

Annex G

Information Provided by Contracting Governments regarding Whale Killing Methods and Associated Welfare Issues

DENMARK (GREENLAND)

1. Summary of Activities Related to the Action Plan on Whale Killing Methods (based on Resolution 1999-1)

Contracting Government	Denmark (Greenland)
Season	2003
Area	Greenland
Fishery type (e.g. commercial, aboriginal subsistence, scientific permit)	Aboriginal subsistence

Summary of primary and secondary whale killing methods used
(Note that the appropriate Method No. should be used throughout the form)

Method No.	Brief description of method (e.g. penthrite grenade, 'cold' grenade, rifle of stated calibre, etc). Put the most commonly used method first. Insert more rows if necessary.	Used as: (state whether primary killing method, secondary, or both)
1	Penthrite grenade	Primary (142 in West Greenland)
2	Rifle (minimum 30.06 cal. (7.62 mm) and cal. .375 or cal. 458	Primary (52 in West Greenland + 13 in East Greenland)

Summary of criteria used to indicate unconsciousness and death

[Include brief description here] Criteria: when the whale does not move and the flippers are immovable. Number of whales killed instantly are whales reported killed within 1 minute.
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Summary of information providers

Percentage of data provided by:	
• Inspectors	0%
• Scientists	0%
• Hunters	100%
• Other (please specify)	0%

Summary of hunt

Item	Species 1 <i>Minke whale - West Greenland</i>		Species 2 <i>Minke whale - East Greenland</i>		Species 3 <i>Fin whale</i>	
	No.	%	No.	%	No.	%
Whale killing methods						
• Total no. killed (all methods summed)	185		13		9	
• Total killed using Method 1 only	133	72%			9	100
• Total killed using Method 2 only	52	28%	13	100		
• Total killed using Method 3 only						
• Total needing secondary harpoon or other secondary killing method						
• If bullets used:						
- minimum number						
- maximum number						
- median number						
Time to unconsciousness/death (TTD)*						
• Total for which information recorded	179		13	100	7	78
• Total estimated TTD to be instant	36		2	15	1	20
• Maximum estimated TTD	300 min.		60 min.		720 min. ¹	
• Mean time to TTD	14 min.		31 min.		114 min. ¹	
• Median Time to TTD	8 min.		25 min.		10 min.	
Other information						
• Total targeted and missed						
• Total struck and lost	7		1		3	

¹The time to death of 720 minutes of one struck and lost fin whale was caused by bad weather conditions and the breaking of the harpoon string. When excluding this one whale the average time to death was 13 minutes.

*NB: The Resolution asks for TTD information for each whale not killed instantly. Please append these data, e.g. as Table or histogram. [none]

Any other relevant information e.g. with information on technical assistance given to other fisheries or with respect to new studies to (a) improve methods and TTD, (b) develop new criteria for TTD. [none]

2. Report on improvements in ASW in Greenland

Referring to Resolution 1997-1 on improving the humanness of aboriginal subsistence whaling, the Greenland Home Rule Government would like to report the following on the process of improvements:

- The harpoon-cannon renovating programme finished in 1998. 71 harpoon cannons were well functioning and safe. 37 vessels with a mounted harpoon cannon were active in the 2003-season, and approx. 575 skiffs were used in the collective hunt.
- A seminar on renewable resources was held 9-11 October 1998 in KATUAQ, the Greenlandic cultural centre in Nuuk. Representatives from all relevant Greenlandic parties were gathered to discuss future ways for sustainable harvest, the situation of the living natural resources, hunting ethics, sharing the resources, etc.
- On 9-11 February 1999 the North Atlantic Marine Mammal Commission (NAMMCO) held a workshop on hunting methods used for hunting marine mammals in NAMMCO member countries. As the workshop was held in Nuuk, Greenland several Greenlandic hunters participated in this workshop and had the opportunity to share information on hunting methods with other hunters and whalers.
- From March to September 2000 several courses on the handling and instruction of the use of the new Norwegian penthrite grenade (Whale Grenade-99) were held for about 150 whalers, wildlife officers and the Greenland Trade Company (distributor of the grenade in Greenland). The whalers representing the 71 vessels with a mounted harpoon cannon. The courses were arranged in cooperation with Dr. Egil Ole Øen and the Greenland Home Rule ship consultant Mr Peter Siegstad and the Department of Industry.
- The harpoon-cannons are inspected every second year, thereby reducing the risks for the hunters to a minimum and maximizing the efficiency when killing whales.
- In November 2001, NAMMCO held a weapons and ammunition workshop in Sandefjord, Norway, on ballistics related to hunting in the NAMMCO member countries of relevant mammals and marine mammals, including minke whales and fin whales.
- In January 2003, NAMMCO held a conference titled 'Users Knowledge and Scientific Knowledge in Management Decision Making' on how both user knowledge and scientific knowledge can be incorporated into management decisions. The recommendations and conclusions from the Conference will form the basis to further the work of integrating user knowledge into the management decision making process.
- From April to August 2003, 9 courses on the handling and instruction of the use of the Norwegian penthrite grenade (Whale Grenade-99) were held for about 75 whalers. The courses were arranged in cooperation consultant Mr Peter Siegstad and the Department of Fisheries and Hunting.

3. A note regarding information encouraged in Resolution 1999-1

The following text contains comments to Resolution 1999-1 regarding the operative paragraphs 2-5:

Ad 2: Number of whales killed by each method:

- In West Greenland, the total minke whale quota was 190, including a carry-over quota. 135 (reallocation 133) minke whales were allocated to vessels with harpoon cannons and 55 (reallocation 57) to the collective hunt. In East Greenland, the quota of 15 minke whales was allocated to the collective hunt, including a carry-over quota.
- In West Greenland, the municipal collective hunt quota on minke whales varied from 2 to 6 animals. The municipal quota to vessels with harpoon cannons was a free quota. 37 of 65 vessels were active in 2003. The 2003 quota and catch of minke whales and the number of vessels with harpoon cannons can be seen in Appendix 1.
- In West Greenland, 133 minke whales were killed by harpoon whereas 52 minke whales were killed in the collective hunt. In East Greenland 13 minke whales were killed in the collective hunt.
- The fin whale quota of 19 animals was set free for vessels mounted with harpoon cannons. In the 2003 season, 9 fin whales were killed.

Number and proportion of total whales killed instantaneously; time-to-death for each animal not killed instantly:

- 36 minke whales were reported killed within 1 minute, the average time to death for minke whales was 14 minutes. 1 fin whale was reported killed within 1 minute. The average time to death for fin whales was 114 minutes, this caused by one struck and lost whale with a time to death of 720 minutes due to bad weather conditions and the breaking of the harpoon string. When excluding this one whale the average time to death was 13 minutes.

Number of whales targeted and missed; number of whales struck and lost:

- See Appendix 1.

Calibre of rifle used and number of bullets used:

- In the collective hunt on minke whales, a minimum of 30.06 cal. (7.62 mm) rifle and cal. .375 or cal. 458 are used. It is not an obligation to report the number of bullets used. It will require many resources to collect information from approx. 575 skiffs.

Methods used to determine unconsciousness/time to death:

- The information collected from the hunters is not scientifically based. There is an instruction on how to determine the time to death in the regulation; from the first shot to the time when the hunter measures that the whale is dead.

Ad 3: Development of more accurate indicators for determining the time to death other than cessation of movement:

- Greenland is lacking the assistance from veterinarians who, in a professional manner, are capable of collecting data on the time to death, and of developing more accurate indicators for determining the time to death.

Ad 4: 'Recognises the difficulty, in some aboriginal subsistence hunts, of obtaining time to death information....'

- See the comments in point 3.

Ad 5: 'Encourages all contracting governments to provide appropriate technical assistance to reduce cruelty in aboriginal subsistence whaling.'

- Greenland has a very good working relationship with the Norwegian government allowing Greenland to import the new whale grenade. Furthermore, Greenland gets very good assistance from Dr. Egil Ole Øen concerning the introduction and instruction of how to use the newly developed penthrate grenade used in the minke whale and fin whale hunt.
- Greenland also seeks advice on how to improve hunting gear and methods through the very fruitful working relationship via NAMMCO which arranged a workshop on hunting methods in February 1999, and a workshop on marine mammals: weapons, ammunition and ballistics, in November 2001.

4. Status for Greenland Action Plan on Whale Hunting Methods, 2003

Implementation of the Greenland Action Plan on Whale Hunting Methods was described in IWC/46/AS3. Recent development in Greenlandic Whaling was furthermore presented in IWC/49/AS3, IWC/51/WK6, IWC/51/WK7, IWC/51/WK8.

With reference to the 10 point Revised Action Plan recommended from the workshop on Whale Killing Methods, 1995, the status for the Greenland Action Plan on Whale Hunting Methods in 2003 is summarized as follows.

Re. Rev. Action Plan point 2: Continue improving accuracy of delivery of penthrate grenade harpoons, including assessment of refined sighting equipment suitable for rapid action under conditions encountered at sea. Support and encourage the development and implementation of programmes to provide training in the safe handling and effective use of killing devices including the penthrate grenade and in other aspects of the hunt.

In close co-operation with the Greenlandic Trade Company (Pilersuisoq A/S) detonating penthrate grenades are distributed according to the issued licenses on 14 places for sale throughout the whaling season. In the period 1991-1994, 147 persons (fishermen and hunters, distributors and shipyard workers) have passed the course in safe handling and firing of the detonating grenade and other hunting

equipment. A further 48 persons finished the course in 1999.

The overhaul programme for the harpoon cannons was successfully concluded in 1998. In 2003 there were 65 harpoon cannons on the West coast of Greenland authorized to apply for a license to go whaling. The harpoon cannons are inspected every 2 years - reducing the risks for the hunters to a minimum and maximizing the efficiency when killing whales.

From March to September 2000, 9 courses were held in Greenland on the handling and instruction in the use of the new Norwegian Whale Grenade-99. All persons who completed a course on the 1985-whale grenade proto-type and newcomers were offered places on the new course which included information on how to keep the harpoon cannons in good shape. The course also included items mentioned in the Action Plan points 2, 3, 4 and 8.

From April to August 2003 an additional 9 courses on the handling and instruction of the of the Norwegian penthrate grenade (Whale Grenade-99) were held for about 75 whalers. The course also included items mentioned in the Action Plan points 2, 3, 4 and 8.

Re. Rev. Action Plan point 3: Continue to review constraints on shooting distance and relative orientation of vessel and whale and encourage reducing times to death.

Shooting distances and shooting angle are dealt with in the course in safe handling and firing of the detonating grenade. Furthermore, maintenance of the harpoon cannons is reviewed.

Re. Rev. Action Plan point 4: Continue to review the effectiveness of secondary killing methods with a view to reducing time to death in whales and encourage the application of the most effective methods.

In fin whaling the secondary killing methods is - like the first - the penthrate grenade, while in the hunt for minke whales a minimum of a 30.06 cal. (7,62 mm) rifle has proven sufficient. Some hunters use cal. .375 or cal. .458 as well.

Re. Rev. Action Plan point 8: Encourage the collection and presentation of struck and lost rates and standardized time to death records in aboriginal subsistence catches of whales and undertake the assessment of requirements for controls on the use of rifles to kill unsecured whales.

In 1992, the Greenland Home Rule Government introduced time to death in the self-reporting system for catch reports in the hunt for fin and minke whales. The regulations and catch report system are also reviewed in the course on the handling of the penthrate grenade.

Re. Rev. Action Plan point 9: Encourage the incorporation of data collection and reduction of struck and lost rates in the initiatives in Greenland relating to the beluga and narwhal hunts.

The Greenland Home Rule Government and Denmark does not recognise IWC competence on small cetacean issues, and consequently Greenland will not provide any information as to point 9.

Appendix 1

2003 QUOTA ALLOCATION TO INDIVIDUAL MUNICIPALITIES

The numbers in the quota columns are given before 1 April, and reallocations of not-used licenses took place 30 August and 15 October. Consequently, the quota of each municipality can vary from the actual total catch.

Municipality	Harpoon cannon quota	Collective hunt (rifle) quota	Total quota	No. of harpoon cannons	Settlements without harpoon cannons	Harpoon cannon strikes	Collective strikes	Total strikes
Nanortalik		6		1	6	7	7	14
Qaqortoq		4		4	4	26	5	31
Narsaq		2		3	2	23	4	27
Paamiut		3		6	1	8	3	11
Nuuk		5		8	1	21	3	24
Maniitsoq		5		8	1	16	4	20
Sisimiut		4		9	2	20	5	25
Kangaatsiaq		5		5	4	1	3	4
Aasiaat		4		4	2	4	1	5
Qasigiannuit		2		3	1	0	2	2
Ilulissat		4		10	4	2	3	5
Qeqertarsuaq		4		3	1	5	5	10
Uummannaq		5		1	6	0	5	5
Upernavik		2		0	6	0	2	2
West Greenland total	135	55	190	65¹	35	133	52	185
Tasiilaq	0	12	12	0	-	0	13	13
Ittoqqortoormiit	0	3	3	0	-	0	0	0
East Greenland total	0	15	15	0	-	0	13	13

Note: 7 struck and lost (Sisimiut: 3; Qasigiannuit: 1, 2; Qeqertarsuaq: 3). ¹ 4 boat owners with 2 harpoon cannons each.

RUSSIAN FEDERATION

1. Summary of Activities Related to the Action Plan on Whale Killing Methods (based on Resolution 1999-1)

Contracting Government	Russian Federation
Season	2003
Area	Chukotka waters
Fishery type (e.g. commercial, aboriginal subsistence, scientific permit)	Aboriginal subsistence

Summary of primary and secondary whale killing methods used
(Note that the appropriate Method No. should be used throughout the form)

Method No.	Brief description of method (e.g. penthrite grenade, 'cold' grenade, rifle of stated calibre, etc). Put the most commonly used method first. Insert more rows if necessary.	Used as: (state whether primary killing method, secondary, or both)
1	Harpoon with float	
2	Darting gun	
3	Rifle (various)	

Summary of criteria used to indicate unconsciousness and death

<i>[Include brief description here]</i>
Criteria: Visual determination of unconsciousness and death. Rifles are utilized for control (final defining) shot that guarantees death.

Summary of information providers:

Percentage of data provided by:	
• Inspectors	100%
• Scientists	Approximately 50%
• Hunters	100%
• Other (please specify)	

Summary of hunt

Item	Species 1 <i>Gray whale</i>		Species 2 <i>Bowhead whale</i>		Species 3 <i>[insert name]</i>	
	No.	%	No.	%	No.	%
Whale killing methods						
• Total no. killed (all methods summed)	126		3			
• Total killed using Method 1 only	0		0			
• Total killed using Method 2 only	0		0			
• Total killed using Method 3 only	0		0			
• Total needing secondary harpoon or other secondary killing method	126**	100	3 [#]	100		
• If bullets used:						
- minimum number	8		50			
- maximum number	97		60			
- median number	36.9		55			
Time to unconsciousness/death (TTD)*						
• Total for which information recorded						
• Total estimated TTD to be instant						
• Maximum estimated TTD	50 mins		40 mins			
• Mean time to TTD	28.7 mins		30 mins			
• Median Time to TTD						
Other information						
• Total targeted and missed						
• Total struck and lost	2					

**Gray whales: the harpoon (Method 1) and rifles (Method 3) were used in the kill of all 126 whales. In addition, the darting gun was used in the kill of 66 (52%) of these whales.

[#]Bowhead whales: The harpoon (Method 1) and darting gun (Method 2) were used to kill all 3 whales. In addition, the rifle (Method 3) was used in the kill of 2 of the whales.

*NB The Resolution asks for TTD information for each whale not killed instantly. Please append these data, e.g. as Table or histogram. [none]

Other: Any other relevant information e.g. with information on technical assistance given to other fisheries or with respect to new studies to (a) improve methods and TTD, (b) develop new criteria for TTD: [See table above]

UNITED STATES OF AMERICA

Data provided on 2003 Bowhead Subsistence Hunt

- In 2003, 35 bowhead whales were landed. All of those whales were taken using the traditional hand-thrown darting gun harpoon with the traditional shoulder gun used as the secondary killing method.
- Thirty-one whales were landed using darting gun harpoons firing a traditional black powder projectile. Four whales were taken in Barrow using the penthrite projectile that the AEWG has been working with Dr. Egil Øen of Norway to develop.
- Six whales were struck and lost. Therefore, for 2003, the rate of efficiency of the hunt was 85%. This rate is much higher than the previous year, but as we have explained previously, weather and ice conditions play a significant role in determining the efficiency of the aboriginal bowhead whale hunts.
- It should be noted in this regard that historically the rate of efficiency in this hunt was 50%. However, the AEWG made a commitment to this Commission to increase the hunt's efficiency rate to an annual average of 75%. As with every other commitment it has made, the AEWG has not only fulfilled this promise, in recent years, it has exceeded 75% as an annual average.
- Two initiatives of the AEWG have been largely responsible for this dramatic improvement in efficiency as well as an increase in the humaneness of this hunt. First, the AEWG early on instituted a practice at its annual meetings whereby the more experienced and successful captains share their hunting techniques with each other and with the younger and less experienced hunters. This 'Hunting Efficiency Workshop' is conducted using a replica of a bowhead whale so that participants can actually demonstrate techniques.
- The Whaling Captains' Associations in individual villages conduct similar workshops each year to that village's bowhead subsistence hunt.
- The second AEWG initiative to help improve the efficiency and humaneness of this hunt is the 'Weapons Improvement Program' overseen by the AEWG's 'Weapons Improvement Committee' which is comprised of hunters, weapons experts and scientists. It is through this Program and under the supervision of the Weapons Improvement Committee that the AEWG has achieved success in adapting the penthrite-exploding projectile for use in the traditional hand-held darting gun.
- Environmental conditions for the spring and fall hunt are treacherous and cause difficulty for subsistence hunters to determine time to death with precision. During the spring, the bowhead subsistence hunt is conducted from the edge of the shore-fast ice and in the spring ice lead system. Crews use small hand-made canoes (*umiags*) consisting of sealskin stretched over a wooden frame and designed to hold four to six people.
- In light of the circumstances of this hunt, it can be seen that in the bowhead subsistence hunt, visual observations simply cannot yield an accurate estimate of time-to-death.
- The AEWG has made extraordinary efforts over the years to cooperate with the Commission. This commitment continues. Therefore, working with the scientists at the North Slope Borough Department of Wildlife Management, the AEWG is preparing to collaborate with researchers at the Norwegian School of Veterinary Medicine on the development of techniques to recover brain tissue samples from landed bowhead whales. As in Norway, these tissue samples would be used to study brain trauma caused by the detonation of the penthrite projectile. The AEWG hopes to follow the success of Norway in using this information as a basis for estimating time to death in the bowhead subsistence hunt.