

## Principles and guidelines for large whale entanglement response efforts

### DEDICATION

This document is dedicated to the memory of Tom Smith from Kaikoura, New Zealand. A kind and generous man, Tom was a fisherman and conservationist who tragically died during an attempt to disentangle a humpback whale while he was in the water. Particularly as a result of this and other human injuries recorded worldwide, an important motivation for these guidelines and principles is to try to prevent similar tragedies and to honour his family.

### DISCLAIMER

While these principles and guidelines have been developed to try to maximise safe and successful operations, disentanglement operations are complex and can be unpredictable; following these guidelines does not necessarily guarantee personal safety, an animal's successful release, or operation in accordance with national rules and regulations (permits and/or letters of authorisation). All responsibility is upon the operator to undertake safe activities under their best judgment. The IWC and the authors of this document are not liable for any actions taken as a result of these guidelines and principles. This is a living document, intended to be dynamic and evolving as new information and experience is gained. It is **not** an instruction manual.

### OBJECTIVE

Based on the most recent information, the objective of this document is to provide principles and guidelines for trained persons to safely and effectively respond to reports of entangled live whales at sea. The objective of an entanglement response is to remove all detrimental entangling gear safely from the whale and learn as much from the entanglement as possible to ultimately prevent entanglements from occurring. Actions by well-meaning untrained persons can worsen an entanglement, through a lack of subject knowledge and experience.

For example, removing easily accessible trailing gear from entangled whales may leave the most critical components on a whale, making future, organised disentanglements more difficult or even impossible, potentially resulting in severe harm or death to the animal.

Regional entanglement response scenarios and complexities may require different techniques and strategies (see Annex F on capacity building and training).

### GOALS OF ENTANGLEMENT RESPONSE

- (a) Human safety
- (b) Animal welfare
- (c) Contribution to the conservation of large whale populations, recognising that prevention is the ultimate goal
- (d) Data collection to assist with identifying key fisheries and whale populations and thus better specification of actual entanglement problems within a region to assist with mitigation and prevention.
- (e) Awareness of issues at all levels to improve reporting and appropriate measures to address issues (a) to (d)

### 1. GENERAL SAFETY

- (a) **At no time should an individual enter the water.** It is not necessary given the proper disentanglement training, tools and techniques. Over a thousand successful disentanglements have occurred with a boat-based technique without significant human injury, whereas human life has been lost during dive-based disentanglement attempts.
- (b) Do not put the whale's rescue above human safety at any time
- (c) Only trained and authorised operators should participate in disentanglement activities.
- (d) Actions must be thoroughly thought through and planned, with full briefing to all **participants** and **team members**. All **participants** need to be clear on aims, objectives, operational procedure and roles.
- (e) Do not secure a line from the whale to the vessel.
- (f) In addition to focussing on the disentanglement itself, pay careful attention to the overall environment.
- (g) Actions must not be pressured by weather, time of day, onlookers, media, or the perceived need to act.
- (h) When in doubt about safety or the success of the operation, stand down, if possible attach a satellite

telemetry device for tracking and/or try again on another day with better support, conditions, and/or resources.

## **2. PERSONNEL**

- (a) Human safety is the number one priority.
- (b) Appropriately, trained, experienced and authorised personnel should be used for the roles required and actions/efforts must be based on the qualifications of personnel on hand.
- (c) Roles must be assigned to team members based on their experience, training, and overall qualifications.
- (d) Personnel should be monitored (e.g. for fatigue, dehydration, emotional state) at all times to maintain
- (e) Team members must be encouraged to speak up if they are not comfortable with a particular action or the general situation. Leaders must respect any concerns raised and not instruct personnel to take a role or action that they are not comfortable with.

## **3. PERSONNEL EQUIPMENT**

- (a) Personnel working near or with entangling gear must carry emergency safety knives on their persons at all times.
- (b) Gloves must be used when handling lines or netting under load (i.e. attached to whale).
- (c) Helmets must be worn by personnel operating near the whale and/or using poles.
- (d) Appropriate attire and personal floatation/protection must be worn at all times. Examples include PFDs, wetsuits, drysuits, worksuits that are snag-free (without straps, D-rings, and clips that can act as snag points for lines/ gear).
- (e) Proper communication tools must be available (e.g. waterproof VHF handheld, cellular phones).
- (f) Carry sufficient water and food.

## **4. PLATFORMS**

Response efforts are generally conducted from two vessels, a primary response vessel and a support/safety vessel.

### **Primary response vessel (PRV)**

- (a) This vessel is the main operational platform to assess, perform the entanglement removal and monitor the situation. It is essential that only disentanglement staff and essential equipment be carried.
- (b) It should be maintained by a helmsman, a specialist crew member at the bow and a third specialist crew person to ensure trailing lines are clear of the engine leg and to assist the crew at the bow.
- (c) Its deck must be kept clear and free of loose objects and any other materials or equipment which may potentially interfere with the safe deployment of running lines during the operation.

### **Support/Safety Vessel:**

A support vessel is needed to carry necessary personnel, equipment and to maintain adequate redundancy in communication systems (i.e. 'two is one, and one is none'). This includes human first aid and resuscitation equipment and qualified staff to deal with possible emergencies.

## **5. ASSESSMENT**

The following factors are used to determine whether an animal is a response candidate through methodology outlined in IWC/62/15.

### **Animal and Entanglement Conditions**

- (a) Size
- (b) Species
- (c) Temperament
- (d) Behaviour
- (e) Health condition (Appendix IV, IWC/62/15): body profile, cyamid coverage, general skin condition and colouration.
- (f) Nature of injuries
- (g) Company of other cohorts (pod members, calves) and the presence of sharks or other predators
- (h) Mobility (anchored, small circles, big circles, free-swimming)
- (i) Type and nature of gear (rope, line, pot, netting, chain, etc).
- (j) Body part(s) affected and not affected
- (k) Configuration and condition of gear

### **Environmental conditions**

- (a) Weather conditions and forecast
- (b) Sea state
- (c) Navigational constraints (e.g. rocks, ice, depth)
- (d) Time of day (e.g. remaining daylight)
- (e) Remoteness of location
- (f) Availability of resources

### **Other conditions**

- (a) Visibility of event
- (b) Media or public presence
- (c) Surrounding vessel traffic
- (d) Military operations
- (e) High recreational use areas

## **6. SAFETY CONCERNS ON APPROACHING AN ENTANGLED WHALE**

- (a) Time spent in the danger zone (area immediately in front of and beside animal that is in range of tail flukes and/or flippers) must be avoided or at least minimised.
- (b) A swimming entangled whale must never be approached in its wake, as unseen trailing gear may foul the approaching vessel's engines.
- (c) Only the minimum required equipment and personnel should be present on the PRV (store non immediate gear on support vessel). The approach boat must be kept 'clean' in order to minimise the risk of lines getting caught on the boat or gear stowed on boat.
- (d) Sudden boat manoeuvres (e.g. gear shifting or sudden velocity changes) must be avoided as these have a higher probability of startling the whale.
- (e) Approaches should be methodical and consistent. Animals may avoid and respond unpredictably to any perceived threat. It should be assumed that an animal does not know the responders are there to help.

## **7. ENTANGLEMENT RESPONSE PROCEDURES**

Disentanglement procedures generally involve some control of the animal, cutting away gear using specialised tools, and documentation and follow-up of the event. The details of disentangling a whale involve a specialised discipline that is dangerous for both the responder and the entangled whale; as noted in the introduction this is **not** an instruction manual; specific disentanglement procedures should be addressed through a thorough and strict training programme (see Annex F).

## **8. DOCUMENTATION AND DE-BRIEFING**

Documentation gathered during disentanglements offers one of the best and only opportunities to understand the scope and extent of regional entanglement issues.

Documentation may include:

- (a) Photographs of operations and of the animal before, during, and after a response
- (b) Video from point-of-view cameras mounted to safety helmets
- (c) Collection and documentation of gear removed
- (d) Biological sampling (biopsy, skin in gear)
- (e) Field observations (operational log, behavioural log, etc)

This information should be assembled into a full disentanglement case study and shared with regional and international entanglement response networks. Every attempt should be made to build documentation/data gathering into operational procedures. Data should identify species, individual, level of injuries, disentanglement activities and state of the animal and its entanglement at the end of an operation.

Effort should be made to monitor post-disentanglement behaviour and survival through the use of telemetry, genetics and or photo identification of individual animals.

Follow-up of an entanglement response is an opportunity to discuss the level of preparedness, the equipment, the process, and identify any changes to procedure or equipment that could be made to improve future disentanglement attempts. NB: As discussed under Items 3 and 8 of this report, there is work underway on consideration of standardising to the extent practical data that are collected, methods of storing these and facilitation of sharing data.