Committee was not able to accept the method at this meeting for a number of reasons, particularly involving the issue of the allocation of historical catches.

Given these uncertainties, the Committee agreed that it was unable to respond to the request for management advice at this time. It noted that the lower confidence bound for abundance would be one which, if endorsed after future study (new abundance estimates should be available next year), might permit formulation of *ad hoc* interim management advice. It agrees that it will be in a better position to provide management advice at the next annual meeting. It also drew the Commission's attention to its view on the problems associated with the provision of *ad hoc* interim advice.

#### 4.1.2 Bowhead whales

The Committee noted its view that a single shared Eastern Canada-West Greenland stock in the eastern Arctic should be recognised as the working hypothesis and the need for a thorough discussion of stock structure, including comprehensive analyses of genetic data, at the next annual meeting. It also noted the new agreed abundance estimate of 1,230 bowhead whales (95% CI: 500-2,940; 90% CI: 570-2,550) in the survey area. This estimate does not reflect the total population size of the putative Eastern Canada-West Greenland stock, but only the animals present in West Greenland in the winter.

The Committee emphasised that no assessment of this putative stock has been undertaken. The new abundance estimate of whales wintering off West Greenland could form the basis of *ad hoc* interim advice since the Committee has in the past provided advice based on 1% of the lower 95% confidence limit of the abundance estimate. For the present estimate that would be five whales. However, the Committee draws the Commission's attention to its view on the problems associated with the provision of *ad hoc* interim advice. It also noted that it would carry out a full review of stock structure issues next year.

### 4.2 Discussion and recommendations

Denmark introduced the Greenland Home Rule Government White Paper on Hunting of Large Whales in Greenland (IWC/59/ASW 8) which includes: a brief review of Greenland's whaling history; an update of the current stocks of large whales found around Greenland; a summary of legislation and monitoring system regarding hunting of large whales; updated statistics and work on the welfare aspects of the hunt; and a discussion of current needs and motivation and future plans. In particular, it stressed that the present quotas do not fulfil the need of 670 tonnes of whale meat that had been agreed by the Commission in 1990; in fact they are short by over 220 tonnes and this did not take into account the increase in the population of Greenland since 1990. It noted that humpback whaling had a long history in Greenland before the quota was removed in 1986. Bowhead whales are found in the area near Disko Bay and could help alleviate the need in that area. It would return to the question of catch limits later in the agenda. A full statement is given as Appendix 6.

A number of points were raised in discussion. The UK indicated that it shared the concern of the Scientific Committee over requests for *ad hoc* advice. It commented that it believed that this may have led to less time for consideration on bowhead whales than was appropriate. Japan thanked the Scientific Committee for the manner in which it handled the request for interim advice and believed it was appropriate to give such advice whilst awaiting the development of an *SLA* approach.

Norway noted the concerns expressed by the NAMMCO Scientific Committee as well as the IWC Scientific Committee over the sustainability of the catches of white whales and narwhals in Greenland. It asked whether an increase in the catches of large whales such as bowheads and humpbacks could substitute for over-hunting of belugas and narwhals. Switzerland stated its belief that the IWC had responsibility for managing all cetaceans and asked whether the need calculations included small cetaceans. Denmark stated that it was not possible to give an answer at this stage to Norway but noted that it may be

possible to consider this further in a different context. It explained that the present calculation of need related to large whales in West Greenland only.

The Russian Federation complimented the Scientific Committee for its work and noted that there were problems with the issue of substitution of one type of whale meat for small cetacean meat. Moreover, for Russian native people it is not possible even to substitute meat from bowhead whales with meat from gray whales. The priority issue should be to maintain the health and historical and traditional dietary needs of native peoples.

A number of comments were made with respect to the need request being expressed in tonnes of whale meat rather than in numbers of animals, as was generally the case. Austria and Germany questioned the basis for the conversion factors used in the document and the latter asked if these had been reviewed by the Scientific Committee. The UK commented that it believed need should be expressed in a common way for all fisheries.

The Chair of the SWG noted that the Scientific Committee's primary concern is with numbers of animals as this is how it can examine sustainability of populations. While it could comment on weights of animals, this could not be equated with weights of edible products. It had recognised the need for consideration of the multispecies nature of the Greenlandic hunt and would take this into account when developing *SLAs*. The question of need was the province of the Commission's ASW Sub-committee.

Denmark referred to table 6 of IWC/59/ASW8 and the conversion factors therein (8 metric tonnes for humpback whales, 10 tonnes for fin whales and 2 tonnes for minke whales). There was no conversion factor as yet for bowhead whales.

Iceland and Dominica both supported the approach of the Scientific Committee agreeing that sustainability was the primary consideration, whilst stressing the need to then try to meet dietary and cultural needs.

After this exchange of views the Sub-committee noted the report of the Scientific Committee and its recommendations.

## 5. ABORIGINAL WHALING SCHEME (AWS)

### 5.1 Report of the Scientific Committee

The Chair of the SWG noted that in 2002, the Committee had developed scientific aspects of an aboriginal whaling scheme (AWS) intended for use in conjunction with the *Bowhead SLA*. These proposals were agreed by the Scientific Committee and reported to this Aboriginal Whaling Sub-committee (the specifications can be found in *Ann. Rep. Int. Whaling Comm. 2002: 74-5*). He reported that the Scientific Committee again **recommends**, as it has done each year, the scientific components of an aboriginal whaling management scheme to the Commission, noting that they form an integral part of the long-term use of *SLAs*. It will keep this item on its agenda.

### 5.2 Discussion and recommendations

The Sub-committee endorsed the report of the Scientific Committee and noted its recommendations.

## 6. ABORIGINAL SUBSISTENCE WHALING CATCH LIMITS

### 6.1 Bering-Chukchi-Beaufort Seas stock of bowhead whales

#### 6.1.1 Report of the Scientific Committee

The Chair of the SWG reported that in 2006, a total of 39 bowhead whales were struck, resulting in 31 animals landed, of which 21 were males and 10 were females. Ice and weather conditions challenged hunters during spring, resulting in the lowest spring harvest ( $n=5$ ) for the past 35 years. This contributed to an overall lower harvest in 2006 when compared to the previous 10 years. No catches were taken of bowhead whales off Russia due to adverse ice and weather, as well as technical issues.

After full consideration of the stock structure discussions, the Committee strongly recommended that the *Bowhead SLA* remains the best tool for providing management advice on bowhead whaling, noting that it was robust to a wide range of stock structure hypotheses. The results from the *SLA* showed that the present strike and catch limits are acceptable. The *SLA* has been run assuming 67 strikes per year i.e. 335 strikes for the 5-year block; a strike is always assumed to result in death. Between block and between year carryover is allowed under the proposed AWS.

#### 6.1.2 Discussion and recommendations

The Need Statement for the USA was presented by Harry Brower, Chairman of the Alaska Eskimo Whaling Commission (SC/59/ASW6 and Appendix 4).

The Russian Federation reminded the Sub-committee of the importance of bowhead whales to the people of Chukotka (and see IWC/59/ASW 3). It also noted the practical difficulties it faced in relation to taking its full need. Technical reports and data indicate a requirement of at least 10 bowhead whales annually but at this point they could not take more than 5 bowhead whales with 2 'struck and lost'. This amount was reached in agreement with the USA within the existing quota. It wished maintain the *status quo*. It also reminded the Sub-committee of its previous comments that replacement of bowhead whales with gray whales was not an option.

Austria remarked on the availability of whale products in the Anchorage shops and that there was no CITES information with those products. They sought advice from the US regarding sales and or seizures in the US and questioned whether it was really subsistence whaling if products were sold. The US noted this was a discussion which had a long history in the IWC and the use of non-edible products for handicrafts was an accepted practice. Export was regulated in accordance with CITES rules. However, it was legal for such products to be sold in the USA.

After this discussion the Sub-committee endorsed the report of the Scientific Committee and its recommendations.

### 6.2 North Pacific Eastern stock of gray whales

#### 6.2.1 Report of the Scientific Committee

The Chair of the SWG reported that during the Russian aboriginal hunt for gray whales in 2006, a total of 129 gray whales were landed (including 55 males and 74 females) and 5 gray whales were struck and lost. Only 16 of the 22 whaling villages in Chukotka were able to participate in the

hunt due to severe ice and weather conditions, and for technical reasons. Five inedible whales (known as 'stinky' whales) were caught.

The Committee **reaffirms** its advice from last year that the *Gray whale SLA* remains the most appropriate tool for providing management advice for this harvest. The results from the *SLA* show that the present strike and catch limits are acceptable (a total catch of up to 620 for the five year block). An *Implementation Review* is scheduled for 2009.

#### 6.2.2 Discussion and recommendations

The Russian Federation noted the extensive work on the needs of the Russian aboriginal people since 1982 and introduced IWC/59/ASW3. This document indicates annual requirements of 350 gray whales and 5 bowheads and that approximately one third of the 1960s/1970s harvest is currently undertaken; this reflects practical difficulties associated with the changing political situation. While annual needs have been estimated at about 100kg per person, the reality is currently that only about 30kg per person are obtained. In addition, in recent years the problem of stinky whales has emerged, reducing the amount of available quota for consumption while native populations are increasing. Despite the disparity between needs and current quota, for the present, the Russian Federation indicated its willingness to maintain the *status quo*.

The Makah Tribe presented their needs statement (Appendix 5). Austria requested clarification of US domestic law concerning the Makah hunt. The US explained that the Makah Tribe have applied for a waiver of the US Marine Mammal Protection Act and that application is pending.

After this discussion, the Sub-committee endorsed the report of the Scientific Committee and its recommendations.

### 6.3 North Atlantic humpback whales off St. Vincent and The Grenadines

#### 6.3.1 Report of the Scientific Committee

The catch in 2007 for St. Vincent and The Grenadines was reported to be one female; it was not accompanied by a calf and was not lactating.

The Committee was informed that genetic samples for the whales caught in 2005, 2006, and 2007 have been collected and plans for analysis are in place. Fluke photographs for the 2000, 2003, 2005, and 2006 catches had been submitted for comparison to the North Atlantic Humpback catalogue, and no matches were identified. It welcomed this information and particularly commended the collection of genetic samples and fluke photos. It strongly encouraged the continued collection of such data from future catches.

The Committee agreed that the animals found off St. Vincent and The Grenadines are part of the large West Indies breeding population. The Commission adopted a total block catch limit of 20 for the period 2003-07. The Committee agreed that renewal of this catch limit for another 5-year block will not harm the stock.

#### 6.3.2 Discussion and recommendations

St. Vincent and The Grenadines referred the Sub-committee to IWC/54/AS7 which established their needs for take of humpback whales and noted their requirement for an annual quota of 4 humpback whales. They encouraged the Sub-committee to recommend for St.

Vincent and The Grenadines a humpback take not to exceed 20 for the period 2008-2012.

The United Kingdom congratulated St. Vincent and The Grenadines on providing appropriate genetic and photo-identification data.

The Sub-committee endorsed the report of the Scientific Committee and its recommendations.

### 6.4 Minke whale stocks off Greenland

#### 6.4.1 Report of the Scientific Committee

The Chair of the SWG reported the following catch information for 2006 for common minke whales: East Greenland: 2 common minke whales landed (2 males; 0 females; plus 1 struck and lost); West Greenland: 175 common minke whales landed (43 males; 128 females; 4 unidentified sex; plus 6 struck and lost).

##### 6.4.1.1 WEST GREENLAND

The Chair of the SWG reported that the Committee had stressed that it is in a considerably stronger position than it has been in recent years. There was a new abundance estimate from the 2005 aerial survey of 10,800 with 95% confidence interval 3,600-32,400 (see IWC/59/Rep1, item 8.2.3). Considerable progress had been made on developing an assessment method incorporating sex ratio data. It believes that it will be possible to make a final recommendation on whether this method can be used to give management advice in the short (5-year) term and if so, to provide that advice. Should this work prove successful, it would open the door to beginning development of a full *SLA* approach for providing long-term advice.

Questions about stock structure remain. Although the survey estimate does not apply to the whole population available it is not known by how much. This issue will be addressed should the proposed assessment method prove to be applicable next year. However, despite the great improvement, the Committee remains concerned that it is not in a position to give authoritative advice on safe catch limits this year. Given that, it agreed that it is not possible for it to give more than interim *ad hoc* advice for the forthcoming season, noting that it believed that there was a reasonable chance that it would be in a position to provide advice at the 5-year block timescale next year. Therefore, the Committee recommended that any quota established by the Commission on the basis of the interim *ad hoc* advice below be limited to one year only.

While the Committee does not feel in a position to recommend a single number, it offered the following advice to the Commission, following the approach of last year: under the assumption that (a)  $MSYR_{mat}$  is 3%<sup>1</sup>; (b) that the true population has a sex ratio of 1:1; and (c) that the population is underestimated by factors between 2 and 2.7<sup>2</sup>, the estimated annual replacement yield ranges from about 170 to 230 whales if the lower bound of the revised 2005 aerial survey estimate is used.

The Committee agreed that the Commission should exercise caution when setting catch limits for this stock. It

<sup>1</sup>The Committee has elsewhere suggested that the likely value for common minke whales lies towards the upper end of the range 1-4% (*J. Cetacean Res. Manage. (Suppl.)* 6: 10 [2004]).

<sup>2</sup>Although not accepted as appropriate to use to provide management advice at this meeting, the value of 2.7 is broadly compatible with the results of the methods that attempted to use sex ratio information to obtain a lower bound for the total population abundance.

emphasised its strong recommendation that safe long-term management of aboriginal whaling is best accomplished under an agreed AWMP *SLA*. It therefore agreed that development of an *SLA* for this fishery should begin as soon as practical.

Finally, the SWG noted that new aerial and shipboard surveys will be undertaken this summer and autumn as part of the extensive T-NASS survey endorsed by the Committee last year and it expects new abundance estimates to be provided next year.

#### 6.4.1.2 EAST GREENLAND

The Chair of the SWG reported that no new information on stock structure, abundance or trends was available this year. However, catches off East Greenland are believed to come from the Central stock of minke whales. The Committee notes that the present catch limit represents a very small proportion of the Central stock that numbers well over 60,000 animals. The Committee agreed that the present catch limit of 12 animals poses no threat to the stock. New abundance estimates will be available from the forthcoming T-NASS survey.

#### 6.4.2 Discussion and recommendations

General discussion of all of the Greenland catch limits was taken under Item 6.6.

### 6.5 West Greenland stock of fin whales

#### 6.5.1 Report of the Scientific Committee

The Chair of the SWG noted that the catch of West Greenland fin whales in 2006 was 9 landed fin whales (2 males; 6 females; 1 unidentified sex; plus 1 'struck and lost').

The Committee was very pleased this year to have an agreed assessment method for the first time for West Greenland fin whales. In addition, there is a new estimate of 3,200 whales in 2005 with a 95% confidence interval of 1,400-7,200. The Committee therefore believed that it was able to provide interim management advice for this stock for the 5-year block period. The assessment results suggest that this fin whale stock is above its maximum sustainable yield level - perhaps considerably above it.

The Committee recommended the following advice to the Commission: for the preferred estimate of productivity, the estimated posterior median for  $Q_i$  is 26 while the lower 5% credibility value is 14; the comparable values for current depletion shows the stock to be at 97% and 75% of its initial size, respectively<sup>3</sup>.

Although the Committee is pleased to be in a position to provide this interim advice, it emphasised that safe long-term management of aboriginal whaling is best accomplished under an agreed AWMP *SLA*. It therefore agreed that development of an *SLA* for this fishery should begin immediately.

### 6.6 Catch limits for other large whales off Greenland

#### 6.6.1 Discussion and recommendations

Greenland referred to (IWC/59/ASW8) and then presented its request for catch limits for the forthcoming five year block. For the West Greenland area the request is for:

- (1) a quota of 200 minke whales struck annually (the range in the Scientific Committee report is 170-230), including a carry-over of maximum 15 non-used quotas in the following year, with an annual review of data as suggested by the Scientific Committee;
- (2) a quota of 19 fin whales struck annually (the Scientific Committee had given a range of 14-26);
- (3) a quota of 10 humpback whales struck annually, including bycaught animals but postponed until 2008 after the Scientific Committee's review; and
- (4) a quota of 2 bowhead whales struck annually and including bycaught animals (the Scientific Committee had stated up to 5).

For the East Greenland area the request is for an annual quota of 12 minke whales struck, including a carry-over of maximum 3 non-used quotas (the Scientific Committee had stated that this was acceptable).

In response to a question from Austria about whether these whales were the same whales that the Commission had in the past been concerned about even a single take from Canada, the Chair of the SWG clarified that this was before the Scientific Committee had received new information in recent years clarifying stock structure. Where once there were thought to be several small stocks, the Committee's working hypothesis now is that there is a single larger eastern Canada/West Greenland stock. The Scientific Committee is planning a major review of stock structure next year.

The UK indicated that while it recognised Greenland's long whaling tradition, it was not happy with its proposed catch limits. Given concerns over abundance estimates of Western Greenland minke whales it believed that it was less than precautionary to increase the take from 175 to 200. While they recognise the Scientific Committee's interim advice that a limited take of bowheads may be sustainable, it believed that that advice was equivocal. With respect to humpback whales, the UK referred to the problems with *ad hoc* advice. It requested Greenland to further reflect on these matters. There was support for this approach from Brazil, Germany, Chile, Netherlands, Switzerland and Luxembourg.

Iceland noted that in light of the advice of the Scientific Committee, and taking into account information that it had from the NAMMCO Scientific Committee, they could support the proposal from Greenland, which it believed in general could be seen as conservative.

Norway commented that its view was that it was important to consider the advice of the Scientific Committee when considering the Greenlandic request. It therefore proposed that it could accept for the full five years the catch of 19 fin whales and 2 bowhead whales. For common minke whales off West Greenland it could accept the value of 200 proposed for 2008, with a review of the limits for 2009-2012 next year in the light of the Scientific Committee's advice at that time. With respect to humpback whales, it could support the proposed catch of 10 (noting the view of NAMMCO's Scientific Committee) for 2008, with a review of the limits for 2009-2012 next year in the light of the Scientific Committee's advice at that time.

Denmark noted that it could accept the Norwegian suggestion. A number of other countries including Grenada, the Russian Federation, St. Vincent and The

<sup>3</sup> $Q_i$  is a quantity of that allows the proportion of the net recruitment allocated to recovery to increase if the stock is believed to be depleted. There is a 50% probability that the correct value of  $Q_i$  is really below (or above) the posterior median estimate given here, and a 95% probability that it is below (above) the lower 5% credibility limit.

Grenadines, St. Lucia, Dominica and Japan supported the Norwegian proposal. Japan also commented that IWC members should work to seek consensus and not take the ASW quotas to a vote in Plenary.

The Sub-committee noted the report of the Scientific Committee and its recommendations.

## 7. OTHER MATTERS

No other matters were raised.

## 8. ADOPTION OF THE REPORT

The report was adopted 'by post' on 26 May 2007.

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### Appendix 1

#### LIST OF PARTICIPANTS

##### Argentina

Miguel Iñiguez

##### Australia

Donna Petrachenko  
Philip Burgess (Rapporteur)  
Zena Armstrong  
Lesley Gidding  
Pam Eiser  
Andrew McNee

##### Austria

Andrea Nouak  
Michael Stachowitsch

##### Belgium

Alexandre de Lichtervelde  
Koen Van Waerebeek

##### Brazil

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Leif Fontaine  
Ole Heinrich  
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##### Dominica

Lloyd Pascal  
Andrew Magloire

##### Ecuador

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Nancy Hilgert  
Cristina Castro

##### Finland

Esko Jaakola  
Penina Blankett

##### France

Stephane Louhaur  
Vincent Ridoux

##### Germany

Marlies Reimann  
Lars Puvogel

##### Grenada

Justin Rennie  
Frank Hester

##### Iceland

Stefán Ásmundsson  
Gisli Víkingsson

##### Italy

Riccardo Rogillo  
Caterina Fortuna  
Frederico Cinquepalmi

##### Japan

Minoru Morimoto  
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Shigeki Takaya  
Jiro Huagiji  
Ryoichi Nakamura  
Kayo Ohmagari  
Dan Goodman  
Saemi Baba (I)

##### Republic of Korea

Chiguk Ahn  
Yong Rock An  
Hyun Jin Park

##### Mexico

Lorenzo Rojas-Bracho

##### Netherlands

Maaïke Moolhuijsen

##### New Zealand

Geoffrey Palmer  
Jan Henderson

Michael Donoghue  
Indra Prasad

##### Norway

Turid Eusébio  
Halvard Johansen (Chair)  
Hild Ynnesdal  
Lars Walløe  
Egil Øen

##### Russian Federation

Valentin Ilyashenko  
Rudolf Borodin  
Igor Mikhno  
Alexey Ottoy  
Nikolai Etyne  
Gennady Inankeuyas  
Vladimir Etylin  
John Tichotsky (I)

##### Spain

Carmen Asencio

##### St. Vincent and The Grenadines

Raymond Ryan

##### Sweden

Bo Fernholm

##### Switzerland

Bruno Mainini

##### UK

Richard Cowan  
Trevor Perfect  
Paul Dolder  
James Gray  
Laurence Kell  
Panayiota Apostolaki  
Mark Simmonds  
Jennifer Lonsdale

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Bill Hogarth  
Doug DeMaster  
Cheri McCarty  
Roger Eckert  
Emily Lindow  
Shannon Dionne

Robert Brownell  
 Brad Smith  
 John Field  
 Rollie Schmitt  
 Michael Tillman  
 Heather Rockwell  
 Micah McCarty  
 Keith Johnson

John Arum  
 Brian Gruber  
 Anne Renker  
 Stanley Speaks  
 Harry Brower  
 Edward Itta  
 George Noongwook  
 Merlin Koonooka

Raymond Hawley  
 Eugene Brower  
 Kirsten Erickson  
 Shannon Bettridge

**Secretariat**  
 Greg Donovan

## Appendix 2

### AGENDA

1. Introductory items
  - 1.1 Appointment of Chair
  - 1.2 Appointment of rapporteur
  - 1.3 Review of documents
2. Adoption of the Agenda
3. Aboriginal Subsistence Whaling Management Procedure
  - 3.1 Progress with the Greenlandic Research Programme (regarding fin and minke whales)
    - 3.1.1 Report of the Scientific Committee
    - 3.1.2 Discussion and recommendations
  - 3.2 *Implementation Review* for bowhead whales
    - 3.2.1 Report of the Scientific Committee
    - 3.2.2 Discussion and recommendations
  - 3.3 Preparation of the *Implementation Review* for gray whales
    - 3.3.1 Report of the Scientific Committee
    - 3.3.2 Discussion and recommendations
4. Advice on other Greenlandic stocks
  - 4.1 Report of the Scientific Committee
  - 4.2 Discussion and recommendations
5. Aboriginal Whaling Scheme (AWS)
  - 5.1 Report of the Scientific Committee
  - 5.2 Discussion and recommendations
6. Aboriginal subsistence whaling catch limits
  - 6.1 Bering-Chukchi-Beaufort Seas stock of bowhead whales
    - 6.1.1 Report of the Scientific Committee
    - 6.1.2 Discussion and recommendations
  - 6.2 North Pacific Eastern stock of gray whales
    - 6.2.1 Report of the Scientific Committee
    - 6.2.2 Discussion and recommendations
  - 6.3 North Atlantic humpback whales off St. Vincent and The Grenadines
    - 6.3.1 Report of the Scientific Committee
    - 6.3.2 Discussion and recommendations
  - 6.4 Minke whale stocks off Greenland
    - 6.4.1 Report of the Scientific Committee
    - 6.4.2 Discussion and recommendations
  - 6.5 West Greenland stock of fin whales
    - 6.5.1 Report of the Scientific Committee
    - 6.5.2 Discussion and recommendations
  - 6.6 Catch limits for other species off West Greenland
7. Other matters
8. Adoption of the Report

### TERMS OF REFERENCE

The Terms of Reference of the Aboriginal Subsistence Whaling Sub-committee are to consider the relevant information and documentation from the Scientific Committee, and to consider nutritional, subsistence and cultural needs relating to aboriginal subsistence whaling

and the use of whales taken for such purposes, and to provide advice on the dependence of aboriginal communities on specific whale stocks to the Commission for its consideration and determination of appropriate management measures (*Rep. int. Whal. Comm.* 48: 31).

### Appendix 3

#### ABORIGINAL SUBSISTENCE WHALING (ASW) CAUCUS STATEMENTS

##### (A) From the meeting in 2006

On 10 June 2006, aboriginal subsistence whalers from the countries of Denmark on behalf of Greenland, the Russian Federation, and the USA met for a historic first-time meeting to share information on whale killing methods and animal welfare issues. The meeting participants consisted of the Organization of Fishermen and Hunters in Greenland, the Association of Traditional Marine Mammal Hunters of Chukotka, the Alaska Eskimo Whaling Commission, and the Makah Whaling Commission. On behalf of these groups, we would like to thank the organizing committee of the IWC Workshop on Whale Killing Methods for recognizing the need to involve the aboriginal subsistence hunters in the workshop and their recognition of the need to seek practical solutions in advancing the recommendations of the workshop.

We unanimously agreed that in our communities, subsistence whaling is a critical activity; providing food for nutrition and serving to reinforce and maintain our cultural identity. As subsistence hunters, our traditions and our concern for other living creatures dictate a rapid and humane death for the whales we hunt. The most highly respected hunters are those who can take a whale quickly, humanely, and efficiently. This also serves a practical purpose since the more quickly a whale can be taken, the less chance it will be lost. Finally, we recognize and agree that in all hunting situations human safety must be given first priority.

We agreed to four major points affecting each aboriginal hunt:

- (1) Subsistence hunting is for food to meet cultural and nutritional needs. It guarantees the sustainable survival of the Native people. The human health of our peoples depends on the consumption of traditional marine mammal products.
- (2) The safety of his crew is a whaling captain's most important responsibility. For example, in the past five years, from one to six hunters annually collectively have died in the Chukotka Native and Alaska Eskimo hunts.
- (3) With safety assured, achieving a humane death for the whale is the highest priority.
- (4) Efforts to modernize our whaling equipment and practices can be made only within the context of each community's economic resources and the need to preserve the continuity of our hunting traditions.

As aboriginal subsistence whalers, we welcome the opportunity to consider incorporating more technologically advanced equipment into our traditional hunts. As we consider these opportunities, we also find that they present us with challenges. We each come from small communities with limited economic resources. Therefore, acquiring more expensive, modern equipment can prove difficult if not impossible. It is also important to be aware that innovations in our hunting techniques must be consistent with our traditional equipment and practices, or we risk losing the very culture we are working to conserve.

Training in whale hunting methods is a critical aspect in continuing the traditional subsistence whale hunt. All

aboriginal groups spend significant resources and time on training. Training guarantees efficiency, safety, and transfer of traditional knowledge from the older generation to the younger generation.

In discussions on time to death, we agreed that from a practical standpoint, we accept the 1990 IWC indicators of death which include: open jaw, slack flippers and cessation of movement which also are consistent with our traditional indicators. However, each aboriginal subsistence hunter may assess them differently. We noted several differences among our hunts, including differences in environmental conditions, differences in the species we hunt, and differences in the equipment we use. There are no 'textbook' solutions that can apply to all aboriginal subsistence whale hunts.

We also noted similarities in that all aboriginal subsistence whalers show respect for the animal. As whaling captains, each of us gives greatest priority to the safety of our crew members. Once a whale is struck, we look for indicators that the whale has died, but we recognize that these are just indicators and are not guarantees. So each captain, to protect his crew, gives the whale an additional amount of time based on his experience and judgment. Therefore, when asked to report the time to death, the best we can offer is an estimate.

In summary, we benefited from this opportunity to talk and learn about each other's hunting methods and found many similarities. We noted differences in environmental conditions and cultural traditions of our hunts. But, it is clear that within each of our cultures, achieving safe, humane, and efficient harvest methods is the most important goal of our subsistence hunts provided that it is economically viable and consistent with our traditions.

##### (B) From the meeting in 2007

Representatives of aboriginal subsistence whaling (ASW) groups, including the Alaska Eskimo Whaling Commission (AEWC), the Makah Tribe, the whale hunters of Chukotka, the Organisation of Fishermen and Hunters of Greenland, and St. Vincent and the Grenadines, met in caucus on 21 May 2007 to discuss issues of mutual importance in advance of the 59<sup>th</sup> Annual Meeting of the International Whaling Commission. This statement reflects the consensus position of all aboriginal subsistence whaling groups.

"Mr. Chairman, IWC/58 was a historic meeting for the Aboriginal Subsistence Whaling countries. They met in unity for the first time and developed a statement of principles for the ASW countries and their whaling communities. IWC/59 is a significant year to ASW countries and we wish to comment on the Commission's review of aboriginal subsistence catch limits as that review may affect our traditional way of life.

Most of the aboriginal hunts have a history that goes back many centuries - in fact more than 3,000 years - and over that time our people have accumulated a huge store of traditional knowledge about whales, about the sea and about the weather, and developed the appropriate equipment, boats and weapons as well as our own humane methods and hunting techniques. The whale is a large part

of our traditions and cultures, and needed for subsistence. In accordance with our traditions, we are determined to take measures to conserve whales and pass on our whale hunting culture and traditions to the next generations. We see ourselves as part of our environment. For many centuries our native peoples have shown the world excellent examples of conservation and rational, sustainable use of natural resources. We don't take from the environment more than we need for food and supporting the life of our coastal communities. We ask the IWC to respect our way of life.

Specifically, we ask the IWC to consider that all issues relating to aboriginal subsistence whaling should be decided at the IWC by consensus, which will serve as recognition of the right of aboriginal peoples to obtain their traditional food in their traditional way. Decision by consensus also will serve as recognition of their nutritional and cultural reliance on these traditional practices. And we ask that the IWC make its decision based on reason and science and not political expediency.

In 2007, the Commission must establish quotas for all whale stocks under its jurisdiction that are subject to aboriginal subsistence whaling. All members of ASW caucus express mutual support for quotas that are consistent with the Commission's conservation objectives and meet aboriginal subsistence needs.

The ASW caucus understands that certain members of the Commission have raised concerns about the term 'aboriginal subsistence whaling' in the Schedule. However, no specific changes to the term 'aboriginal subsistence whaling' have yet been proposed. The caucus believes that any changes to the term 'aboriginal subsistence whaling' may have significant legal consequences, both at an international and domestic level.

During the first meeting of the ASW caucus, we reviewed parameters for the IWC concept of 'time to death' and concluded that 'from a practical standpoint, we accept the 1990 IWC indicators of death which include:

open jaw; slack flippers; and cessation of movement which also are consistent with our traditional indicators. However, each aboriginal subsistence hunter may assess them differently. We noted several differences among our hunts, including differences in environmental conditions, differences in the species we hunt, and differences in the equipment we use. There are no 'textbook' solutions that can apply to all aboriginal subsistence whale hunts... [t]herefore, when asked to report the time to death, the best we can offer is an estimate.

In general we agree with the principle of minimizing time to death, but because safety of whaling crews is the first priority, it must be left to the discretion of each captain to manage time to death issues. We will continue to provide the IWC with the best possible data under the respective circumstances of each aboriginal hunt.

We recall and restate the second major point of our statement from the 2006 meeting: 'The safety of his crew is a captain's most important responsibility.'

The ASW caucus will continue to support the collection of data as currently requested by the IWC. We have concerns over potential misuse of new data. We are on record with our 2006 statement and its four points in reference to this data.

The ASW caucus discussed the Chukotkan whalers' take of 'stinky' whales. The Chukotkan whalers have proposed that since the AWMP *Implementation Review* will occur in 2009, the definition of 'stinky whale' for the ICRW Schedule and solution of how 'stinky' whales will be considered by the AWMP and *SLA* need to be adopted by the next IWC session in 2008. The ASW caucus supports the Chukotkan whalers proposed approach, which is consistent with achieving conservation goals.

The ASW caucus intends to conduct regular meetings to discuss issues of mutual concern and expects to provide consensus recommendations to the Commission at future meeting."

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## Appendix 4

### QUANTIFICATION OF SUBSISTENCE AND CULTURAL NEED FOR BOWHEAD WHALES BY ALASKA ESKIMOS: 2007 UPDATE BASED ON 2000 US CENSUS DATA

#### INTRODUCTION

This document is essentially identical to the previously prepared 2002 'Update based on 2000 US Census data' (Stephen R. Braund and Associates [SRB and A] 2002) and is resubmitted at this time to provide a current (2007) subsistence and cultural need statement. As in 2002, this needs assessment relies on the 2000 US Census. The quantification of subsistence and cultural need for bowhead whales by Alaska Eskimos has not been updated with 2007 population information because the last US Census was in 2000 and the next US Census will not be conducted until 2010.

In previous subsistence and cultural needs assessments submitted to the International Whaling Commission (IWC) for years between the decennial US Census, the calculation depended on the most current Alaska Department of Labor Data population estimates for the communities multiplied by the percent Native from the 1980 and 1990 US Census. However, the most reliable information for assessing subsistence and cultural need using the IWC accepted method is to rely on the US Census. Thus, the 2007 needs assessment is based on the 2000 US Census and is the same as the 2002 needs calculation.

Like the 2002 report, this document is intended to be an addendum to SRB and A (1997)<sup>4</sup>. The 1997 report should be read in conjunction with this document as the former report provides relevant discussion and references for the historic context of this report. That discussion is not repeated in this brief report.

This report provides the seventh (although identical with the sixth) calculation of subsistence and cultural need for bowhead whales by Alaska Eskimos and is based on the same methodology used in the previous six 'needs' assessments. The first calculation of subsistence and cultural need submitted to the IWC was undertaken in 1983 (US Government, 1983<sup>5</sup>). The second calculation was submitted to the IWC in 1988 (Braund *et al.*, 1988<sup>6</sup>) when more extensive research provided additional historical whaling and human population data. The 1988 study used the most recent Eskimo population data available at that time, ranging from 1983 to 1987, to calculate current need. The third calculation of need, performed in 1992, was based on 1990 US Census population data. This update was presented to the Alaska Eskimo Whaling Commission (AEWC), but not to the IWC (SRB and A, 1992<sup>7</sup>). The

fourth calculation of need was conducted in 1994 based on July 1, 1992 population data generated by the State of Alaska, Department of Labor (SRB and A, 1994<sup>8</sup>). The fifth calculation (fourth presented to the IWC) was based on July 1, 1997 population data generated by the State of Alaska, Department of Labor (SRB and A, 1997<sup>9</sup>). The calculation of need for the 2002 and this report relies on 2000 US Census data. This is the third time since 1983 that US Census data have been used for the Alaska Eskimo needs calculation. All of the calculations of need since 1988 utilize the same method that was accepted by the IWC in 1988.

#### 2007 UPDATE BASED ON 2000 US CENSUS DATA

In preparation for the May 2007 IWC meeting, the Alaska Eskimo Whaling Commission (AEWC) requested an update of cultural and subsistence need for bowhead whales. Because the most reliable population information is from the US Census, this update is based on the 2000 US Census data for the 10 Alaska bowhead whaling communities. The 1997 update was based on the five year old 1997 population information. Furthermore, the human population estimates used in 1997 were based on estimates provided by the Alaska State Demographer (ADOL, 1997<sup>10</sup>) for each year (e.g., 1991-1997) since the 1990 US Census. The Alaska State Demographer prepares these updates annually and they include the total population (Native and other) in each of the communities and do not contain any information related to race. The Native population then has to be estimated from these total population data. Estimating the Native population in the ten Alaska bowhead whaling communities between decennial censuses is a complex process that relies on the Alaska Department of Labor population estimates and then applies the percent Native American from the latest (e.g., 1990 or 2000) US Census to these annual population estimates (see SRB and A (1997): tables 2 and 3). However, the 2000 US Census has race information, and the Alaska Native population in each of the whaling communities is reported. For this reason, the 2000 US Census is used for the 2007 needs update. Applying the IWC accepted method of calculating need (see Braund, Stoker and Kruse, 1988), SRB and A updated need based on 2000 US Census data. The only variable that has changed since 1988 for this calculation is the Alaska Native population for the ten whaling communities.

Only the Native population of each community is considered. The 2000 US Census Alaska Native population data represent 'American Indian or Alaska Native alone or

<sup>4</sup>Braund, S.R. and Associates. 1997. Quantification of subsistence and cultural need for bowhead whales by Alaska Eskimos - 1997 update based on 1997 Alaska Department of Labor Data. prepared for The Alaska Eskimo Whaling Commission, Barrow, Alaska.

<sup>5</sup>US Government. 1983. Report on Nutritional, subsistence and cultural needs relating to the catch of bowhead whales by Alaskan Natives. Submitted to the 35<sup>th</sup> Annual Meeting of IWC.

<sup>6</sup>Braund, S.R., Stoker, S.W. and Kruse, J.A. 1988. Quantification of subsistence and cultural need for bowhead whales by Alaska Eskimos. Stephen R. Braund and Associates, Anchorage, Alaska. Submitted to the 40<sup>th</sup> Annual Meeting of IWC as TC/40/AS2.

<sup>7</sup>Braund, S.R. and Associates. 1992. Quantification of subsistence and cultural need for bowhead whales by Alaska Eskimos - 1992 update based on 1990 US Census. Prepared for the Alaska Eskimo Whaling Commission, Barrow, Alaska.

<sup>8</sup>Braund, S.R. and Associates. 1994. Quantification of subsistence and cultural need for bowhead whales by Alaska Eskimos - 1994 update based on 1992 Alaska Department of Labor Data. Prepared for the Alaska Eskimo Whaling Commission, Barrow, Alaska.

<sup>9</sup>Braund, S.R. and Associates. 1997. Quantification of subsistence and cultural need for bowhead whales by Alaska Eskimos - 1997 update based on 1997 Alaska Department of Labor Data. prepared for The Alaska Eskimo Whaling Commission, Barrow, Alaska.

<sup>10</sup>Alaska Department of Labor, Research and Analysis Section. 1997. Alaska population overview - 1997 estimates (forthcoming 1998). Table 4.2. Population of places by Borough and Census Area, 1990-1997.

in combination with one or more other races.’ Based on 2000 US Census data, the number of bowheads needed by each community and by the region as a whole (all ten communities) is derived by multiplying the mean number of whales landed per capita over the base time period (1910-1969) by the 2000 Alaska Native population for each community and for the region as a whole. Using this method, the need for each community is shown on Table 1. Based on the 2000 census data, the cultural and subsistence

need in the ten Alaska Eskimo communities is 56 landed bowhead whales (58 if rounded up). In 1997 and 2002, it was also 56 landed bowheads. Applying the mean of 0.008621 bowhead landed *per capita* for all ten communities for the historical period (1910-1969) to the 2000 regional Native population of 6,633 results in a 2000 regional cultural and subsistence need of 57 landed bowhead whales. In 1997, this regional calculation was 56 landed bowhead whales.

Table 1  
Ten Alaska Eskimo whaling villages’ subsistence and cultural need for landed bowhead whales, 2000.<sup>1</sup>

Community	Number of observations <sup>2</sup>	Total Eskimo population for each year of a bowhead observation <sup>3</sup>	Number of bowheads landed 1910-1969 <sup>4</sup>	Mean landed <i>per capita</i> 1910-1969 <sup>5</sup>	2000 Alaska Native population <sup>6</sup>	2000 bowhead need (landed) <sup>7</sup>	2000 need (landed) rounded <sup>8</sup>
Gambell	39	11,883	68	0.005722	622	3.6	4
Savoonga <sup>9</sup>	0	-	-	0.005722	614	3.5	4
Wales	42	6,907	5	0.000724	137	0.1	1
Diomede <sup>10</sup>	30	3,250	11	0.003678	137	0.5	1
Kivalina	7	926	3	0.003240	364	1.2	1
Point Hope	50	12,467	209	0.016764	686	11.5	12
Wainwright	49	10,723	108	0.010072	508	5.1	5
Barrow	60	44,687	379	0.008481	2,933	24.9	25
Nuiqsut <sup>9</sup>	0	-	-	0.008481	386	3.3	3
Kaktovik	3	327	3	0.009174	246	2.3	2
Totals	280	91,170	786		6,633	55.9	58
Region <sup>11</sup>	208	91,170	786	0.008621	6,633	27.2	57

<sup>1</sup>Subsistence and cultural need is based on historic per capita harvest per community multiplied by the 2000 Alaska Native population of each community.

<sup>2</sup>The number of observations represents the number of years for which data on landed whales were available for each community (See Appendices 1 and 2 of Braund, Stoker and Kruse (1988) and Table 1 of SRB and A (1991\*)).

<sup>3</sup>Total Eskimo population represents the sum of the Eskimo population for each year there was an observation of a landed bowhead whale (only includes the 1910-1969 ‘Base Period,’ see Braund, Stoker and Kruse (1988)).

<sup>4</sup>Number of bowheads landed represents the sum of the observed bowheads landed between 1910 and 1969.

<sup>5</sup>The mean landed bowhead whales per capita is based on the total number of whales landed between 1910 and 1969 for each community divided by the sum of the total Eskimo population for each village for each year landed whale data existed between 1910 and 1969 (See Appendices 1 and 2 in Braund, Stoker and Kruse (1988) and Tables 1 and 3 in SRB and A (1991)). The sum of the total Eskimo population was calculated by adding the Population estimates for each community for each year that there was a landed whale observation. For example, Barrow’s 389 landed whales from 1910-1969 was divided by the total Eskimo population sum of 44,687 for this 60 year period (i.e., 379 divided by 44,687 = 0.008481).

<sup>6</sup>2000 Alaska Native population data for each community are from the 2000 US Census. They represent the category ‘American Indian or Alaska Native alone or in combination with one or more other races.’

<sup>7</sup>The number of bowheads needed is derived by multiplying the mean per capita landed whales (1910-1969) by the 2000 Alaska Native population for each community. The true column total of 55.9 is shown and is less than the sum of its parts because of their being rounded up.

<sup>8</sup>The number of bowhead whales needed per individual community is rounded to the nearest whole number unless the product was less than 0.5; such cases were rounded up to one.

<sup>9</sup>Because there are no landed bowhead data for either Savoonga or Nuiqsut between 1910-1969, the mean per capita landed whales for Gambell was used for Savoonga and the mean for Barrow was used for Nuiqsut.

<sup>10</sup>Due to uncertainties in the landed whale data for Little Diomede Island, four different calculations of subsistence and cultural need, ranging from 0.4 to 1.0 bowheads, were presented (see Table 4 SRB and A (1991)). The Little Diomede mean landed whale per capita (1910-1969) in this table represents the mean of these four calculations.

<sup>11</sup>The mean per capita landed whales for the region represents the total number of whales landed for all ten communities between 1910 and 1969 divided by the sum of the total Native population for all communities for each year landed whale data existed between 1910 and 1969 (i.e., 786 whales divided by 91,170 = 0.008621).

## Appendix 5

### USA: STATEMENT ON THE MAKAH NEEDS STATEMENT

The Makah Tribe has a documented history of whaling activities that date back at least 3,000 years. Whaling continues to be of central importance to Makah Tribal culture, identity, and health, and is a key part in the education of the Tribe's children. We have discussed the importance of Makah whaling to its culture and identity at past IWC meetings, so I intend to concentrate on current information that supports the importance of whaling to contemporary tribal members.

In addition to a thorough anthropological discussion of Makah whaling, the current Needs Statement for the Makah Tribe conveys a number of important points regarding the Tribe's whaling activities:

- (1) A household survey conducted in December 2006 indicated that an overwhelming number of Makah reservation residents continue to support the Tribe's whaling efforts. The survey also indicated that a substantial majority of households wanted more access to whale products, and desired to incorporate whale

products into their regular diets. Many saw traditional foods as a means to increase the health of Tribal members while reducing nutritionally-based diseases that plague the Tribe. Nutrigenomic research supports this opinion.

- (2) The 2006 Household Survey demonstrated the Tribe's commitment to preserving its whaling activities with another datum. Many of the Tribe's members now report that they actively engage in the complex spiritual and religious activities that surround successful whaling; this datum represents a significant increase in ceremonial participation since the last survey five years ago.

The Needs Statement clearly indicates that the Makah community has a need to continue its whaling activities, and that the Tribe's members desire and support opportunities to maintain the central role that the whale has provided for the Tribe's health and well-being for at least the last three millennia.

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## Appendix 6

### GREENLAND INTRODUCTION OF THE WHITE PAPER AND STATEMENT ON QUOTA REQUEST

Finn Karlsen, Minister of Fisheries, Hunting and Agriculture, Greenland Home Rule Government

#### Introduction of the white paper

On behalf of Denmark and the Minister of Fisheries, Hunting and Agriculture in Greenland, it is my privilege to introduce you to the 'White Paper on Hunting of Large Whales in Greenland', which has been submitted as document IWC/59/ASW8rev.

The aim of the white paper is to give an overview of the hunting of large whales in Greenland as it is done today. The document includes:

- A brief review of our long whaling history
- An update of the current status of the stocks of large whales found around Greenland
- A summary of our legislation and monitoring system regarding hunting of large whales
- An explanation of our work aimed at improving the welfare aspects of the hunt, with updated statistics
- A discussion of our current need of whale meat and our motivation for whaling
- A mention of our future plans regarding hunting of large whales, including the health effects of eating whale products.

Since the last half of the 20<sup>th</sup> century, Greenland has gone through enormous changes. We have become a modern nation but still relying on natural resources like fish and marine mammals. We have always regarded whales as an exploitable natural resource, and sustainable whaling is vital for our culture, socio economy and for our local economy. We make efforts to keep up with technology and to train our hunters in order to ensure that large whales are killed as humanely as possible, while at the same time taking into consideration the safety of the crews.

I hope that the 'white paper' will give IWC members and others a better understanding of the hunting of large whales in modern Greenland. We need this understanding in order to obtain international approval for the continuation of sustainable catches of large whales in future years.

#### Statement on quota request

Currently, West Greenland has an aboriginal subsistence quota of 175 minke whales and 19 fin whales per year in West Greenland and 12 minke whales in East Greenland. The fin whale quota was voluntarily reduced to 10 for the years 2006 and 2007. The West Greenland catches in 2006 brought approximately 462 tons of whale meat to our people, which were 208 tonnes less than needed. The West Greenland quota this year will only bring 438 tons, which is 232 tons less of what we need in order to satisfy West Greenland's need of 670 tons. In 1990 the IWC accepted that the amount of meat from large whales needed to satisfy West Greenland's need is 670 tonnes.

It is important that the IWC quotas can satisfy the documented need of meat from large whales of 670 tons for West Greenland. This could be achieved by increasing the current quota of minke whales and fin whales and by allocating quotas of other species as well.

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 have been successful during 2005 and 2006, and the IWC is now in a better position to approve new quotas, including quotas for bowhead whales and humpback whales.

Humpback whales played an important role in meat supply for Greenlanders for thousand years and were hunted until 1986. Many adult people have expressed their appreciations for old days and long for humpback whale meat and mattak. Therefore, the Greenlanders who grew up with humpback whale meat would very much appreciate if Greenland could obtain a quota for these species.

The Greenland Institute of Natural Resources has submitted an assessment of the population dynamics of humpback whales in West Greenland to the IWC Scientific Committee. This work estimated that yearly catches of up to 30 humpback whales would be sustainable. The IWC Scientific Committee had a number of observations regarding the analysis of this data, and agreed that the committee would be in a stronger position to provide management advice for this species in 2008.

I would like to point out that the scientists actually observed 350 individual humpback whales during the aerial survey in 2005. This means that the population size must be much larger than the 350 whales seen during the survey.

Bowhead whales are confined to Disko Bay and adjacent waters and, although they have been totally protected in the past 70 years, a quota for this species will greatly alleviate the need of whale products in this area.

Furthermore, the IWC Scientific Committee has agreed that the new abundance estimate of bowhead whales wintering off West Greenland could form the basis of *ad hoc* interim advice of 5 animals per year.

In summary, the prospects of obtaining approval from IWC for quotas for 2008-2012 are particularly good for a number of reasons:

- First, the IWC Scientific Committee has recently provided with an interim *ad hoc* advice of catches from 170 to 230 minke whales off West Greenland per year.
- Second, the Scientific Committee has advised that catches of 14-26 fin whales of West Greenland would be sustainable.
- Third, the Scientific Committee has provided with an interim *ad-hoc* advice of catches of up to 5 bowhead whales per year.
- Fourth, there is evidence that humpback whales in West Greenland number at least several hundreds, probably thousands and certainly more than the 350 individual humpback whales were observed by scientists in the aerial survey of 2005.
- Fifth, the control and monitoring systems are functioning well and the block quotas for the period 2003-2007 have not been exceeded.
- Sixth, with the current quotas West Greenland is 220 tons short of the documented need of 670 tons of meat from large whales that was approved by the IWC in 1991.
- And finally, the numbers of Greenland born persons has increased about 10% since 1990, when the need of 670 tons were accepted by the IWC. Thus, the current need should be around 740 tonnes of meat per year for West Greenland.

With basis on the advice from the Scientific Committee, the IWC should be able to approve quotas for Greenland that are larger than the ones for the period 2003-2007. These quotas would be sustainable and the hunt would be well regulated. Furthermore, Greenland will continue

working actively on improving the welfare aspects of whale hunting in cooperation with hunters and experts.

On behalf of the Greenland Cabinet I kindly request acceptance of following 5 year quotas.

#### *For West Greenland area*

- (1) A quota of 200 minke whales struck annually, including a carry-over of maximum 15 non-used quotas in the following year, and an annual review of data as suggested by the Scientific Committee.
- (2) A minimum quota of 19 fin whales struck,
- (3) A minimum quota of 10 humpback whales struck, including bycaught animals, and
- (4) A minimum quota of 2 bowhead whales struck and including bycaught animals.

If the proposed quota is accepted, and landed, this will result in approximately 690 tons of whale meat, assuming that a bowhead whale gives as much as a fin whale. We would like to provide more accurate conversion factor for bowhead whales of West Greenland as soon as possible after the first animal has been caught. We are proposing a conservative approach, since the requested 690 tons are well below our estimated current need of 740 tons of whale meat per year.

In relation to the request of quota on humpback whales, Greenland is aware of the lack of a clear advice from the Scientific Committee, and therefore requests the Scientific Committee to finalise the evaluation of the submitted data on humpback whales. Due to the described situation, Greenland would also like to request that IWC does not make any decision about a quota on humpback whales at this year's annual meeting, but returns to the request from Greenland at the next annual meeting to make a final decision. Greenland would also like to request that the allocated quota come to effect in 2008 at the earliest. It is the sincere hope and expectation from Greenland that the Scientific Committee completes its work on humpback whales expeditiously and at the latest prior to the next Annual Meeting of the IWC.

#### *For East Greenland area*

Minimum quotas of 12 minke whales struck, including a carry-over of maximum 3 non-used quotas.

#### **Conclusion**

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, socio economy and the local economy of the country. A Greenland without 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.

The Greenland Home Rule Government hopes that the IWC will be able to take management decisions based on the best available scientific knowledge and respect for the cultural, nutritional and economical needs of Greenlanders. Allowing Greenland to obtain sufficient whale meat to fulfil the documented need will be a way to protect the environment by rationally utilising the natural resources at hand.