

'Struck and Lost' whales in commercial and Special Permit hunting

Submitted to the 2007 Whale Killing Methods and Associated Welfare Issues Working Group, Anchorage, Alaska, by the Government of New Zealand

P. Brakes and M. Donoghue

Background

The Commission recognises that the issue of whales that are struck by a projectile during whaling activities and are not landed - 'Struck and Lost' - is a significant welfare issue and a matter of concern. Resolution 2004-3 called for submission of data on the number of whales 'Struck and Lost' (S&L) and killing methods used for *each* whale. This Resolution further requested the Working Group on Whale Killing Methods and Associated Welfare Issues to advise the Commission on, *inter alia*:

- methods of improving the efficiency of whale killing methods; and
- reducing times to death and other associated welfare issues.

At a recent NAMMCO workshop held in Denmark to address the issue of S&L in marine mammal hunting¹ it was acknowledged that: *'The loss of animals that have been struck by a weapon or projectile (struck and lost - S&L) is a problem that occurs in all types of hunting, but one that is particularly prevalent in hunts for marine mammals'*².

The 2006 NAMMCO Workshop recommended the need for improvement in struck and lost rates, including that: *'the present information on struck and lost is outdated or inadequate for several species and areas, and that accurate estimation of struck and lost is important for effective management and essential to improve hunting practices'*.

Provision of data on 'Struck and Lost' to the IWC

Since the NAMMCO Workshop stressed the importance of providing data on S&L, it is timely to review the data on S&L submitted to the Commission - the body with international jurisdiction over matters related to the hunting of large whales.

The Terms of Reference for the Whale Killing Method and Associated Welfare Issues (WKM&AWI) Working Group³ state:

'The Working Group is established to review information and documentation available with a view to advice [sic] the Commission on whale killing methods and associated welfare issues'.

To facilitate discussion of this subject, therefore, data on S&L whales should be provided to the Working Group. The Secretariat has developed a form⁴ for the provision of welfare data, including S&L data, for consideration by the annual meetings of the WKM&AWI Working Group and occasional Whale Killing Methods (WKM) Workshops.

Table 1 provides a list of whales reported as S&L in papers submitted to the Scientific Committee between 2003 and 2006 by Japan, Norway and Iceland. Since these data are available and are reported to other bodies within the Commission, we urge Contracting Governments conducting commercial or special permit whaling to also report these data to the WKM&AWI Working Group.

Monitoring and reporting 'Struck and Lost' incidents

The reporting of S&L incidents may be hindered by certain factors, including the potential reluctance of hunters to report S&L incidents. During the NAMMCO Workshop, it was noted:

'..hunters may not feel it is in their best interests to report accurately or to report at all. Hunters are aware that, if the existence of a significant level of struck and lost becomes known to wildlife managers, it may lead to lower levels of allowable catch in the future. If it becomes known to the public, it will give ammunition to the anti-hunting lobby. Also, hunters often find struck and lost to be an embarrassment because it reflects badly on their skill as hunters. Therefore

¹ Report of the NAMMCO Workshop to Address the Problems of "Struck and Lost" in Seal, Walrus and Whale Hunting. North Atlantic House, Copenhagen, Denmark 14 - 16 November 2006

² *Ibid.* Pike, p.13

³ IWC/59/WKM&AWI 1

⁴ Summary of Activities Related to the Action Plan on Whale Killing Methods (based on Resolution 1999-1)

*they may be reluctant to report struck and lost, or may report falsely if they perceive it is in their best interest to do so. As a result, estimates of struck and lost from such programmes tend to be negatively biased*⁵.

Conflicts of interest during cetacean hunts

It is common practice to restrain domestic farm animals in slaughterhouses to ensure that a humane slaughter method can be applied without inflicting unnecessary suffering. However, as Pike noted during the NAMMCO 2006 Workshop:

*'In many cases, the goal of minimizing S&L conflicts directly with the goal of minimizing animal suffering by killing the animal quickly. All seal and whale hunters know that one of the best ways of preventing struck and lost is to "secure" the animal, usually using a harpoon, before it is killed. This makes it possible to retrieve the animal should it sink in deep water. However it is obvious that this prolongs the period between when the animal is first injured by the harpoon and when it is killed, and thus the suffering of the animal'*⁶.

The reported preference during commercial and special permit hunts is to attempt to kill the whales immediately with the first grenade harpoon strike. However, data previously reported to the Commission on 'Instantaneous Death Rates' indicates that this has not always been successful.

During the 2006 NAMMCO Workshop it was further noted that: *'Bringing the whale rapidly close to the boat may facilitate using the back-up weapon before the animal fully regains consciousness. This requires strong forerunners and fast winches'*. The rapid despatch of a wounded whale using a secondary killing method, however, may conflict with the requirement to winch whales in carefully to avoid either the forerunner breaking or the harpoon pulling out of the wounded flesh. This further emphasises the need for sufficiently powerful primary killing methods and accurate placement of the harpoon to ensure a swift death from the initial strike.

'Struck and Lost' for larger whale species

The most often cited causes for S&L whales are that 'the harpoon line broke' or that the 'harpoon pulled out'⁸. During the NAMMCO Workshop it was noted that as well as losing dead whales that sink, *'Another cause of S&L is when wounded whales break loose. This is more common among the larger and stronger whales, such as fin whales. There is an increased risk of the whale breaking loose and escaping when the explosive malfunctions'*⁹.

Since the hunting of larger species in Special Permit whaling has become more prevalent in recent years, every effort should be made to prevent such incidents, through the improvement of gear specifications. The provision of information on the strain gauge of forerunners used during the hunting of large species such as, sei, fin and sperm whales in the JARPA II and JARPN II hunts, along with comprehensive S&L incident reports, to the next Whale Killing Methods Working Group would facilitate the Commission's deliberations.

International cooperation

Noting that one suggestion from the Working Group on Large Whales held at the NAMMCO Workshop was to: *'To strengthen international cooperation in order to facilitate: a) access to information and technology...'*¹⁰, a number of questions arise from the NAMMCO Workshop for which it would be useful to have further information that might better inform the Commission's deliberations on Struck and Lost whales:

- a. It was reported that in Iceland and Japan, air pumps are used to inflate baleen whales and increase their buoyancy, to prevent the loss of dead whales. Which criteria are used to judge that these whales are dead before they are inflated with air?
- b. What method is used to inflate these whales and is this used for all species of baleen whale?
- c. Appreciating the difficulties associated with securing a large, fast and strong species such as the fin whale during potentially difficult weather conditions, how does the 'Struck and Lost' rate for fin whales during the JARPA II feasibility study or during Icelandic commercial whaling for fin whales compare with the 'Stuck and Lost' rate reported during the Greenlandic hunt for fin whales?

⁵ NAMMCO Workshop Report. Pike p.17.

⁶ *Ibid.* p.15

⁷ *Ibid.* p.53

⁸ Information reported by Norway and Japan to previous WKM&AWI Working Groups and Workshops.

⁹ *Ibid.* p.55

¹⁰ *Ibid.* p.56

- d. It is noted in the NAMMCO Workshop report that '*It seems the large calibre rifle is ineffective for fin and sperm whales as the secondary killing weapon*'. What data have been presented to support this statement and are only penthrite grenade harpoons used as secondary killing methods for these species? If so, are there any implications for S&L rates?
- e. Are large calibre rifles effective as a secondary killing method for other larger species killed during Special Permit hunts, such as sei and Bryde's whales? What implications does the use of rifles as a secondary killing method have on the S&L rates for these species?

Recommendations

It is clear that the NAMMCO workshop has provided a great deal of useful information for consideration by the WKM and AWI Working Group and that a number of steps could be taken to further develop practical ways to mitigate S&L rates, for example:

1. The Working Group could identify relevant criteria for reporting S&L incident reports for each whale S&L, which would assist in the development of strategies to reduce S&L rates in all hunts.
2. The Working Group could also consider situations where whales are 'Lost and Recovered'.
3. Since '*weather is a very important factor in affecting struck and lost*'¹¹, the WKM Working Group could review the range of weather conditions that may impact S&L rates, with a view to providing guidance on when hunting should be abandoned during adverse weather conditions.
4. The WKM&AWI Working Group could also consider seeking advice or sponsoring research into:
 - forerunners and linkages that can withstand the many tonnes of strain associated with hunting different species in variable weather conditions;
 - assessing the criteria used to determine whether a whale has actually been struck with a harpoon or a bullet and the potential for erroneous judgement; and
 - how the wounds of a S&L cetacean are evaluated and recorded, in order to estimate the prognosis for the individual.

Conclusion

The information provided to the NAMMCO Workshop was very valuable, and New Zealand is grateful to NAMMCO for publicising the report of the Workshop. In addition, the information from the NAMMCO Workshop may also assist in improving understanding of other aspects of the debate regarding killing methods.

The NAMMCO Workshop concluded that:

*'Hunters, managers and researchers should use every means available to reduce struck and lost, preferably without unduly increasing killing times...It is therefore crucial that hunters and managers should cooperate to ensure that accurate and complete data on struck and lost are gathered and used in wildlife management'*¹².

The WKM&AWI Working Group could endorse these recommendations and urge all IWC members engaged in whaling activities to submit data on struck and lost rates for hunted whales to the annual meetings of the Working Group, in a standard format as developed by the Secretariat.

The WKM and AWI Working Group is the competent body of the Commission to review such data, with a view to developing mitigation measures to reduce S&L incidents for whales.

In addition, the information from the NAMMCO Workshop may also assist in improving understanding of other aspects of the debate regarding killing methods noted as (a) to (e) under international cooperation..

¹¹ *Ibid.* p.62

¹² *Ibid.* p.19

Table 1. ‘Struck and Lost’ incidents reported to the Scientific Committee for 2002 to 2006, by Japan, Norway and Iceland.

Year	Nation	Species	Number reported ‘Struck and Lost’	References	Details
2002/ 2003	Japan	minke (JARPA)	1	SC/55/06	‘Of target individuals, 39 individuals could not be sampled. Amongst these, 18 individuals were missed because of their swimming activity (fast speed, long diving or quick mobility). 13 individuals were cancelled to sample because of bad chasing condition (foggy or sunset). Sampling was abandoned for 7 individuals because they escaped into the pack ice. One individual was the case of struck and lost’.
2002	Japan	minke (JARPN)	2	SC/55/07	‘Causes of failure to collect the targeted whale was as follows. For common minke whales, a total of 26 individuals were not sampled because quick mobile (7), long diving (13), high speed swimming (1) and missing of the targeted animal before chasing (3). Rest of two minke whales was missed by technical reason (struck and lost). For the Bryde’s whales, 2 individuals were not sampled, one is missing by long diving (1) and the other is technical reason (struck and lost)’
2002	Norway	minke	9	SC/56/Prog. Rep.Norway	‘Number of individuals killed, but not taken onboard the vessel’
2003	Iceland	minke	1	SC/56/Prog. Rep.Iceland and SC/57/O14	
2003/ 2004	Japan	minke (JARPA)	3	SC/56/12	‘...473 individuals were targeted for sampling. A total of 440 individuals was collected (110 from area IIIE, 330 from Area IV, see fig.6) Technical sampling efficiency (the rate of sampling for targeted individuals) was 0.93 Out of 33 cases of sampling failure, the most frequent reason was an escape of the targeted whale into the pack ice (8 cases). Struck and lost also occurred in 3 cases’.
2003	Japan	minke (JARPN)	1	SC/56/O13	‘Causes of failure to collect the targeted whale were as follows. For common minke whales, a total of 12 individuals were not sampled, because quick mobility (5), long diving (5) and a sudden turn for the worse of sea condition (1). One common minke whale was missed by technical reason (struck but lost). For the Bryde’s whales, three individuals were not sampled because of quick mobility (1)

					and long diving (2). In the case of sei whale, one individual was not sampled, because quick mobility (1)'
2003 & 2004	Norway	minke	19	IWC/57/WKM&AWI 5	In 2005 data on 'struck and lost' for the 2003 and 2004 seasons were reported collectively as '19 whales lost because the harpoon line broke or the harpoon worked loose. No whales were reported to have escaped wounded'.
2004	Japan	minke (JARPEN)	1	SC/57/ProgRep. Japan	'A total of 59 common minke whales were sampled. In the sampling process, one individual was harpooned but missed by the technical reason (the cases of struck and lost)'.
2004/2005	Japan	minke (JARPA)		SC/57/O5	'Sampling efficiency (the rate of succeeded sampling for targeted individuals) was 94%. This value was highest among the previous JARPA surveys. Of targeted individuals, 27 individuals could not be sampled. Among those, seventeen individuals were missed because of their swimming activity (fast speed, long diving or quick mobility). Five individuals were cancelled to take because of bad chasing condition (foggy or sunset). Sampling was abandoned for four individuals because they escaped into the pack ice. One individual was the cases of struck and lost'.
2005	Japan	minke (JARPEN)	1 (offshore) 1 (coastal)	SC/58/O8 SC/58/10	'One minke whale was struck and lost due to technical failure' 'A total of 60 common minke whales were sampled. In the sampling process, one individual was harpooned but missed by the technical reason (the cases of struck and lost)'.
2005/2006	Japan	minke (JARPA)	3	SC/58/O7	'Sampling efficiency (the rate of successful sampling for targeted individuals) was 95.6%. This value was the highest level during the previous JARPA surveys. Struck and lost occurred in only three cases'.