



TWENTY FIFTH MEETING OF THE COUNCIL
5 – 6 April 2017, Nuuk, Greenland

DOCUMENT 11 REPORT OF THE COMMITTEE ON HUNTING METHODS

Submitted by: COMMITTEE ON HUNTING METHODS (CHM)

Action requested:

Council is asked to note the report from the CHM and endorse the following recommendations given by the Committee and approved by FAC:

- *Rules of Procedure for the CHM – changes related to membership and terms of reference – see doc NAMMCO/25/17*

- *Establish a new committee on animal welfare issues related to non-hunting issues – Rules of Procedures, see appendix 1*

Background: Council at NAMMCO 24 tasked the Committee on Hunting Methods to discuss the following issues and give recommendations on how to best address these in NAMMCO:

- 1) to review its Terms of Reference and give suggestions on how best to deal with the animal welfare concerns related to by-catch, entanglements and strandings in the NAMMCO framework.
- 2) to organise a workshop on alternative methods for collecting standardised TTD data that are less expensive, thus making it easier to compare TTD between countries.
- 3) to review underlying reasons for struck and lost (S&L) with the aim of decreasing the S&L rates and how to best collect data on S&L.

REPORT OF THE COMMITTEE ON HUNTING METHODS

The Committee on Hunting Methods (CHM) has held 4 meeting since NAMMCO 24:

Telephone meetings 3 May 2016, 2 June 2016 and 21 February 2017 and one face to face meeting 18 October 2016 in Copenhagen, Denmark.

Members of the CHM in 2016: Amalie Jessen and Nette Levermann (Greenland), Ulla Svarre Wang and Signar Petersen (Faroe Islands), Hild Ynnesdal, Kathrine Ryeng and Egil Ole Øen (until summer 2016) (Norway), Guðni Magnus Eriksson and Kristján Loftsson (Iceland). Nette Levermann has chaired the CHM and Guðni Magnus Eriksson has been Vice-Chair.

The next meeting of the CHM is scheduled in the fall 2017, unless new requests from Council at NAMMCO 25 require otherwise.

THE FOLLOWING SUMMARIESES THE MAIN DISCUSSIONS AND RECOMMENDATIONS TO COUNCIL FROM CHM:

1. RULES OF PROCEDURE FOR THE CHM

With reference to Article II Membership in the RoP, each member country has up to two members in the Committee.

The limiting of national representatives originated from when the Committee's RoP had been first defined. The CHM agreed on the importance of having sufficient resources available to accommodate and secure a committee's ability to do what is required of it. In view of the workload and activity level of the CHM, the idea of limiting national representatives at all seemed counterproductive and it was agreed to recommend revising the RoP accordingly.

The CHM furthermore recommended having a reference to the fact that, irrespective of number of representatives, each member country would have one vote in cases of disagreement on procedural or administrative matters. The advisory mandate of the CHM does not call for votes, i.e. possible disagreements would be reflected in the recommendation/advice given. However, should situations arise where a vote is called, the principle of one vote-one country should govern.

The CHM agreed to recommend to Council the following revision to the existing RoP:

II Membership

Each NAMMCO member country shall be represented *in the Committee and have one vote regardless of number of national representatives.*

With reference to Article I Terms of reference (ToR) of the CHM

The exiting ToR specifies the criteria the advice given should be based on. For some unknown reason there is no reference to animal welfare specifically. Taking into account the important role animal welfare concerns have played and continues to play in all the work and advice given by the CHM, it was agreed to include *animal welfare* in line with the other important factors: available scientific findings, technological developments, traditional knowledge, and hunters safety. Furthermore, the CHM agreed to also include *efficiency of hunting gears* to the existing wording.

The CHM agreed to recommend to Council the following revision to the existing ToR in the RoP:

I Terms of reference

1. The Committee shall, upon request from the Council or individual member countries, provide advice on hunting methods for those species of marine mammals relevant to NAMMCO member countries. The Committee shall ensure that such advice is based on the best available scientific findings, technological developments and traditional knowledge, with due consideration given to safety requirements, *animal welfare*, *efficiency in hunting gears* and efficiency of utilization.

2. ANIMAL WELFARE CONCERNS RELATED TO BY-CATCH, ENTANGLEMENTS AND STRANDINGS

After having considered it thoroughly the CHM agreed on the importance of keeping the terms of reference of the CHM and not expand it to also include issues of a non-hunting related character. The NAMMCO Agreement encompasses cooperation in research on marine mammals and their role in the ecosystem including effects of human activities (be it hunting or non-hunting related). The CHM agreed that it was both timely and important for the organisation to clearly reflect this and that animal welfare concerns, related to by-catch, entanglements and strandings should be addressed by NAMMCO.

The CHM agreed to recommend to Council to establish a new Committee. The CHM furthermore agreed to not limit the ToR to the specific issues of animal welfare concerns related to by-catch, entanglements and strandings, but widen the ToR to make it general and able to encompass situations not foreseen today.

It was emphasised that safety for humans (for instance rescue personnel in entanglement situations) has priority over animal welfare concerns.

The CHM recommends the following ToR (based on the ToR of the CHM):

Terms of Reference

1. The Committee shall upon request from the Council or individual member countries, provide advice on *animal welfare issues related to non-hunting human induced activities, and live strandings, affecting marine mammals*. The Committee shall ensure that such advice is based on the best available scientific findings, technological developments and traditional knowledge, with due consideration given to safety requirements for humans.
2. Members of the Committee may raise specific questions for discussion during meetings of the Committee. The Committee may make proposals to the Council for specific tasks to undertake within its terms of reference.
3. Non-member governments with observer status in NAMMCO may request advice from the Committee through the Council.

Upon request from the Finance and Administration Committee the CHM developed RoP for the new committee based on the RoP of the CHM with the only change being the recommended ToR above – see appendix 1.

The CHM agreed to propose to Council that the new Committee be called: “**Animal welfare issues related to non-hunting activities**”. It was commented that this title did not cover the issue of strandings. However, for the benefit of a short title it was agreed that the reference to strandings in the ToR would make ensure that this issue is included in the work of the committee.

3. ALTERNATIVE METHODS FOR COLLECTION OF TTD DATA – A WORKSHOP

The CHM had been asked to look at the possibility of organising a Workshop to look at alternative methods for collecting TTD data. The CHM tasked the Secretariat to prepare a background document describing the various methods and how collection of TTD takes place today for different species. The CHM has not finalised its discussions and will return with a recommendation at a later Council meeting.

4. STUCK AND LOST (S&L)

Reasons for S&L and how to decrease it

The Secretariat had prepared an overview of the known S&L rates today for different hunts. In addition, the document tried to define S&L and summarised different factors that may contribute to S&L. Member countries had responded to a questioner developed by the Secretariat with the aim of getting the latest updated S&L rates for different hunts including how it is recorded and also possible identified reasons behind the S&L.

The CHM discussed the situations in the different hunts in member countries.

The Faroe Islands reported that S&L is nearly non-existing in the pilot whale hunt. However, some reports have been on whales injured from the propeller of the boats. Some of these whales were dead before being injured, and they had later been killed and landed. With respect to harbour porpoises this species has not been targeted for the last 30 years. Seals are only shot around fish farms.

The CHM suggested that it might be beneficial for the Faroe Islands to look into technical possibilities developing a shield around the outboard motors to prevent this kind of propeller incidents in the future.

Greenland reported that for the beluga, narwhal and walrus the reported S&L is low. Regulations require that S&L be reported and the S&L animals are reduced from the quota. The CHM agreed that this requirement most probably do not encourage hunters to report S&L.

For the large whales the S&L estimates are easier to control via the requirement to register the grenades to receive the allocated subsidy. In addition, more efforts have been put into reducing the S&L in the large whale hunts, and the S&L rate are very low.

The CHM agreed that there were pros and cons on including or not including S&L in the quotas as a means to get more exact S&L estimates. It was noted that to be able to give advice it is essential to know in more detail how the hunting takes place and also how the hunts are administered. The CHM acknowledge that it is the hunters themselves who have the most extended knowledge. It is thus important to get their input on when and why S&L occurs before advising Council on this issue. The CHM therefore recommended that Greenland initiate meetings with hunters with the aim of hearing their views on what happens when a whale/walrus/seal is S&L.

Iceland reported that S&L is a minor problem in both the minke whale (1 %) and fin whale (1,4%) hunts. There has been no systematic recording of S& L but it was thought to be due to the harpoon line being cut.

Norway reported S&L rates of around 1 % and the reasons given by hunters are technical failure and cutting of harpoon line as in Iceland.

The CHM agreed to advice Iceland and Norway to address their hunters with the aim of finding out why the harpoon line breaks.

The CHM briefly discussed the possible merits of initiating a control mechanism for technical inspection of hunting weapons and gears. In Iceland and Norway the national inspectors oversee that the mandatory equipment are in place but do not necessarily check the functioning of these. Generally, the CHM acknowledge that it will always be the hunter's intent to land an animal, the alternative costs are far too large to think otherwise. Consequently, it is in the hunters own interest and should be their responsibility to ensure that weapons and gear are according to regulations, well-functioning and at the appropriate place. NAMMCO and the authorities should strive to find out how to reduce S&L and inform the hunters accordingly.

The CHM has developed a one page information sheet stating what S&L is, what can be done to avoid and reduce the risk of S&L and what the hunter should focus on to reduce and avoid S&L. The information sheet will have appendices with illustrations of target point for the different hunts and will be translated into the NAMMCO languages and these will be available on the NAMMCO webpage.

Collection of S&L data

Council had also asked CHM to address how data on S&L best could be collected. This request had also been sent to NAMMCO Scientific Committee which discussed it at their meeting in November 2016. The CHM concurred with the conclusion of the SC that the best method for collecting S&L data was using observers in the different types hunts, as S&L rates vary between species and hunts. Like the SC, CHM acknowledged that this would be logistically challenging and costly and would therefore perhaps not represent a prioritised parameter for improving assessments.

The CHM agreed that collection of S&L data for large whales were controlled and that the big challenge was with respect to the small whale hunts. CHM did not have any concrete solutions but pointed out that there might be a need for reviewing regulations for those hunts where S&L are thought to be high.

5. REQUEST FOR ADVICE FROM THE FINANCE AND ADMINISTRATION COMMITTEE (FAC)

FAC, before making a final recommendation to Council, had asked both CHM and SC for their input on:

- Advice on guidelines for release of WG/EG meeting reports
- Advice on attendance and funding of external experts

The CHM gave the following advices:

Ad guidelines for release of reports:

For Working Group and Expert Group meeting reports:

These reports remain confidential until 2 weeks after the adopted report has been circulated to the parent committee and Council.

The Committee underlined the importance of NAMMCO members having the possibility to be sufficiently informed of the findings in a given report before making it public. It was seen as essential in order to responsibly respond to any questions or situation emanating from these reports given that would not yet have been discussed by the Council.

The report must include a 1st page or introductory text stating “This report contains the view of the WG/EG and do not necessarily represent the view of NAMMCO. The report will be presented to NAMMCO Council on xxxx.”

For Committee meeting reports:

These reports remain confidential until the adopted report has been circulated to Council. This is in line with the RoP’s today.

For Committee meeting documents:

The CHM agreed that, to further strengthen the transparency of the organisation, draft agendas and those meeting documents that will be published in the Annual Report should be made public and available on the webpage as soon as they are ready and circulated to the committee members.

Ad external experts:

It was agreed that in general it was important that experts outside the NAMMCO committees was invited to give legitimacy, validation of results and also show transparency when dealing with issues like assessment and estimation of abundance estimates and evaluation of TTD and IDR. Recognising that the expertise may be represented in the NAMMCO Committees, the CHM never the less found it valuable to have outside experts participating in meetings to demonstrate transparency.

The CHM defined an external expert as anyone, invited by a committee to participate in a working group meeting/expert group meeting, that is not a member of that committee regardless of institution and nationality.

In response to the funding question the CHM agreed that all invited external experts should be funded. There had been situations in the past where external experts had funding from elsewhere and NAMMCO had thus not covered their travel and accommodation.

The CHM also commented that in all its work over the years the various member countries had always been responsible for submitting data and information relating to their respective hunts. How the members accomplished this had not been an issue for the committee.

6. UPDATE FROM MEMBER COUNTRIES ON HUNTING METHODS AND REGULATIONS

List of references on hunting methods in member countries and overview of laws and regulations in member countries were presented under this agenda item – appendices 1 and 2 respectively.

CHM commented on changes and new additions to the two documents all of which are given in appendices 2 and 3. In general, CHM agreed that the NAMMCO manuals on hunting should be listed in document 2.

The Faroe Islands

Regulations

A new Executive order (No 9 of 26 January 2017) on pilot whale and other small whales had been approved and had replaced the Executive order from 2013. The new Executive order has been made with the authority in Parliamentary Act No 56 of 19 May 2015 on pilot whale and other small whales and is regulating all stages of the drive hunt. The law confirms the traditional pilot whale drive hunt, and among other things, enables the authorities to prosecute persons exhibiting disruptive behaviour and interference in the hunt. There are 23 approved whaling bays. Presently three new locations are provisional approved, and will be investigated and tested to see if they are suitable as whaling bays.

CHM noted that there has been a slight revision to the design of the spinal lance based on experiences made in 2015. The Secretariat will revise the NAMMCO manual on pilot whaling accordingly.

Quotas, number of active boats, hunting period

There is no regular quota system in the pilot whale hunt, and all small boats can participate. The drive hunt can take place all year around.

Catches, strandings, irregularities

In 2016 there were 5 drives and 295 pilot whales were taken. No irregularities were reported.

Greenland

Regulations:

A revision to the Executive Order regulating the hunt on narwhal and beluga (2017) is recently approved. New items include more specific rules concerning quotas and stocks in combination with hunting grounds. Securing that all settlements and cities gets a part of the quota for the area, harmonizing the rules of hunting in Melville Bay with the Sanctuary rules for the Bay and finally change of the length of the vessels allowed in the hunt from 14 meter to 15 meter.

Quotas

The national quotas for large whales in 2016-2017 is based on the advice from the IWC Scientific Committee and approved by the IWC Commission.

The 2016 and 2017 quotas for West Greenland are: 164 minke whales, 19 fin whales, 10 humpback whales, 2 bowhead whales and East Greenland: 12 minke whales. Carry-over numbers have been added for both years.

Number of active hunting boats

There were 30-ish approved whaling boats with harpoon guns and 400-ish smaller boats were active in whaling activities in Greenland in 2016.

*Catch numbers including struck and lost*Whale catches in 2016:

10 fin whales, (about average for the last five years).

148 minke whales including 3 struck and lost in West Greenland and 15 in East Greenland. (about average for the last five years in WGRL and fully utilized quota in EGRL for first time in 10 years).

5 humpback whales (lowest number since the quota was given) and 0 bowhead whale.

187 beluga in West Greenland (quota 320) and 16 in Qaanaaq (quota 20; technical, 3-year quota is given for 100 animals).

176 narwhales in West Greenland (quota 306), 81 in Inglefield Breeding (quota of 103 animals), 91 in Melvin Bay (quota 70+46) and 53 in East Greenland (quota 82

Extra political quota to EGRL, and Melville Bay on narwhal.

52 walrus in West Greenland (quota 69), 74 in Northwater (quota 86) and 9 in East Greenland (quota 18).

The catch numbers for beluga and narwhale and walrus includes struck and lost without specifying the actual numbers of S/L.

There are no quota regulations on other small cetaceans or pinnipeds in Greenland.

By-catches:

3 humpback whales, 1 minke and 1 finwhal along the coast of WGRL.

Hunting period

The hunting period for 2016-2017 is for fin whale and humpback whale from 1 January to 31 December and for minke whale March to 30 November and bowhead whale 1 April to 31 December.

Strandings and irregularities

No strandings had been reported in 2016 and there were no reported infractions of national legislation on large whales.

Others

IWC entanglement response training for Greenland

An entanglement response training was concluded successfully on July 1, 2016 in Nuuk, Greenland. Recognising an apparent recent upward trend in entanglements and with the training opportunity provided through the IWC, the Government of Greenland requested, organized and sponsored a three day training course (one day in the classroom and two at sea).

The training was organized by the Ministry of Fisheries and Hunting, with support from the Greenland Fisheries License Control. In addition, the IWC provided support through its technical adviser, and the voluntary entanglement fund. The trainees included 18 wildlife officers and whalers/fishermen.

The training also allowed wildlife officers and whalers/fishermen to discuss, for the first time as a group, what is known of entanglements along the coast of Greenland. One immediate priority issue appears to be coastal pound nets, and the group was able to develop a strategy that will hopefully alleviate the negative impacts to both these fishers (gear damage) and whales.

Iceland

There have been no changes to the regulations in Iceland in 2016.

Minke whales

Quota: 264 minke whales

Catch: 46 taken by 3 vessel. No struck and lost

No irregularities have been reported.

Fin whales

Quota 146 fin whales, but no hunting took place in 2016.

Eiriksson informed the meeting that following a recommendation from the Expert Group meeting on TTD in 2015, a course for minke whale hunters on weapons and method had been successfully organised in 2016 with participation from 12 hunters.

Furthermore, it was the plan to complete the TTD measurement in minke whale hunt in the summer of 2017.

Norway

Norway has not introduced any new hunting methods or adopted new or revised legislation in 2016.

Hunting updates

Whaling

Quota: 880 minke whales

Active hunting boats: 16 vessels

Catch including struck and lost: 591 minke whales

Hunting period: 1. April – 7. September

Irregularities: No irregularities were reported

Sealing

The West Ice

Quota: 21.270 harp seals

Active hunting boats: 1 vessel

Catch: 1442 harp seals, including 6 animals for scientific purposes

No commercial hunt was allowed for hooded seals, but 18 animals were taken for scientific purposes

Hunting period: 1. April – 30. June

Irregularities: No irregularities were reported.

In 2016 The Ministry of trade, industry and fisheries decided to reintroduce some financial support to the sealing industry. One vessel was assigned the financial support, and participated in the hunt.

The East Ice

Quota: 7000 harp seals

Active hunting boats: No vessels conducted hunt in this area.

Catch: 28 animals were taken for scientific purposes.

NEW COMMITTEE

**RULES OF PROCEDURE FOR THE COMMITTEE ON ANIMAL WELFARE ISSUES
RELATED TO NON-HUNTING ACTIVITIES****I Terms of Reference**

2. The Committee shall, upon request from the Council or individual member countries, provide advice on animal welfare issues related to non-hunting human induced activities, and live strandings, affecting marine mammals. The Committee shall ensure that such advice is based on the best available scientific findings, technological developments and traditional knowledge, with due consideration given to safety requirements for humans.
2. Members of the Committee may raise specific questions for discussion during meetings of the Committee. The Committee may make proposals to the Council for specific tasks to undertake within its terms of reference.
3. Non-member governments with observer status in NAMMCO may request advice from the Committee through the Council.

II Membership

1. Each NAMMCO member country shall be represented in the Committee and have one vote regardless of number of national representatives.
2. The Committee shall elect from among its members a Chairman and a Vice-Chairman, who shall each serve for two years, after which time they may be re-elected.
3. The Committee may also seek outside expertise when the Committee considers this to be necessary and appropriate.

III Observers

1. Attendance of accredited observers shall not be permitted at the meetings of the Committee unless otherwise decided by the majority of the Committee and approved by the Council.

IV Meetings

1. The Committee shall meet once a year, preferably prior to the annual meeting of the Council, unless otherwise decided by the Council. Additional meetings may be held when judged necessary by the Committee and approved by the Chairman of the Council.

2. A provisional agenda for the Committee shall be compiled by the Chairman and distributed to Committee members no later than 30 days prior to the meeting in question. Comments or suggestions for revision of the provisional agenda shall reach the Chairman no less than 10 days prior to that meeting.
3. The Chairman shall, in consultation with other members of the Committee and the Secretary of NAMMCO, seek to ensure that key documentation of relevance to the provisional agenda is available at the beginning of each meeting.
4. For all meetings of the Committee and subsidiary bodies, the draft agenda, ToRs when relevant, list of participants and the meeting documents that will be published in the Annual Report should be made public and available on the NAMMCO website as soon as they are ready and circulated to the meeting participants.

V Report

1. A draft report shall be presented for consideration before the end of the Committee meeting. The final report of each meeting shall be prepared by the Secretariat as required by the Committee and transmitted to all members of the Council as soon as possible after the meeting and within two weeks after the conclusion of the Committee's deliberation. The content of the reports shall be considered confidential prior to their release to the Council.
2. The report of the Committee shall be made available by the Secretariat to anyone who so wishes, according to guidelines approved by the Council.
3. Subsidiary bodies report their findings in writing to the Committee according to their terms of reference and within two weeks after the conclusion of their deliberations. Reports of subsidiary bodies shall be considered confidential until four weeks (excluding July) after being circulated to the Committee and the Council. Thereafter they shall be made public and available on the website. Within a week of the report being circulated to the Committee and the Council, Parties and/or members of the Committee may ask for a review of the report by the Committee on Hunting Method. The report shall then remain confidential until it is published together with the report of that Committee.

VI Amendment of Rules

1. Proposals for amendment of these Rules of Procedure shall reach the Chairman of the Council not less than 60 days prior to the Council meeting at which the matter is to be discussed. The Chairman of the Council shall transmit these proposals through the Secretariat to the Members of the Council not less than 30 days prior to that meeting.

LIST OF REFERENCES ON HUNTING METHODS

(Updated March 2017)

NAMMCO

- Manual on maintenance and use of weaponry and equipment deployed in hunting of baleen whales in NAMMCO member countries
- Manual on Pilot whaling
- Manual on small whale hunting in Greenland

FAROE ISLANDS

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- Greenland Home Rule 1989. Introduction of the Detonating Grenade Harpoon in Greenland Whaling on an Experimental basis. IWC Document TC/41/HK2.
- Greenland Home Rule 1990. Greenland Licenses for Hunting Minke Whales with Rifles. IWC Document TC/42/HK2.
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- Greenland Home Rule 1991. Designation of Types of Rifles in Greenland. IWC Document TC/43/AS1.
- Greenland Home Rule 1991. Introduction of the Detonating Grenade Harpoon in Greenland, 1991. IWC Document TC/43/HK2.
- Greenland Home Rule 1992. Introduction of the Detonating Grenade Harpoon in Greenland, 1992. IWC Document TC/44/HK1.
- Greenland Home Rule 1993. Greenland Action Plan on Whale Hunting Methods, 1992. IWC Document TC/45/HK3.

- Greenland Home Rule 1994. Greenland Action Plan on Whale Hunting Methods. IWC Document IWC/46/AS3.
- Greenland Home Rule 1995. Comments regarding the Terms of Reference to the second Workshop on Whale Killing Methods. - Greenland Action Plan on Whale Hunting Methods. IWC Document IWC/47/WK4 rev.
- Greenland Home Rule 1997. New Technologies, New Traditions: Recent Developments in Greenlandic Whaling. IWC Document IWC/49/AS3.
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- Greenland Home Rule 2002. Report on improvements in ASW in Greenland. IWC Document IWC/54/WKM & AWI3.
- Greenland Home Rule 2002. Status for Greenland Action Plan on Whale Hunting Methods, 2001. IWC Document IWC/54/WKM & AWI5.
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- Greenland Home Rule Government 2007. White Paper on Hunting of Large Whales in Greenland. IWC Document IWC/59/ASW8rev.
- Greenland Home Rule Government 2008. Summary of Activities Related to the Action Plan on Whale Killing Methods (based on Resolution 1999-1). IWC Document IWC/60/20
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LIST OF LAWS AND REGULATIONS IN NAMMCO MEMBER COUNTRIES

(Updated March 2017)

FAROE ISLANDS

- Parliamentary Act No 57 of 5 June 1984 on whale hunting, as last amended by Parliamentary Act No 54 of 20 May 1996
 No 56 of 19 May 2015 on pilot whale and other small whales, as last amended by Parliamentary Act No 44 of 6 May 2016
 No 9 of 14 March 1985 on the protection of animals, as last amended by Parliamentary Act No 56 of 19 May 2015
 No 43 of 22 May 1969 on weapons etc., as last amended by Parliamentary Act No 81 of 22 May 2015
- Executive Order No 87 of 20 September 2007 on protection of whales
 9 of 26 January 2017 on pilot whale and other small whales
 No 57 of 12 September 1969 on weapons etc.
 No 74 of 28 June 2016 on registration of shooting weapons, as amended by Executive Order No 92 of 7 September 2016
 No 93 of 7 September 2016 on weapon certificate

GREENLANDGreenland Home
Rule Act

- No 1 of 16 Mai 2008 on revisions to Greenland Home Rule Act No 12 of 29 October 1999 on hunting
 No 25 of 18 December 2003 on animal welfare
 No 29 of 18 December 2003 on nature protection
- Executive Order No 26 of 24 October 1997 on extraordinary check and approval of harpoon canons
 No 22 of 19 August 2002 on trophy-hunting and fishing
 No 21 of 22 September 2005 on protection and hunting of polar bears
 No 20 of 27 October 2006 on protection and hunting of walrus
 No 12 of 16 July 2010 on reporting from hunting and strike of large whales
 No 16 of 12 November 2010 on protection and hunting of seals
 No 12 of 22. December 2014 on protection and hunting of large whales
 No 13 of 30. December 2014 on hunting licenses for full time hunters
 No 14 of 30. December 2014 on hunting licenses for part-time hunters
 No 3 of 27. January 2017 on protection and hunting of beluga and narwhal

Catch registration form (1993-present) "*Piniarneq*"

ICELAND

Law	No 26, May 3, 1949 on whaling No 40, June 1, 1979 on amendments to Law No 26/1949 on whaling No 23, April 17, 1991 on amendments to Law No 26/1949 on whaling (cf. Law No 40/1979) No 92, July 1, 1991 on amendments to Law 26/1949 on whaling (cf. Law No 40/1979 and 23/1991)
Regulation	No 163, May 30, 1973 on whaling No 359, April 6, 2009 on amendments to Regulation No 163 of May 30, 1973 on whaling (cf. Regulation No 304/1983, 239/1984, 862/2006, 822/2007, 456/2008 58/2009 and 263/2009) No 414, April 29, 2009 on the ban on whale hunting in specific areas.
Minke waling licenses	Rules in the licenses for minke whaling.

NORWAY

Act of 29 May 1981 No 38	Relating to Wildlife and Wildlife Habitats (the Wildlife act)
Act of 27 March 1999 No 15	Relating to the Right to Participate in Fisheries and Hunting
Act of 6 June 2008 No 37	The Marine Resources Act
Act of 19 June 2009 No 97	Animal Welfare

Executive Orders from the Department of Fisheries and Coastal Affairs:

31 March 2000	Regulation of the practice of hunting minke whales.
11 March 2003	Regulation of the practice of hunting seals in the West Ice and the East Ice
22 December 2009	Regulation of the practice of hunting seals on the coast of Norway

The Ministry of Fisheries and Coastal Affairs and the Directorate of Fisheries issues each year executive orders relating to the participation and governing of the hunt of Whales and Seals.

STRUCK AND LOST (S&L)

“Struck and Lost” occurs when an animal is hit (struck) by a weapon, such as a rifle bullet, grenade or harpoon, and is not landed. The injured animal may survive or die, depending on the severity of the injury.

FACTORS THAT MAY CONTRIBUTE TO REDUCING S&L

Always have equipment to secure the animal before or after it is killed, such as a harpoon, line and float or a grappling hook.

It is important that equipment is suited to local conditions and maintained in good condition.

Anatomical and physiological features:

- Involuntary reflex movements – especially up and down trashing with flippers and/or tail - can be very violent and last for several minutes.
- The animal’s locomotion ability makes it possible for a seal to slide off the ice, thus important to take into consideration when shooting seals that are lying near the ice edge. A wounded animal can move quickly into the sea.
- Most marine mammals sink when dead or in a state of unconsciousness.
- Fat animals float, while thin animals sink. This is the case for seals and smaller toothed whales but not for large whales.

Important to consider these factors before taking a shot/throwing a harpoon/hakapik etc.

Hunters training /experience and technique

Proper hunting skills and proper hunting techniques are more critical than equipment to hunting success and reducing S&L. Here is a list of the most important aspects to consider:

- Target area (brain, neck, thorax (heart and lungs) and abdominal area) differs from species to species – see attached figures
- The angle of the shot relative to the animal axis - do not shoot from behind – see attached figures
- Shoot when the probability of retrieving the animal is best – i.e. after it has taken a breath so it does not sink.
- To be patient and wait for the right moment to strike an animal
- Knowledge and training on use of equipment
- Bullets/grenades are slowed down in water and changes direction
- In water versus on land/ice
- Seals: the long shooting distance, the animal sink before being secured.
- Seasonality, salinity of the water and locality plays a role. For seals: sink easier when body fat content and the salinity of the water is low. River deltas will have less saline water.

LARGE WHALES

GUN/RIFLE SHOTS IN MINKE WHALE HUNT

Only shoot when whale head is above water. Direct the gunshot to the brain of the animal or the foremost part of the neck region. The site of the brain in minke whale in relation to the outer body characteristics such as eye and blowhole are shown in Fig. 1. If necessary, should the head not emerge from the water, the shot can be aimed at the heart.

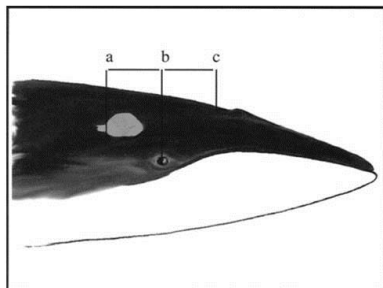


Figure 1
Minke whale head with the brain as seen from the side

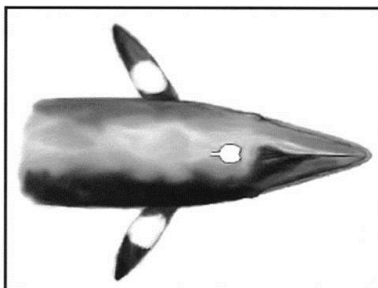


Figure 2
Minke whale head with the brain as seen from above

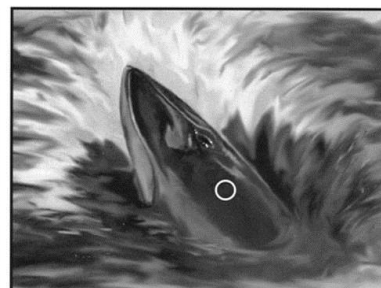


Figure 3
Minke whale head with the characteristic target point for the rifle seen obliquely from the back

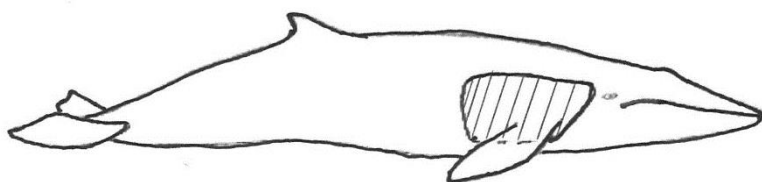
Fig. 1. The brain's location in the minke whale and target sites for gunshot from different positions. (SK Knudsen, H Rud and EO Øen)

Seen from the side, the brain is positioned on a plane mid-way between the eye and dorsal surface of the head. Fig. 1 shows the back edge of the brain laying along a projection on a horizontal line (a) as far behind the eye (b) as the blowhole (c) extends to the front of the eye. The brain of the minke whale is about 20 cm wide, 20 cm long and 15 cm high. The centre of the brain lays about 55 cm back from the blowhole opening in a small (5.5 m) minke whale and about 75 cm back from the blowhole opening in a large (8.5 m) minke whale.

EXPLOSIVE GRENADE ON LARGE WHALES

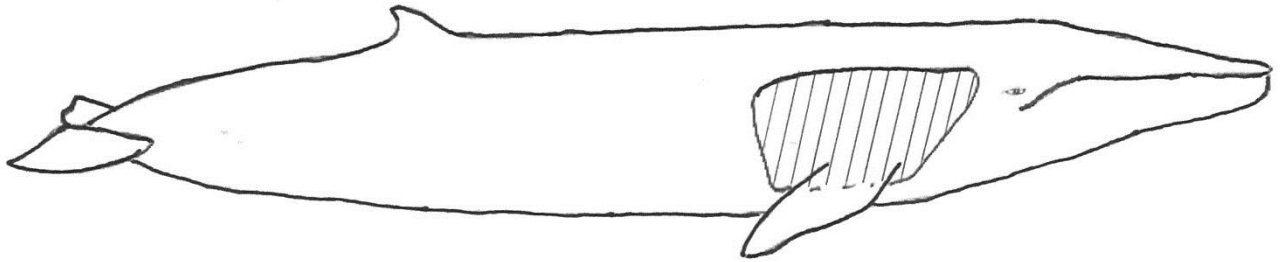
The heart and lungs and their major blood vessels lay in the chest cavity. Above the chest cavity lies the back region with the spinal column that goes up to the brain. **These organs are the greatest and most important target region of the animal.** Detonation in this region causes the whale to die instantly or in a moment. The grenades are especially made to detonate in the middle of the chest cavity when the shot is directed against the chest and from the side. (Figs. 2 - 5).

Direct the shot from the whaling gun against the chest region and as much as possible from the side.



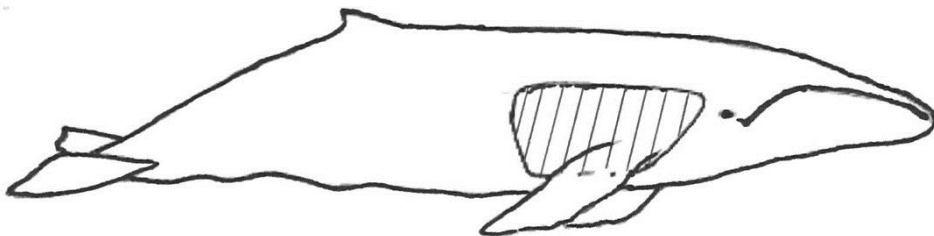
*Fig. 2. Vital vulnerability area (hatched area) regarding detonation of a grenade in a minke whale (*Balaenoptera acutorostrata*).*

Illustration: S Kessler and EO Øen



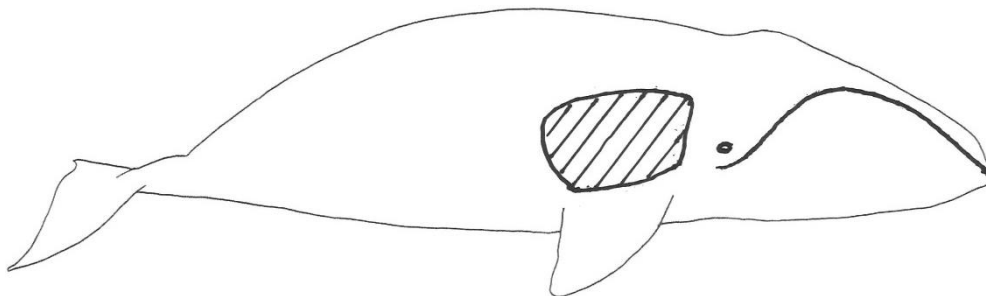
*Fig. 3. Vital vulnerability area (hatched area) regarding detonation of a grenade in a fin whale (*Balaenoptera physalus*).*

Illustration: S Kessler and EO Øen



*Fig. 4. Vital vulnerability area (hatched area) regarding detonation of a grenade in a humpback whale (*Megaptera novaeanglia*).*

Illustration: S Kessler and EO Øen



*Fig. 5. Vital vulnerability area (hatched area) regarding detonation of a grenade in a bowhead whale (*Balaena mysticetus*).*

Illustration: S Kessler and EO Øen

SMALL WHALES

- The most suitable bullet types for brain shot of small cetaceans are: full metal jacket round nose, solid round nose and solid expanding.
- Different ammunition has dissimilar trajectories. The rifle must therefore always be tested with the ammunition that is employed prior to the hunt.
- Rifle bullets are slowed quickly in water, regardless of the calibre and the weight of the bullet. To ensure that the bullet penetrates the brain, the shot must be fired when **the skull is above water**.

SPECIES SPECIFIC TARGET SITES

HARBOUR PORPOISE, FIG. 6

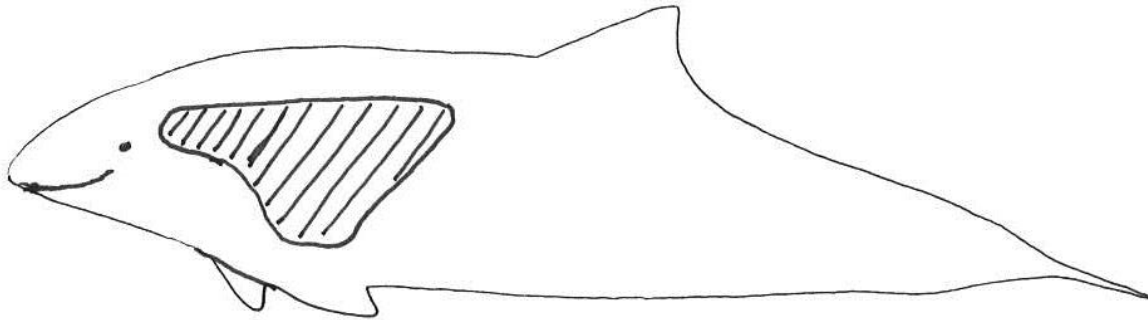


Fig. 6. The marked area indicates the optimal target area in harbour porpoise. From NAMMCO Expert Group Meeting to Assess the Hunting Methods for Small Cetaceans 15-17 November 2011.

WHITE-SIDED AND WHITE-BEAKED DOLPHINS, FIG. 7.

Due to the larger body-size, calibre .30-06 with full metal jacket bullets are commonly used.

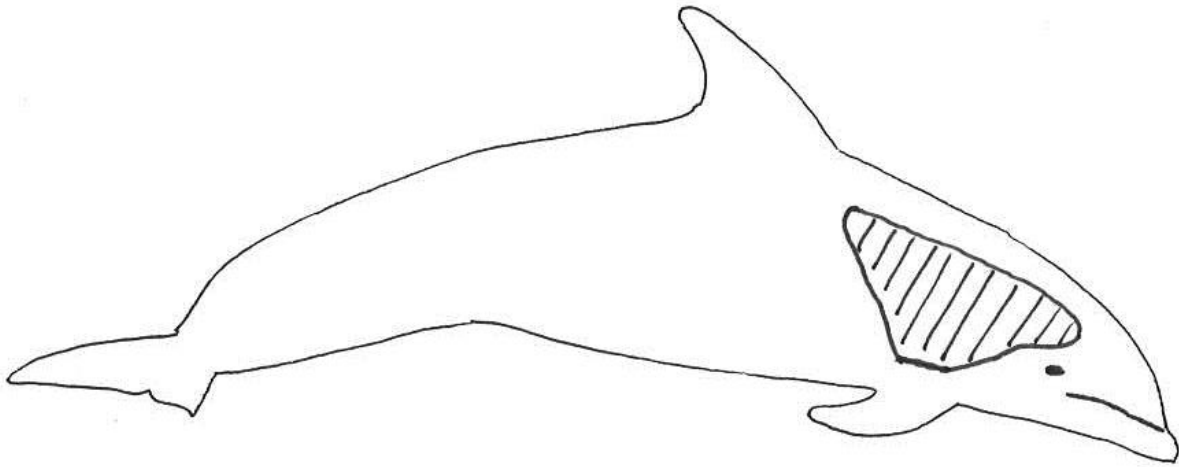


Fig. 7. The marked area indicates the optimal target area of white beaked and white sided dolphins. From NAMMCO Expert Group Meeting to Assess the Hunting Methods for Small Cetaceans 15-17 November 2011.

LONG-FINNED PILOT WHALE, FIG. 8

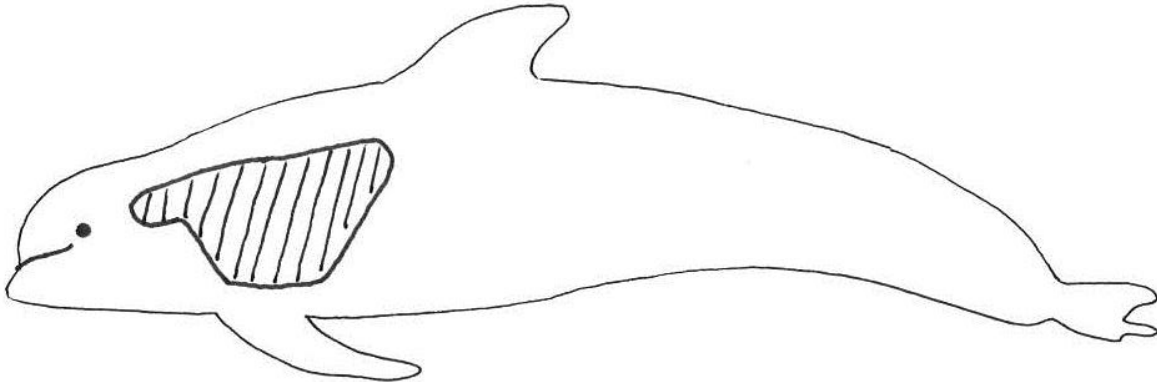


Fig. 8. The marked area indicates the optimal target area of a pilot whale. From NAMMCO Expert Group Meeting to Assess the Hunting Methods for Small Cetaceans 15-17 November 2011.

KILLER WHALE, FIG. 9

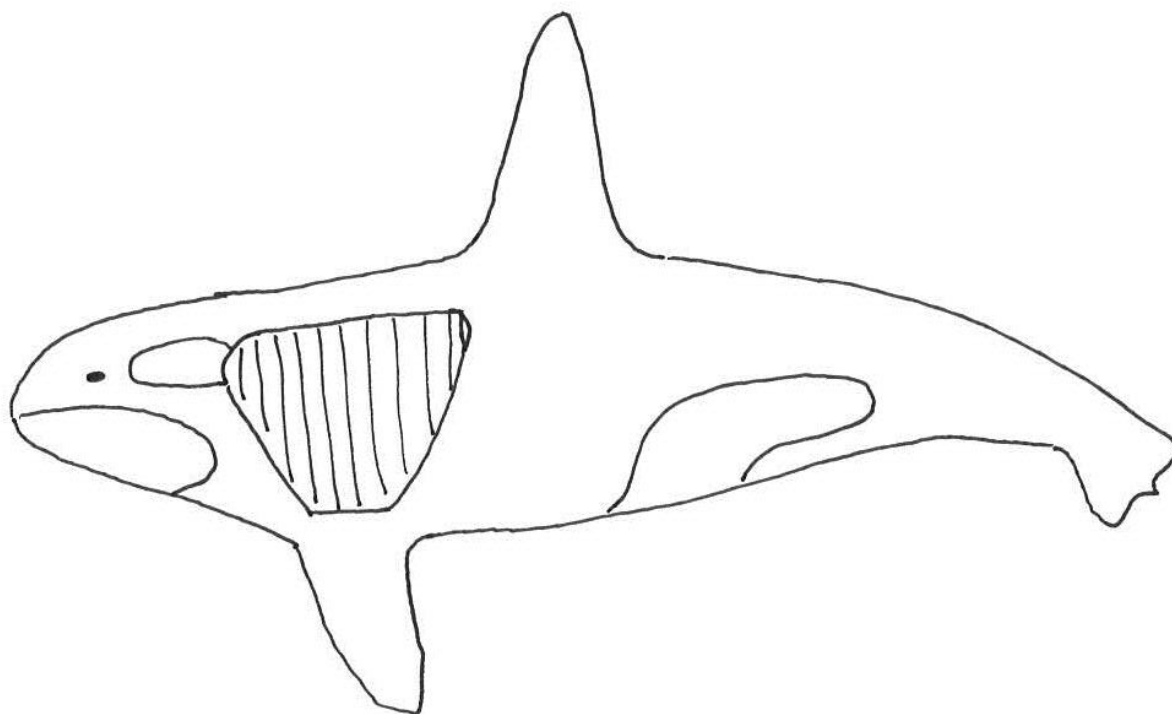


Fig. 9. The marked area indicates the optimal target area of a killer whale. From NAMMCO Expert Group Meeting to Assess the Hunting Methods for Small Cetaceans 15-17 November 2011.

NARWHAL, FIG. 10 AND BELUGA, FIG. 11

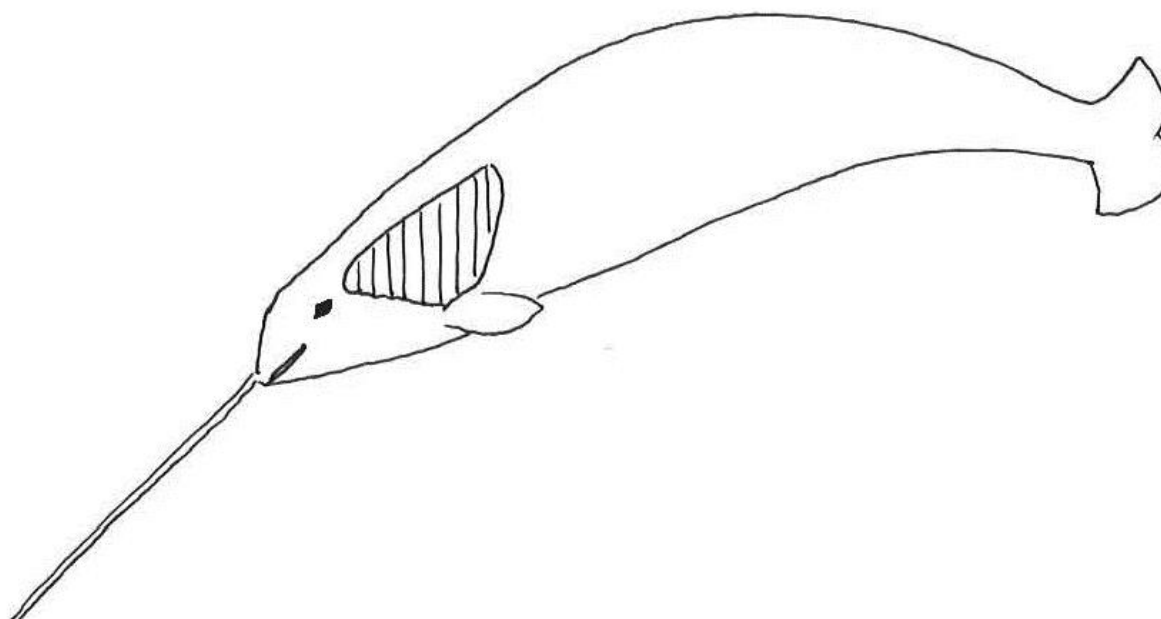


Fig. 10. The marked area indicates the optimal target area of a narwhal. From NAMMCO Expert Group Meeting to Assess the Hunting Methods for Small Cetaceans 15-17 November 2011.

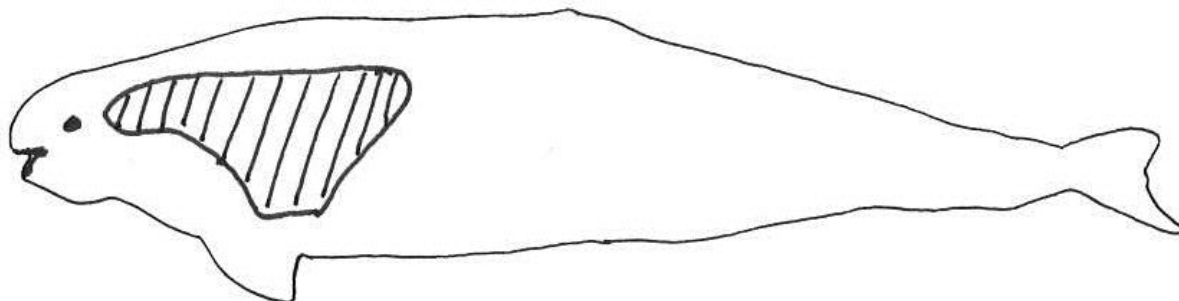


Fig. 11. The marked area indicates the optimal target area of beluga. From NAMMCO Expert Group Meeting to Assess the Hunting Methods for Small Cetaceans 15-17 November 2011.