

The value of animal welfare data collection: a case study on whaling operations

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Introduction

At present, there is no binding requirement within the International Whaling Commission (IWC) for presentation of animal welfare data and, in recent years, the whaling nations have stopped supplying data regarding the welfare implications of whaling for commercial purposes. In the past, although analyses of data were provided, the raw data were not publicly accessible. In 2006, an analysis was conducted of video footage of Japan's 'scientific whaling' in the Southern Ocean during the 2005/06 season. The results of the analysis suggested some severe animal welfare issues associated with the hunt based on a limited sample size. The case is made for the provision of such data to the IWC to be made compulsory. This would be achieved through an amendment to the IWC Schedule requiring specified animal welfare data. Such a schedule amendment should be drafted to include all forms of commercial whaling (including 'scientific whaling' and whaling under objection) and should build upon earlier proposals that were presented to the IWC between 2000 and 2003.

Video analysis of Japan's Southern Ocean 'scientific whaling'

An analysis was conducted of video footage obtained from Japan's whaling in the Southern Ocean Whale Sanctuary in 2005/2006 (Gales *et al* 2007). The footage showed the catching of sixteen Antarctic minke whales (*Balaenoptera bonarensis*). The key findings of the analysis were that:

- Whaling in the Southern Ocean often starts with a high speed chase so the stress for the whale begins some time before it is even harpooned;
- Fewer than one in five of the observed whales were killed instantaneously — average time to death for whales not killed instantly was 10 min and one whale survived for at least 35 minutes; and

- Some whales that are not killed instantly suffocate as a result of being unable to raise their heads out of the water as they are winched in on the harpoon line.

The killing of larger whales (fin [*Balaenoptera physalus*], sei [*Balaenoptera borealis*], Bryde's [*Balaenoptera edeni*] and sperm [*Physeter macrocephalus*]) is likely to be associated with greater welfare problems, due to their larger size (for example, in one case, a struggling whale was lashed to the side of the catcher ship, which then steamed off with the whale still alive).

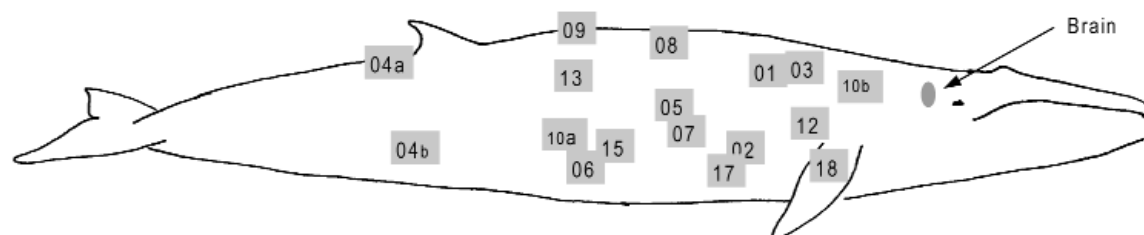
Striking a whale at sea in rough weather from a pitching vessel is just as hard as it was in the 1950s when animal welfare concerns were first raised in the IWC. The position of the harpoon strikes on each whale was recorded where this could be determined from measurements from images.

In conclusion, the high quality video footage, which was obtained by Greenpeace, revealed information that would not otherwise have been made available. The presence of Greenpeace did not reduce the accuracy of the harpooning, as judged by comparing the position of harpoon strikes with the results of previous studies.

Adopting a requirement for the submission of animal welfare data to the IWC

At present, there is no binding requirement to submit animal welfare data to the IWC. However, the schedule to the International Convention for the Regulation of Whaling contains a section on Logbooks (Appendix A) and some data relevant to welfare can be provided on a voluntary basis. In addition, the Revised Action Plan on Whale Killing Methods contains numerous specific requests for data provision. Norway and Japan have submitted some information (though not raw data) to the IWC in the past but neither submits information to the IWC at present. Instead, both have provided some information (but not raw data) to the North Atlantic Marine

Figure 1



Locations of the harpoon hits analysed from the video footage. Nearly half of the hits were caudal to the mid-point of the whale. In these positions when the harpoon line is winched tight the whale cannot get its head above water. Harpoons which hit the animal close to the brain result in a quick death (from Gales *et al* 2007). Reprinted from Gales N, Leaper R and Papastavrou V (2007) Is Japan's whaling humane? *Marine Policy* 32: 408-412. Copyright (2007), with permission from Elsevier Publishers and the authors.

Mammal Commission (NAMMCO), which held a workshop on the subject in 2010 (Anon 2010). Iceland does not appear to provide any animal welfare data.

The only way to require the mandatory collection of such data would be through an amendment to the IWC Schedule, under Article V of the Convention (Busby & Holt 2008). The IWC Schedule contains all the binding decisions that have been adopted by the IWC since it was set up in 1946. Schedule amendments require at least a three-quarters majority for adoption and are binding on IWC members unless they take out a formal objection within the prescribed period (90 days, but opening up further periods if objections are filed within the initial 90 days as detailed in Article V).

The last animal welfare Schedule Amendment that was adopted was the cold harpoon ban (Paragraph 6 of the Schedule, which came into effect in two stages, initially excluding minke whales, but with their inclusion in 1983 — see Schedule Paragraph 6 for details).

Since then, a schedule amendment for a ban on the use of the electric lance was proposed by the UK and New Zealand. The proposal was last put forward in 1997 and, following discussion, was withdrawn on the understanding that Japan, “intended to use, from next season, rifles as the principal secondary killing method”.

An additional approach to the existing schedule amendments that restrict certain killing methods would be to require animal welfare data to be provided. If such a schedule amendment were adopted, it is possible that one or more whaling countries would file a formal objection, in which case they would not be bound by the decision. In addition, in the past, although Norway submitted data on its whaling operations to the IWC as required, it also submitted restrictions on the dissemination of such information by the IWC Secretariat¹. The legality of such restrictions has not been seriously questioned by any member government. Such unilateral restrictions would not be legal.

¹ See the IWC Scientific Committee Rule of Procedure H on Availability of Data (note 3 regarding the Government of Norway). <http://www.iwcoffice.org/commission/procedure.htm>.

There is also the question as to whether such a schedule amendment would apply to ‘scientific whaling’. Article VIII of the IWC Convention states that the “...killing, taking and treating of whales” for the purposes of scientific research is exempt from other IWC decisions. However, the requirement that data should be collected does not restrict the “...killing, taking and treating of whales...” and so would not be exempted by Article VIII. The precedent already in the IWC schedule is Paragraph 30, with which Japan complies and which requires certain information to be submitted to the Scientific Committee of the IWC prior to the issuing of scientific permits. In 1979, when the IWC was considering the decision to add this paragraph to the Schedule, the Commission first obtained legal advice that indicated that such a provision was permissible within the convention².

Provided that the schedule amendment was clearly worded, there is no reason why it would not also apply to whaling under objection.

The proposal by the UK

The idea that the provision of animal welfare data should be required in the IWC schedule was first proposed by the UK at the 52nd meeting of the IWC in Adelaide in 2000 (Anon 2000). The proposal was then considered at the Working Group on Whale Killing Methods and Associated Welfare issues in London the following year. The UK proposal was discussed again at the much more comprehensive 2003 Workshop on Whale Killing Methods and Associated Welfare Issues in Berlin.

The 2003 Workshop participants agreed an action plan including the collection and provision of information on time to death (IWC 2003), which was non-binding but ‘encouraged’ the collection of various kinds of data. However, since then, Norway no longer maintains observers onboard the vessels, Iceland does not appear to collect any animal welfare data beyond struck and lost rates and Japan does not provide data to the IWC. Thus, it has become clear, in the intervening years, that a voluntary approach to the provision of data has not been successful.

² A legal opinion was sought from Professor DW Bowett QC.

During the 2003 workshop, Japan took the view that a discussion regarding the collection of animal welfare data was inappropriate and left the room during the discussion of the UK paper. Norway and Iceland had taken a similar position during earlier discussions (IWC 2001). The debate concluded with no consensus regarding the usefulness or feasibility of collecting the data from commercial whaling operations but acknowledging that it would not be possible to collect some of the data for aboriginal subsistence whaling operations.

The UK proposal included a draft paragraph for inclusion in the IWC Schedule, together with a proposal for draft text which would become an Annex to the Schedule (see *Appendix*).

Developments since 2003

Norway has engaged in data collection through the 'blue box' which records information such as vessel speed and acceleration and the firing of harpoons. However, the blue box is not able to provide information on time to death or cessation of movement of the whale, or location of the harpoon strike on the whale.

The information obtained from the footage of Japan's 'scientific whaling' in the Southern Ocean clearly demonstrates the value of video footage. Video cameras are now being trialled to record marine mammal by-catch data from fishing vessels as a component of electronic monitoring systems, even from vessels less than 15 m in length (Leaper & Papastavrou 2010). A number of trials have already been conducted with promising results. Systems typically include video cameras linked to a GPS and other sensors on the vessel, such as gear rotation sensors.

Conclusion — a way forward: proposal for an animal welfare data schedule amendment

The adoption of an animal welfare data schedule amendment is the only way to require whaling countries to provide data in order that the animal welfare implications of whaling for commercial purposes can be properly determined.

A small number of vessels are involved (in 2010, the largest fleet was Norway's with 18 vessels [Norwegian Directorate of Fisheries 2010]) and the smallest fleet was Japan's Southern Ocean hunt with one factory ship and two catchers). Thus, the use of video technology would not be onerous and a requirement for video footage should be included in a Schedule amendment. The provision of the other information that was proposed by the UK should be

reviewed in the light of developments since 2003, in particular the use of video technology. A Schedule amendment should then be drafted in such a way that it applies to all forms of commercial whaling (including 'scientific whaling' and whaling under objection).

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Appendix

IWC/53/WKM&AW15: UK Paper on Collection of Whale Killing Data

Draft paragraph for inclusion in RMS (Chapter VI or revised Chapter III) (Reproduced with permission from the International Whaling Commission. This document, IWC/53/WKM&AW15 which is available from the IWC, contains draft text for possible inclusion in the Revised Management Scheme [RMS]. More information on the RMS is available from <http://www.iwcoffice.org>).

For each whale hunted in whaling operations, the international observer (and/or national inspector) shall record, as a minimum, the data set out in Annex A on whale killing methods and associated welfare issues. This information shall be included in the observer's (inspector's) report to be provided to the IWC Secretariat at the end of each hunt or voyage or season as determined by the Commission*. The data will be publicly available.

ANNEX A

Reporting Requirements Needed To Assess Whale Killing Methods And Associated Welfare Issues

Preliminary

- Time of sighting of the target whale/group containing target whale
- Distance from vessel
- Estimate of group size: presence/absence of calves in group
- Behaviour of the whale pre-chase (ie slow travel, fast travel, resting, feeding, milling, social/sexual)
- Time of start of chase.

Primary Killing Method

- Time of first harpoon
- Type of harpoon (eg penthrite grenade head)
- Distance of vessel to whale when first harpoon fired
- Position of whale relative to vessel, ie ahead, abeam or other
- Behaviour of whale upon being struck, eg a) whale "runs at surface"; b) dives and disappears; c) blowing pattern; d) evidence of severe internal bleeding, eg blood in exhalation; e) other behaviour, eg thrashing or lolling.

All behaviours to be timed.

- Location of harpoon on detonation
- Details on performance of harpoon (notes on unusual harpoon performance, if any)
- Physical area of entry wound of harpoon, and exit wound (if appropriate).

Secondary Killing Method

- Method used
- Time of second/subsequent harpoon(s) if needed; is penthrite grenade used?
- Distance of vessel to whale when additional harpoon fired,
- Position of whale relative to vessel, ie ahead, abeam or other
- Behaviour of whale upon being struck, eg a) whale "runs at surface"; b) dives and disappears; c) blowing pattern; d) evidence of severe internal bleeding, eg blood in exhalation; e) other behaviour, eg thrashing or lolling. All behaviours to be timed
- Details on performance of harpoon (notes on unusual harpoon performance, if any)
- Location of harpoon on detonation (indicated on diagram at Annex B)
- Physical area of entry wound of harpoon, and exit wound (if appropriate)
- Details of performance of gun used: calibre, number of shots, target area of whale, number of guns used.

Information on Target Whale

- Time when whale assessed as dead
- Criteria used to assess that whale is dead (according to accepted veterinary criteria, ie mouth droops open, body goes limp, etc: see item 5 of Humane Killing Action Plan)
- Total time to death, ie from time of first harpoon to assessment as dead
- Time when whale hauled alongside vessel
- Time whale secured or taken onboard
- Whale escapes: time when whale escapes; reasons for this (eg failure of equipment); approximate state of health of whale (eg severely wounded, whale has harpoon in it; whale dived but lost).

Post Mortem

Where the opportunity arises, and the specialist skills and knowledge are available, the following information should be recorded.

- Exact position of entry and exit point of harpoon
- Photograph of entry and exit point
- Assessment of effectiveness of grenade, based on examination of internal injuries. Organs and tissues to be examined should, depending on location of harpoon, include lungs, heart (thoracic cavity), skull, brain, blood supply and spinal cord. Photographs should be taken where appropriate
- Assessment of effectiveness of any secondary killing method used, based on examination of internal injuries, as above.

Data Collection

All data shall be recorded on standardised data sheets to be provided by and returned to the IWC Secretariat.

* All data shall be recorded on standardised data sheets to be provided by and returned to the IWC Secretariat.