

Report of the Working Group on Whale Killing Methods and Associated Welfare Issues

TUESDAY 5 JULY 2011

Contents

1. INTRODUCTORY ITEMS.....	2
1.1 Appointment of Chair.....	2
1.2 Appointment of Rapporteur.....	2
1.3 Review of Documents.....	2
2. ADOPTION OF AGENDA.....	2
3. DATA PROVIDED ON WHALES KILLED.....	2
3.1 Background.....	2
3.2 Reports.....	2
3.3 Conclusion.....	2
4. INFORMATION ON IMPROVING THE HUMANENESS OF WHALING OPERATIONS.....	2
4.1 Reports from member governments.....	2
4.1.1 Norway.....	3
4.1.2 USA.....	3
4.1.3 Conclusion.....	3
4.2 Report of Whale Welfare and Ethics Workshop.....	3
4.2.1 Presentation of IWC/63/WKM&AWI 4.....	3
4.2.2 Discussion.....	4
4.2.3 Conclusion.....	6
5. WELFARE ISSUES ASSOCIATED WITH THE ENTANGLEMENT OF LARGE WHALES.....	6
5.1 Proposals to advance the recommendations of the Maui workshop (IWC/62/15).....	6
5.2 Discussion and conclusions.....	6
6. OTHER.....	6
7. ADOPTION OF THE REPORT.....	7

1. INTRODUCTORY ITEMS

The list of participants is given as Appendix 1.

1.1 Appointment of Chair

Herman Oosthuizen (South Africa) was appointed Chair.

1.2 Appointment of Rapporteur

Greg Donovan (Secretariat) was appointed as rapporteur.

1.3 Review of Documents

The list of documents is given as Appendix 2.

2. ADOPTION OF AGENDA

The adopted agenda is given as Appendix 3.

3. DATA PROVIDED ON WHALES KILLED

3.1 Background

Resolution 1999-1 encouraged reporting of data on whales killed including the number killed by each method, the number killed instantaneously, times to death, number of whales targeted and missed, number of whales struck and lost, calibre of rifle where used, number of bullets used and methods to determine unconsciousness/time to death. A voluntary template for providing information is available. Resolution 2001-2 encouraged governments to submit information on variance data on times to death (to the extent possible) and comparative data from the killing of other large mammals.

3.2 Reports

Five member governments provided information under this item, all related to the killing of cetaceans. No information on the killing of other large mammals was submitted to the Working Group.

IWC/63/WKM&AWI 3 from New Zealand, presented information (using the template) on the euthanasia of stranded cetaceans deemed beyond hope of rescue during the period April 2010 – March 2011. Three species (long-finned pilot whale, dwarf minke whale and pygmy sperm whale) were involved and all individuals died instantly. Rifles (30-06 and .303) were used.

IWC/63/WKM&AWI 5rev from the USA, presented information (using the template) on its 2010 bowhead whale hunt. Black powder and penthrite was used and further information is provided under Item 4.

IWC/63/WKM&AWI 9 from Denmark presented information (using the template) on the Greenlandic hunts for the 2010 season. Four species were involved. The 45 gram penthrite grenade was used in the hunts for bowhead and humpback whales while the fin whale hunt used the 30 gram penthrite grenade as the primary and secondary killing method. Large calibre rifles (calibre larger than 7.62 mm (30.06)) were used as the primary method for the collective hunts for common minke whales and as a secondary method for the harpoon (30 gram penthrite grenade) hunt for common minke whales. Denmark on behalf on Greenland commented on the improvement in TTD on minke whale.

IWC/63/WKM&AWI 10 from St Vincent and The Grenadines presented information on the catch of three humpback whales between 18 March and 14 April 2010. The whales were killed using the traditional harpoon and lance.

Finally, IWC/63/WKM&AWI 6 reported on Norwegian common minke whaling in 2010. Harpoon guns (50mm and 60mm) equipped with penthrite grenades were used as the primary killing method. Large calibre rifles (at least 9.3mm) are used as back-up weapons.

3.3 Conclusion

The Working Group was pleased to receive the information summarised above and thanked the relevant governments.

4. INFORMATION ON IMPROVING THE HUMANENESS OF WHALING OPERATIONS

4.1 Reports from member governments

Resolution 1997-1 concerns steps being taken to improve the humaneness of aboriginal whaling operations. Resolution 2001-2 encourages all Contracting Governments to provide appropriate technical assistance to reduce time to unconsciousness and death in all whaling operations.

4.1.1 Norway

IWC/63/WKM&AWI 6 from Norway summarised the extensive Norwegian research undertaken since 1981. Substantial improvements have been made since the first research when cold harpoons were used (17% instant deaths and mean time to death over 11 minutes) compared to the 2000-2002 results using the new penthrite grenade (instant deaths at least 80% and mean time to death about 2 minutes).

It also reported on the important co-operative work undertaken by Norway as part of the IWC's 'Action Plan'. This involves teaching and training of hunters and the transfer of knowledge, developments and technology with a number of hunts including those of Canada, Greenland, Iceland, Japan, Chukotka and Alaska. Norwegian scientists have also contributed to expert group meetings in NAMMCO on whale killing data assessment (NAMMCO, 2010).

4.1.2 USA

The Working Group also received a presentation of IWC/63/WKM&AWI 7 by Harry Brower (USA) focusing on the Alaskan 2010 hunt as well as a short video presentation on the use of the penthrite projectile from Eugene Brower (USA), one of the hunters.

In 2010, 71 bowhead whales were struck and 45 animals were landed. While the number landed was higher than the recent 10-year average (39), the efficiency (% of struck whales landed) was 63%, which is lower than the 15 year average of 77%.

In 1979, the AEWEC committed to the IWC to work to achieve an average efficiency of 75%. In practice, despite great efforts, efficiency in this subsistence hunt will be highly variable (and less than 100%) as this reflects the variability in two of the most important factors affecting the hunters' ability to retrieve whales once they are struck i.e. ice and weather conditions. Ocean currents and the whale's momentum also can carry whales under the shore-fast ice, making it impossible for them to be retrieved. In 2010 a number of struck whales sank but did not resurface; the cause is unknown.

Equipment failure can also contribute to losses. This year, the Alaska Eskimo Whaling Commission (AEWC) identified a problem with some newer harpoons in Barrow and steps are being taken to correct this. The USA is committed to improving the hunt, including the introduction of the penthrite grenade that results in quicker kills. This involves not only distribution of the grenades but importantly training and certification of hunters. At this time, penthrite grenades are available in Barrow, Wainwright, Nuiqsut, Gambell, Savoonga, Point Lay and Kaktovik and almost all of the hunters have completed training and certification. Results from 2010 and the 2011 spring hunt are being collated and are very promising with a high percentage of instant kills.

However, the penthrite programme is expensive. Not only is the cost of the projectile expensive (more than \$1,000) but transportation can also be extremely expensive (e.g. \$30,000 to ship 90 grenades to St. Lawrence Island from Barrow by charter). The AEWEC is working with the US Coast Guard to try to avoid some of the charter costs.

4.1.3 Conclusion

The Working Group was pleased to receive the information summarised above and the progress being made. It thanked the relevant governments and hunters.

4.2 Report of Whale Welfare and Ethics Workshop

4.2.1 Presentation of IWC/63/WKM&AWI 4

At IWC/62 in 2010, the UK informed the Commission that it would be holding a Welfare and Ethics workshop to collate knowledge on the current status of animal welfare science and management policies globally and allow expert discussion and analysis of such information.

The report of the UK's workshop held on 22-23 March 2010 in Cornwall, UK is given as IWC/63/WKM&AWI 4. A summary PowerPoint presentation was given to the Working Group by the Workshop's chair, David Pritchard.

In describing the background to the workshop, the UK recalled that in the 'Future of the IWC' process, animal welfare had been identified as a 'Category A' issue requiring priority resolution, and that the suggestion had been made that further work on animal welfare and ethics be undertaken at IWC63 and IWC64.

The workshop's aims were to collate knowledge on the current status of animal welfare science and management policies globally and allow expert discussion and analysis of such information. The workshop brought together international experts in animal welfare and marine mammal science; policy and legislation; animal ethics; animal research and; wild animal welfare. Participants received and discussed presentations under the headings of: whales and the way humans interact with them; global approaches and developments in animal

welfare and ethics and; wild animal welfare. The UK thanked the World Society for the Protection of Animals for its sponsorship of the workshop.

The UK explained that the workshop had benefited from the diversity of expertise in workshop attendees. Many presentations (included in annex C to IWC/63/WKM&AWI 4) and discussions provided insights into the development of and best-practice in animal welfare science and related management policies globally, which it was hoped would be of interest to the Commission.

The UK's presentation of the workshop recalled progress on animal welfare issues relating to whale hunting by the Commission and several of its member nations. The workshop did not, however, limit its consideration to whaling. Given the expansion of the IWC's agenda in recent decades there are now many issues which have the potential to impact the welfare of whales, therefore the workshop's deliberations covered a broad spectrum of human-whale interactions.

The workshop produced a series of general conclusions for the promotion of good animal welfare which it encouraged the IWC to consider in its management decisions. These included agreement that: whales are sentient animals with intrinsic value; humans have responsibility to prevent suffering caused by unnecessary human activities and to mitigate those which cannot be prevented; ongoing monitoring of human-whale interactions, with data collection & analysis, are essential to ensure good animal welfare; human activities resulting in poor welfare, including fishing gear entanglements, prolonged kills and ship strikes are major animal welfare concerns; activities which may result in poor welfare should be subject to independent scrutiny and ethical review, incorporating cost-benefit analysis and; ethics and animal welfare science should be taken into account in the management of all human-whale interactions.

The workshop also produced conclusions on specific human-whale interactions (killing and euthanasia; use of whales in invasive research; whalewatching; and ship-strikes and entanglements) which can be found on pages 5-8 of IWC/63/WKM&AWI 4.

The UK then presented and explained the recommendations of the workshop to the IWC that it should:

- (1) take account of welfare issues in the development and implementation of its management and conservation actions and procedures;
- (2) consider adoption of a Schedule amendment regarding provision and open access to practical and relevant welfare data for all forms of whaling;
- (3) promote 'Responsible Whalewatching' and facilitate the development of a five year strategic plan in this regard;
- (4) introduce a mechanism by which independent ethical review can occur, particularly with reference to whaling conducted for scientific purposes;
- (5) continue to strengthen its conservation agenda in the light of the welfare and conservation challenges faced by whales in the 21st century; and
- (6) convene an intersessional *ad hoc* working group of interested member countries to consider in detail the recommendations and conclusions of IWC/63/WKM&AWI 4 and to develop recommendations as to how these might be adopted by the Commission by schedule amendment and/or resolution/decision, as deemed appropriate, at IWC64.

Regarding recommendation (2), the UK noted its hope, under the IWC's new constructive dialogue, that such data would be used fairly. In commenting on recommendation (4), the UK noted that this area had been given consideration in 1999 but without agreement at that time. It hoped that a way forward could now be agreed.

Finally, in relation to recommendation (6), the UK expressed hope that an intersessional *ad hoc* working group would be able to review and expand upon the workshop's findings and so assist the IWC in ensuring a scientific and objective approach to the management of animal welfare and ethics. It further hoped that such a group could consider the ways in which animal welfare and ethics might be better integrated across the spectrum of the IWC's work.

4.2.2 Discussion

In discussion, Norway thanked the chair of the workshop for his presentation. It noted that the report contained discussion of many general aspects on animal welfare related to treatment of whales and wildlife in general with which Norway agreed and which were already implemented in Norwegian laws and regulations. Accordingly in Norway all hunters, including whalers, have to be trained and certified and the whaling is conducted by licensed fishermen from small fishing vessels as a part time occupation. The products are sold and are a part of their general income.

IWC/63/WKM&AWI 4 noted that the views expressed therein were those of the participants and not necessarily those of the Governments and organisations they represent. In Norway's view it therefore expresses the private opinions of the participants to the workshop on matters that have been heavily discussed in IWC for 25 – 30 years. These issues have divided the Commission into at least two groups with different views on how such matters should be dealt with and solved. Initiatives to discuss these very complex matters were appreciated. However, it is important that the discussion reflects all views before recommendations and conclusions are made as they affect the lives of many people in local and often remote and vulnerable societies. Norway does not doubt the goodwill of several of the participants of the workshop to bring sound and useful information on some of the welfare problems for whales that might occur during hunting, entanglements and the growing whalewatching industry. However, as Norway has specific scientific knowledge and expertise in the killing of whales, it limited itself to comments on that element in the report.

The definition of whales used in the report includes all cetaceans; 75 – 80 species varying from the small river dolphin to the great blue whale. No one disagrees that they should be treated humanely by man. However, some of these species are used for food for people and are consequently hunted by man using different gears, techniques and methods under different environmental conditions. During the last 30 years, continuous work has been undertaken to improve the hunt. This has improved the animal welfare aspects of the hunt considerably for many of the species hunted. In some types of whaling the killing methods are today even superior to methods used in other large mammal hunts with regard to their capability to render the animal quickly unconscious and dead. In this respect Norway referred to its report IWC/63/WKM&AWI 6.

Norway stated that in spite of all the information on results of the work to improve the whale killing methods submitted voluntarily through the years to IWC by whale hunting member nations, only fragments of this factual information were reflected in the workshop report. Where they were referred to, some of this information was biased. In this respect Norway referred to papers submitted to the workshop and mentioned particularly three papers which contained factual errors and disinformation as to the Norwegian research and results. It therefore believed that the information given by the presenters had not been discussed or professionally assessed during the workshop. Instead phrases like 'we heard' are used to express how the participants received the presentations.

Animal welfare has been the driving force in Norway's work on its improvements in the whale hunt. In recent years, Norway has found that the discussions of these issues within the IWC had become more and more irrelevant and sometimes even counterproductive. Therefore Norway stated that it has moved its primary discussions of whale killing methods to NAMMCO, and intends to continue this practice. The most recent workshop was held last year¹ and another is planned for this autumn. Norway concluded by referring to the possible value of the workshop report. It stated that it found it difficult to support the idea that a report with such serious shortcomings could be useful as a background document for any future IWC work; the report will not contribute to a constructive discussion of these very important issues.

Denmark, Iceland and Japan expressed support for Norway's views. All noted that they believed that the issue was of great importance but that they were unhappy about the way it was being handled within the IWC. They were particularly concerned about the misuse of data that they had supplied in good faith and noted that these discussions reflected a general lack of trust within the organisation.

Australia thanked the UK for its work in organising the workshop and presenting the report which contained much new and valuable information on a broad range of issues, not simply whaling. Without wishing to enter into a detailed debate about the contents of the report, it stressed that the provision of data was an important component of improvements in animal welfare as had been shown by the positive improvements initiated by Norway and others. It supported the UK's proposal for an intersessional working group. These views were supported by Mexico, Argentina and Chile.

The USA also agreed that the IWC should take into account animal welfare issues in the development and implementation of its management and conservation actions and procedures. The collection of welfare data is important to the IWC and the USA complies with applicable resolutions on the collection of welfare data, to the extent the collection of this data does not compromise hunter safety; hunter safety is of paramount concern. The USA also supported the idea that an intersessional group should be created that would report back to the Working Group in 2012. In doing so, it noted that many of these issues are difficult and sensitive, and will take some time to address in order to make meaningful progress. It did not believe that the Commission would be in a position to establish new committees or adopt binding recommendations by 2012.

¹ <http://www.nammco.no/webcronize/images/Nammco/948.pdf>

4.2.3 Conclusion

The Chair noted that despite agreement on the importance of the general issue of animal welfare, it was clear that there was no consensus on the recommendations put forward by the UK. He suggested that interested countries of all views should consult with the UK with a view to seeing if a consensus way forward could be developed for consideration at the Plenary.

In response to the points raised and the Chair's proposal, the UK thanked participants for the generally constructive discussion. It recognised that whale welfare issues are sensitive and complex, particularly with respect to killing methods. That was why it was keen to look at wider aspects of welfare not just killing. There is also a common interest in improving understanding of the scale and impact of other human interactions with whales including, for example, entanglement, ship strikes and whalewatching. It wanted the discussion of IWC/63/WKM&AWI 4 to be seen as the start of a genuine dialogue between all those with interests in whale welfare. It recognised that there are gaps in the report and welcomes further discussion outside this forum in order to develop ideas further. It also recognised concerns about the scope and nature of the recommendation to form an *ad hoc* group and the comments about timing. That being said it would be a missed opportunity if the IWC did not take this work forward in some way and the UK wants this to be done by consensus so far as possible. It will follow the Chair's suggestion for dialogue with all sides to try to develop an appropriate way forward.

5. WELFARE ISSUES ASSOCIATED WITH THE ENTANGLEMENT OF LARGE WHALES

5.1 Proposals to advance the recommendations of the Maui workshop (IWC/62/15)

The Chair noted that a successful IWC workshop on welfare issues associated with the entanglement of large whales had been held in April 2010 in Maui, Hawaii. The report of the workshop (IWC/62/15) was discussed at IWC 62 and the Commission had welcomed the workshop report, endorsed its recommendations and given particular emphasis to the recommendation for a follow up workshop to address entanglement prevention. He was pleased to see that a paper to take forward the recommendations of that workshop co-authored by Australia, Norway and the USA was available to the Working Group (IWC/63/WKM&AWI 8).

On behalf of the authors, the USA introduced IWC/63/WKM&AWI 8. Short and long-term actions were proposed to advance the more general recommendations, help build capacity for dealing with entanglements around the world and also provide the necessary foundations for a future workshop on entanglement prevention, which has been previously noted as a priority by the Commission.

The short term initiatives include:

- (1) convene a 2nd workshop for which the terms of reference and draft agenda are given in Appendix 4;
- (2) begin capacity building in identified countries and regions; and
- (3) establish a standing group of experts who are willing to advise member countries upon request

The long term initiatives include:

- (1) assist member countries to undertake research;
- (2) promote cooperative research between member countries; and
- (3) identify experts and sources of further information

The authors also suggest that in order to accomplish these short and long-term actions, the IWC establish a voluntary IWC fund to assist with the cost of these actions. They also recommend that proposals to the Fund be reviewed by a panel of experts based on Commission priorities, the financial need of the applicant and their preparedness to facilitate the action.

In addition to the fund, the authors stress that the implementation of these actions will need to involve the appropriate IWC sub-committees and working groups.

5.2 Discussion and conclusions

Many countries spoke in favour of the importance of this issue and thanked Australia, Norway and the USA for this important initiative. The Working Group **endorses** the recommendations found in IWC/63/WKM&AWI 8 and repeated as Appendix 4 and **commends** them to the Commission.

6. OTHER

There were no items raised under this agenda item.

7. ADOPTION OF THE REPORT

The Chair thanked the participants for the constructive atmosphere in which discussions were held and the participants thanked the Chair for his efficient and fair handling of the meeting.

The report was adopted 'by post' at 1900hrs on Saturday 9 July.

Appendix 1

List of Participants

ARGENTINA

Miguel Iniguez

AUSTRALIA

Nick Gales
Peter Komidar
Stephanie Jerino
Pam Eiser

AUSTRIA

Andrea Nouak
Michael Stachowitsch

BELGIUM

Alexandre de Lichtervelde
Fabian Ritter
Els Vermeulen

CHILE

Barbara Galletti

DENMARK

Ole Samsing
Amalie Jessen
Nette Levermann

FINLAND

Penina Blankett

FRANCE

Vincent Ridoux

GERMANY

Walter Duebner
Karl-Hermann Kock

ICELAND

Asta Einarsdottir
Kristjan Loftsson
Gisli Vikingsson

JAPAN

Joji Morishita
Shinji Hiruma
Toshinori Uoya

KOREA

Dae Yeon Moon
Kab-Yong Jeong

LUXEMBOURG

Pierre Gallego

MEXICO

Lorenzo Rojas-Bracho

NETHERLANDS

Peter Bos

NEW ZEALAND

Andrew Bignell
Louise Chilvers
Caroline McDonald
Karena Lyons

NORWAY

Øle-David Stenseth
Egil Øen
Hild Ynnesdal
Einar Tallaksen
Lars Walløe

SOUTH AFRICA

Herman Oosthuizen
Ed Couzens

SPAIN

Santiago Lens

SWEDEN

Bo Fernholm

UK

Richard Pullen
James Gray
Jennifer Lonsdale
Vassili Papastravrou
Trevor Perfect
David Pritchard
Beatriz Roel
Anju Sharda
Mark Simmonds
Jolyon Thomson

USA

Doug DeMaster
Roger Eckert
Mike Gosliner
Brian Gruber
Lisa Phelps
Allison Reed
Rollie Schmitt
Michael Tillman
Ryan Wulff
Eugene Brower
Harry Brower

SECRETARIAT

Simon Brockington
Greg Donovan

Appendix 2

List of Documents

IWC/63/WKM&AWI:

- 1 rev Draft Agenda
- 2 List of Documents
- 3 Summary of Activities Related to the Action Plan on Whale Killing Methods (based on Resolution 1999-1): Euthanasia of stranded whales beyond all hope of rescue – submitted by New Zealand
- 4 Report of the Whale Welfare and Ethics Workshop – submitted by UK
- 5 rev Summary of Activities Related to the Action Plan on Whale Killing Methods (based on Resolution 1991-1) – submitted by USA
- 6 Norwegian Minke Whaling 2010 – submitted by Norway
- 7 Report on weapons, techniques and observations in the Alaskan bowhead whale subsistence hunt – submitted by USA
- 8 Advancing the Recommendations of the Workshop on Welfare Issues associated with the Entanglement of Large Whales (Maui, 2010) – submitted by Australia, Norway and USA
- 9 Summary of Activities Related to the Action Plan on Whale Killing Methods (based on Resolution 1991-1) – submitted by Greenland (Denmark)
- 10 St Vincent and The Grenadines 2010 hunt– submitted by St Vincent and The Grenadines

Appendix 3

Agenda

1. INTRODUCTORY ITEMS
 - 1.1. Appointment of Chair
 - 1.2. Appointment of Rapporteur
 - 1.3. Review of Documents
2. ADOPTION OF AGENDA
3. DATA PROVIDED ON WHALES KILLED
4. INFORMATION ON IMPROVING THE HUMANENESS OF WHALING OPERATIONS
 - 4.1. Reports from Contracting Governments
 - 4.2. Report of Whale Welfare and Ethics Workshop
5. WELFARE ISSUES ASSOCIATED WITH THE ENTANGLEMENT OF LARGE WHALES
6. OTHER
7. ADOPTION OF THE REPORT

TERMS OF REFERENCE

The Working Group is established to review information and documentation available with a view to advising the Commission on whale killing methods and associated welfare issues (*Chairman's Report of the 52nd Annual Meeting* held in 2000).

ADMISSION OF OBSERVERS

Rule of Procedure C.2

Observers accredited in accordance with Rule [of procedure] C.1.(a) and (b) are admitted to all meetings of the Commission and Technical Committee, and to any meetings of subsidiary groups of the Commission and Technical Committee, except the Commissioners-only meetings and the meetings of the Finance and Administration Committee.

Appendix 4

Recommendations on welfare issues associated with the entanglement of large whales

A. SHORT- AND LONG TERM- INITIATIVES

1. Short-term initiatives: within the next year.

1.1. Convene a workshop (see draft terms of reference and draft agenda below) of large whale entanglement response directors, from those countries where programs exist (including Australia, Canada, Mexico, South Africa, USA), along with other technical experts, in order to:

- (1) advance the progress of the 2010 Maui workshop (e.g. new tools, techniques and protocols, and update the decision tree);
- (2) develop 'recommended practices' for entanglement response; and
- (3) develop capacity building curricula and strategy.

1.2. Begin capacity building in identified countries and regions, including that already requested from the following:

- (1) overview seminars, for managers and scientists, followed by response training for regional stranding networks, in Argentina, Brazil and Uruguay;
- (2) capacity building seminar and training for Central American countries. If practical and appropriate, to be conducted as a pre-meeting to IWC 64 (if in Panama).

1.3. Establish a standing group of experts who are willing to advise member countries on specific cases, as well as approaches to entanglement response, including 'recommended practice' protocols. In addition members of this group would:

- (1) supply expert advice on this issue to the IWC for the development and implementation of conservation management plans;
- (2) identify and/or establish appropriate apprenticeship and exchange programmes that build the pool of experts who have 'hands on' experience in all aspects of this issue;
- (3) use the IWC website and list serve communication tools to establish and broaden the current nascent international consultation process for entanglement related events.

2. Long-term initiatives:

2.1. Assist member countries to undertake research to assess the scope and impact of this issue in their waters, especially for those regions and countries which are prioritised. This can include the following:

- (1) assist the appropriate studies of living whales (e.g. scar studies);
- (2) promote the examination of all dead whales for evidence of current or prior entanglement, including capacity building for scientists in those countries where needed.

2.2. Promote co-operative research between member countries which helps to give a broader (e.g. regional or global) understanding of:

- (1) species and populations involved;
- (2) rates and impacts of entanglement for the populations and individuals involved;
- (3) comparison of specific characteristics of entanglements (e.g. gear type and use, environmental conditions, configuration on whale, impact), between countries and regions where such data exist;
- (4) potential mitigation strategies and actions.

2.3. Identify experts and sources of information which can be gathered for an IWC workshop on the prevention and/or mitigation of large whale entanglement.

B. GOVERNANCE OF THE VOLUNTARY FUND

- (1) Proposals to the fund will be reviewed by a panel initially comprised of experts from Norway, the USA and Australia, along with identified technical experts on specific topics.
- (2) Funds to support proposed actions will be awarded based on the following priority:
 - (a) The known level of entanglement and risk to endangered populations
 - (b) The suspected high levels of undocumented entanglement (e.g. large coasts with significant whale populations and high levels of coastal fishing using implicated gear)
 - (c) Financial need of the applicant and their preparedness to facilitate the action.

The above actions need not be limited to support from the established fund. Member countries, IWC sub-committees and working groups can also request guidance from the review panel e.g. for prioritised actions to encourage.

C. TERMS OF REFERENCE FOR THE SECOND WORKSHOP ON LARGE WHALE ENTANGLEMENT ISSUES

1. Update new relevant information since Maui workshop:
 - Review relevant reports from any relevant intervening workshops
 - New tools, techniques and procedures
 - Overview of new networks (e.g. New Zealand, Western Canada)
2. Update 'decision tree'
3. Develop 'best practices' for response and welfare issues
4. Develop general components of seminars and training for capacity building
 - Components for seminars to managers and academia (e.g. global overview of scope, impacts and actions, research tools for understanding scope and impact, and response options)
 - Components for specific training of response personnel
5. Bring information relevant to prevention workshop
 - Each country participating bring review of prevention actions in their region
 - Bring individual(s) contact info for potential IPs to prevention workshop

D. DRAFT AGENDA FOR SECOND WORKSHOP ON ENTANGLEMENT RESPONSE

1. Introductions
2. Nominate Chair and Rapporteur(s)
3. Review and adopt Agenda
4. New information since 2010 workshop
 - 4.1 Overview of any new participating national networks (e.g. New Zealand)
 - 4.2 Aspects of reports from relevant workshops in 2010-2011 (i.e. NOAA, NEAq, IWC...)
 - 4.3 New or unusual relevant cases since Maui (e.g. right whale #2611....)
 - 4.4 New tools or techniques
 - 4.5 New safety or risk assessment
5. Examples of current 'best practices'
6. Examples of current training components and curricula for international capacity building

Breakout session for disentanglers and operational coordinators (practical considerations)

7. Difficult cases or scenarios (practical aspects)
8. Improvements in documentation of events (gear type and configuration, whale species and health)
9. Improvements in assessment (operational difficulty and risk...etc)
10. Training:
 - 10.1 Overview of components and curricula
 - 10.2 Apprenticeships and personnel exchanges
11. Develop best practices document (Safety, procedures, decisions, facilitating prevention)
 - 11.1 Update and improve operational aspects of decision tree
12. Documentation of procedure/event (e.g. for review, media, education and training)
 - 12.1 Communicating with the public (e.g. Media, outreach....etc)

Breakout Session for veterinarians and biologists (e.g. assessing individual and population impact)

13. Difficult cases (health and welfare issues)
14. Improvements in medical and sampling techniques
15. Improvements in assessing risk to whale and likelihood of survival
16. New tools or protocols for euthanasia (esp. at sea)

- 17. Training:
 - 17.1 Overview of components and curricula
 - 17.2 Apprenticeships, exchanges, academic opportunities
 - 17.3. Develop best practices (safety, procedures, decisions, toward prevention)
 - 17.4 Update and improve veterinary and scientific aspects of decision tree
- 18. Considerations and improvements for scientific documentation

Final Combined Session

- 19. Review and edit Maui decision tree based on new information and discussions from both groups
- 20. Interfacing with the public
 - 20.1 Keeping the ocean community informed and involved
 - 20.2 Working with media
 - 20.3 General public (e.g. key messages, avenues to communicate)
- 21. Gathering and analysing information toward prevention
 - 21.1 What is currently happening in various regions?
 - 21.2 What information is most needed?
 - 21.3 What are useful regional and global analyses (e.g. comparative studies v pooling data)
 - 21.4 Consider recommendations/agenda/ideas for an international prevention workshop.
- 22. New directions
 - 22.1. Agreement on components of training for capacity building
 - 22.1.1 List of qualified trainers (by regions and seasons)
 - 22.2 Consider formation of an international disentanglement association
 - 22.3 Apprenticeship and exchange programs
 - 22.4 New directions for tools, techniques and protocols

Draft list of documents and materials for review

- Report of the NOAA workshop on the documentation of gear removed from entangled whales (2010)
- Report of the NEAq-NOAA workshop on the configuration of documented whale entanglements (2011)
- Report of the NEAq-NOAA workshop on the behaviour of whales in relationship to gear (2011)
- NOAA Handbook for field examination of stranded whales for evidence potential human impacts
- Examples of training curricula currently in use (esp. those used for capacity building in other countries)
- PCCS draft manual on disentanglement techniques
- Necropsy report of entangled, sedated, tagged right whale
- NOAA outreach to mariners DVD