

**ADVANCING THE RECOMMENDATIONS OF THE WORKSHOP ON WELFARE
ISSUES ASSOCIATED WITH THE ENTANGLEMENT OF LARGE WHALES
(MAUI, 2010)**

Submitted by Australia, Norway and USA

INTRODUCTION

At the initial suggestion of Norway, and with the subsequent support of Australia and the USA, an IWC workshop on the welfare issues associated with the entanglement of large whales was held from 13-15 April, 2010, hosted by the USA (NOAA) in Kihei, Maui. The workshop brought together a group of invited participants who had expertise in the assessment of and possible responses to entangled large whales. The participants reviewed what is currently known about the scope and impact of large whale entanglement, as well as the current range of decisions and actions taken by responders from various countries around the world. The report of the workshop was presented to IWC/62 in 2010 as part of the work of the Commission's Whale Killing Methods and Associated Welfare Issues working group (IWC/62/15, Australia, Norway, USA). The Commission noted the workshop report and endorsed its recommendations, and gave particular emphasis to the recommendation for a follow up workshop to address entanglement prevention.

The workshop participants reviewed many aspects of large whale entanglement, including the species involved, the geographic range of reports and the source of entangling materials. In addition they reviewed the impacts (e.g. wounds and mortality rates) these events can have on both individuals and populations, and the subsequent welfare and management implications. Finally, they reviewed and discussed potential actions by observers and/or responders (e.g. data collection, intervention to release or euthanize). As a result of these deliberations the participants agreed on several key points summarized here, but available in detail in Appendix 1.

1. All species of large whale, wherever their distribution overlaps with any type of stationary or drifting fishing gear or debris, are at risk of becoming entangled.
2. Large whale entanglements are both rarely observed, and, when they are, they are often not reported because of a lack of awareness and reporting networks. As a result, the true rates of entanglement are considerably underreported for most populations and regions.
3. Many entanglements can cause wounds which have welfare implications, and the mortality rates due to entanglement can and have impacted the recovery of some regional populations.
4. Disentanglement and/or euthanasia can never fully address all of the concerns associated with this human impact, ultimately highlighting the need for prevention.

In response to these points, the workshop members developed a series of recommendations, most of which fell into the following general categories:

- Improve reporting of and data collection from entangled whales, whether alive or dead.
- Improve responses to reports of live entangled whales, using the techniques recommended, in concert with the decision tree developed by the first workshop (Appendix 4).
- In order to accomplish the two points above, undertake capacity building, especially in regions where whale populations overlap with stationary or drifting fishing gear, further prioritizing those areas with endangered populations.
- Gather and review information and potential actions that are most likely to prevent or mitigate large whale entanglement.

In order to advance the above, more general recommendations, Norway, the USA (and Australia) suggest the following short and long-term actions, which will help build capacity for dealing with entanglements around the world, but will also provide the necessary foundations for a future workshop on entanglement prevention, this being a priority previously noted by the Commission.

1. Short-term initiatives: Within the next year.
 - 1.1. Convene a workshop of large whale entanglement response directors, from those countries where programs exist (e.g. Australia, Canada, Mexico, South Africa, USA...etc), 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. See draft terms of reference (Appendix 2), and draft agenda (Appendix 3).

- 1.2. Begin capacity building in identified countries and regions, including that already requested from the following:
 - 1.2.1. Overview seminars, for managers and scientists, followed by response training for regional stranding networks, in Argentina, Brazil and Uruguay.
 - 1.2.2. 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. Additionally, members of this group would supply expert advice on this issue to the IWC for the development and implementation of their conservation management plans.
 - 1.3.1. Identify and/or establish appropriate apprenticeship and exchange programs that build the pool of experts who have “hands on” experience in all aspects of this issue.
 - 1.3.2. Utilize 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 prioritized. This can include the following.
 - 2.1.1. Assist the appropriate studies of living whales (e.g. scar studies).
 - 2.1.2. 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 cooperative research between member countries which helps to give a broader (e.g. Regional or global) understanding of:
 - 2.2.1. The species and populations involved.
 - 2.2.2. The rates and impacts of entanglement for the populations and individuals involved
 - 2.2.3. 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.
 - 2.2.4. 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.

In order to accomplish these short and long-term actions, Norway, USA (and Australia) suggest that the IWC and its member countries establish a voluntary IWC fund which can assist with the cost of these actions.

Governance of the Fund

- o 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 this topic. Funds to support proposed actions will be awarded based on the following priority:
 - The known level of entanglement and risk to endangered populations
 - The suspected high levels of undocumented entanglement (e.g. large coasts with significant whale populations and high levels of coastal fishing using implicated gear)
 - 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, however, it is recommended that member countries use the guidance of the Fund’s review panel, and appropriate IWC subcommittees and working groups, to identify prioritized actions to encourage.

REFERENCES

Australia, Norway and USA, 2010. *Report of the Workshop on Welfare Issues Associated with the Entanglement of Large Whales*, IWC/62/15 Submitted to the 62nd annual meeting of the International whaling Commission, Agadir, Morocco.

Appendix 1

SYNTHESIS AND MAIN RECOMMENDATIONS FROM MAUI 2010 WORKSHOP

(Agenda item 10 from the workshop report)

The Workshop noted that disentanglement may mitigate some of the effects of a prevailing problem that is global and increasing. However, disentanglement or euthanasia alone does not prevent the problem. The Workshop therefore, **recommended** that the IWC initiate a process to prevent the entanglement of cetaceans in marine debris and fishing gear. To begin this process the workshop **recommended** that the IWC sponsor a workshop on current efforts to prevent entanglement. The Workshop recognized that analyses of the gear involved and the entanglement could ultimately lead to the prevention of large whale entanglement. Therefore the Workshop **recommended** as a high priority that debris and fishing gear removed from cetaceans during disentanglement operations be collected, analyzed or appropriately archived for future assessment if real time analyses are not possible.

Because prevention is not imminent, the Workshop focused on operations that would be important from an animal welfare perspective based on current knowledge of entangled whales.

First, based on the information presented and summarized, the Workshop acknowledged that entanglements are occurring at varying rates throughout the geographic range of all large whale species, encompassing breeding, feeding, and migratory routes. Secondly the Workshop **expressed concern** that the numbers of entangled whales presented in the IWC National Progress Reports represented severe underreporting of entanglements. Therefore, the Workshop **recommended** that coastal nations establish adequate programmes for monitoring entanglement of whales and that IWC member countries make a concerted effort to report through National Progress Reports. Monitoring of entanglement could be done through scar based studies, interviews with fishermen, whale watching operators, or more thorough examination of existing stranding data, etc. The Workshop further **recommended** that particular emphasis should be on areas where fishing operations overlap with the distribution of endangered or depleted populations (e.g. western gray whales, North Pacific and North Atlantic right whales and J-stock minke whales).

The Workshop strongly **recommended** that the IWC urge member nations, to establish entanglement response capabilities, drawing from experience in other countries, where whale distributions and fisheries overlap. Given the evidence presented at this workshop, any country that has coastal whale populations and stationary or drifting fishing gear, but is not aware of large whale entanglements, should consider that there is potential for them to exist. Therefore the Workshop **recommended** that those countries enact mechanisms to investigate the extent of possible incidents.

The Workshop **strongly recommended** that response programmes be established in areas where entangled whales are observed. Based on current knowledge, the Workshop developed an assessment and decision tree for large whale disentanglement. Recognizing that assessment of the large whale disentanglement response is a dynamic process, the Workshop **recommended** that development and refinement of the tree be continued as responders gain new knowledge and experience. The Workshop identified human safety, the welfare of the entangled animal and the conservation status of the species as important aspects to take into consideration. Given that decisions about response are often made in emotionally charged situations, the Workshop **recommended** that, when establishing a response network, countries utilize the experience of others that have ongoing successful and functional response networks.

The Workshop noted that animal behavior, and therefore associated risks to response personnel, may vary greatly depending upon the species, age class, and behavior state (e.g., breeding, feeding or migrating) of the entangled animal. The Workshop **agreed** that the use of sedatives represents a managed risk which may provide additional benefits for the safety of responders and enhance animal welfare, and therefore be a valuable tool in disentanglement response, and **recommended** that the technique should be explored further.

The Workshop **concluded** that in cases where an entanglement is considered to be lethal and disentanglement is not feasible, euthanasia should be attempted. Currently there are appropriate techniques available for euthanasia of whales in distress, both stranded and at sea. However, methods differ according to species, size of the animals and environmental conditions. The Workshop **recommended** that euthanasia should only be applied in situations where: (1) the chosen method does not compromise the safety of personnel administering the method and (2) that the application of the method ensures rapid and humane death to the whale.

The Workshop **agreed** that most stranded baleen whales are terminal and under most circumstances, (always in areas of surf), it is both inhumane to the whale and dangerous to response personnel to attempt to refloat and release a stranded large whale. If the whale does not refloat on its own after one tidal cycle, euthanasia should be considered as the most humane option. The Workshop **recommended** that in order to ensure the safety of response personnel, attempts at euthanasia should not be conducted when a whale is in surf and should be conducted only when a whale has been stabilized or is above the tide line.

The Workshop **commended** the detailed work and approaches provided on survival of entangled whales and pathology of injuries presented during the meeting. The Workshop **recognized** that entanglements may produce: (1) external wounds in the absence of significant internal damage, (2) external wounds with internal damage and (3) internal damage in the absence of observable external damage. This variability makes field assessments of specific pathology and physical and physiological effects in the animal difficult. The Workshop **recommended** prioritizing necropsies of entangled and previously entangled whales. Recognizing the importance of such information on future prevention and mitigation measures and the role that such information would play in response decisions, the Workshop **recommended** standardized data be collected on the entanglement and the health of the individual, and when possible survival studies be conducted in other regions or on other species not currently studied but in which whale entanglements are observed. As part of the data collected, the Workshop **recommended** the collection of individual identification data to ascertain the ultimate outcome of the event. In addition, the Workshop **recognized** that although health metrics and health status trends are critical to decisions on condition and outcome of entanglement cases, there are few current standardized methods being used for various species and in different geographic areas. The Workshop **recommended** further development and validation of assessment and condition indices for large whales.

Appendix 2

**TERMS OF REFERENCE FOR PROPOSED SECOND WORKSHOP ON LARGE WHALE
ENTANGLEMENT ISSUES**

1. Update new relevant information since Maui workshop
 - 1.1. Review relevant reports from any relevant intervening workshops
 - 1.2. New tools, techniques and procedures
 - 1.3. 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
 - 4.1. 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)
 - 4.2. Components for specific training of response personnel
5. Bring information relevant to prevention workshop
 - 5.1. Each country participating bring review of prevention actions in their region
 - 5.2. Bring individual(s) contact info for potential IPs to prevention workshop

Appendix 3

DRAFT AGENDA FOR SECOND WORKSHOP ON ENTANGLEMENT RESPONSE

2011, Draft Agenda

6. Introductions
7. Nominate Chair and Rapporteur(s)
8. Review and adopt Agenda
9. New information since 2010 workshop
 - 9.1. Overview of any new participating national networks (e.g. New Zealand)
 - 9.2. Aspects of reports from relevant workshops in 2010-2011 (i.e. NOAA, NEAq, IWC...)
 - 9.3. New or unusual relevant cases since Maui (e.g. right whale #2611....)
 - 9.4. New tools or techniques
 - 9.5. New safety or risk assessment
10. Examples of current "best practices"
11. Examples of current training components and curricula for international capacity building

Breakout session for disentanglers and operational coordinators (practical considerations)

12. Difficult cases or scenarios (practical aspects)
13. Improvements in documentation of events (gear type and configuration, whale species and health)
14. Improvements in assessment (operational difficulty and risk...etc)
15. Training:
 - 15.1. Overview of components and curricula
 - 15.2. Apprenticeships and personnel exchanges
16. Develop best practices document (Safety, procedures, decisions, facilitating prevention)
 - 16.1. Update and improve operational aspects of decision tree
17. Documentation of procedure/event (e.g. for review, media, education and training)
 - 17.1.1. Communicating with the public (e.g. Media, outreach....etc)

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

18. Difficult cases (health and welfare issues)
19. Improvements in medical and sampling techniques
20. Improvements in assessing risk to whale and likelihood of survival
21. New tools or protocols for euthanasia (esp. at sea)
22. Training:
 - 22.1. Overview of components and curricula
 - 22.2. Apprenticeships, exchanges, academic opportunities
23. Develop best practices (safety, procedures, decisions, toward prevention)
 - 23.1. Update and improve veterinary and scientific aspects of decision tree
24. Considerations and improvements for scientific documentation

Final Combined Session

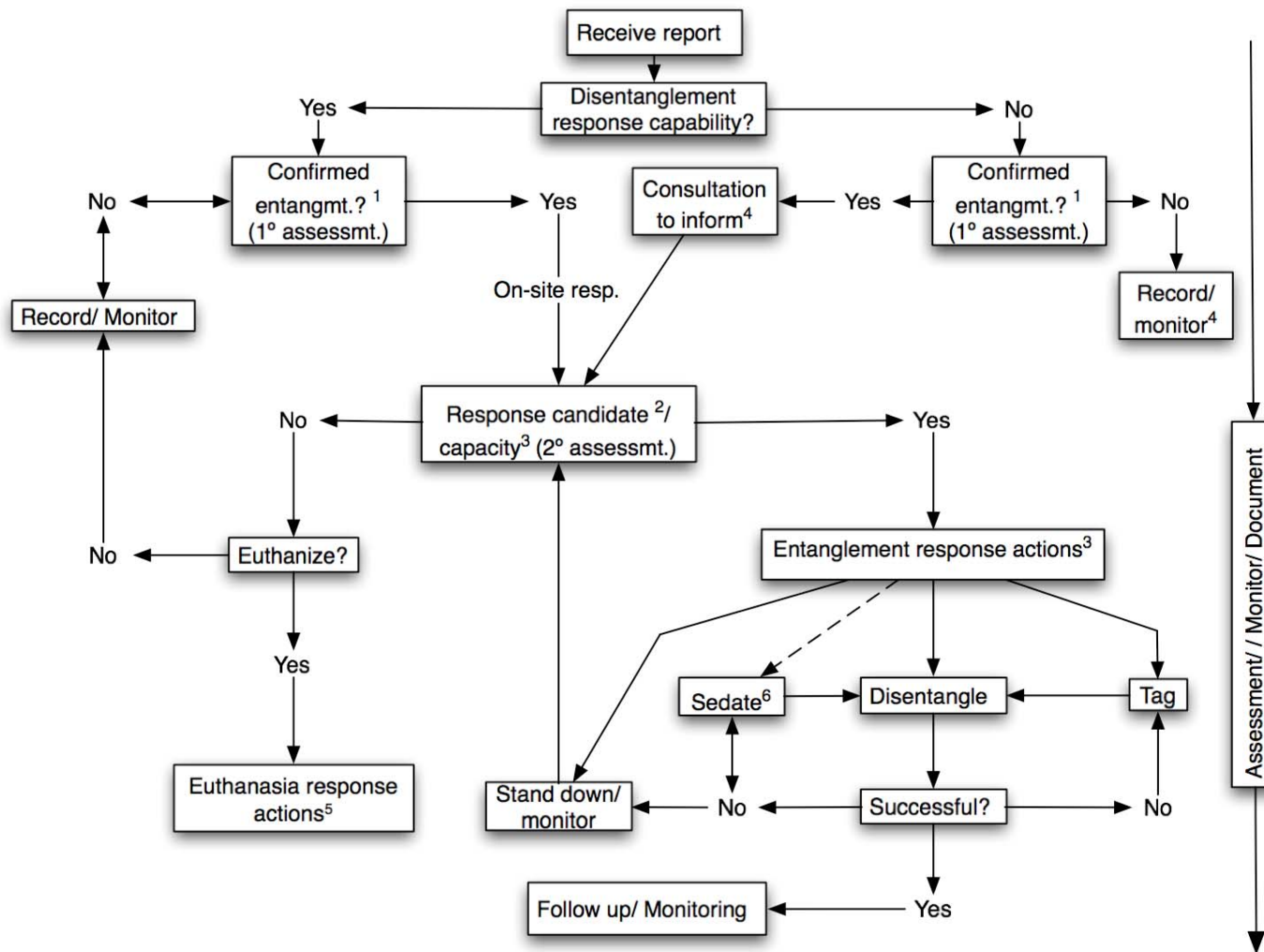
25. Review and edit Maui decision tree based on new information and discussions from both groups
26. Interfacing with the public
 - 26.1. Keeping the Ocean community informed and involved
 - 26.2. Working with media
 - 26.3. General public (e.g. key messages, avenues to communicate)
27. Gathering and analyzing information toward prevention
 - 27.1. What is currently happening in various regions?
 - 27.2. What information is most needed?
 - 27.3. What are useful regional and global analyses (e.g. can we learn more by comparative studies or by pooling data?)
 - 27.4. Consider recommendations/agenda/ideas for an international prevention workshop.
28. New directions
 - 28.1. Agreement on components of training for capacity building
 - 28.1.1. List of qualified trainers (by regions and seasons)
 - 28.2. Consider formation of an international disentanglement association
 - 28.3. Apprenticeship and exchange programs
 - 28.4. 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 behavior 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

Appendix 4

Figure 1. Decision tree for large whale entanglements. Note: Assessment/Monitor/Document are essential and ongoing throughout all aspects of the tree.



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