## LARGE WHALE DISENTANGLEMENT SYSTEMS (Mattila)

### Introduction

Responding to reports of entangled whales and releasing them, along with documentation of the animal, can supply data about the causes, extent and severity of the entanglement problem. Using disentanglement techniques developed by Jon Lien, the Provincetown Center for Coastal Studies and others, under the supervision and authorization of the National Marine Mammal Health and Stranding Response Program, and in cooperation with many Federal, State and NGO entities, response networks are in various stages of development throughout the country. The safe and professional documentation of the whale, entanglement and gear are becoming an integral part of the disentanglement response. Amongst other management issues, some of these data are of use to this workshop. In particular, identification of released individuals in order to determine survivorship through long-term tracking studies, documentation of wounds for ground-truthing scar studies, other newly developed assays of individual health, and the verification of events in order to clarify the reliability of opportunistic reports (see background materials Robbins et al, 2007).

### Current Assessment Techniques

Some aspects of the current assessment criteria used by the disentanglement networks to determine if an entanglement is *potentially* life-threatening, and therefore warrants intervention, may be of use to this workshop. These criteria have evolved over time, as our understanding of which entanglements are life-threatening (short and long term) and which are likely to be shed on their own. They rely on a determination of the species and body part(s) involved, the type and constriction (immediate and potential) of the entangling material, as well as the wounds (acute and chronic) and estimated overall health of the animal. In addition, the animal's behavior and location are sometimes factors considered.

### Current and Potential Data Collection (with discussion of limitations)

Mattila et al, 2007 (background material) summarized some of the data that are, and can be, safely collected during large whale disentanglement operations. Those aspects which are applicable to helping to assess serious injury will be summarized, including: the data collected to help understand entanglement impacts and to ground-truth scarring studies, the safe collection of visual and physical samples, and some experimental tools being developed (e.g. breath collection). Aspects of the documentation of events and some of the data collected are currently distributed to members of disentanglement networks through network web sites. Some caveats in using these data include, but are not limited to: absence of negative data (e.g. what was not seen), real time report narratives that are assumed to be "incorrect", some of which may be updated but may still include inaccuracies.

### Key issues/questions

Since large whale entanglements are cryptic, rarely witnessed events, and the animals often swim off with the gear that they become entangled in, determining the actual number of deaths and serious injuries is extremely problematic. Key questions remain:

- What are the survival rates of released (vs. non-released) animals?
- What types of data can we safely collect in order to determine the likely fate of individuals?
- What type of data may help to illuminate the overall extent of the problem?
- What are the "trade offs": injuries from the disentanglement process?

### A Note on Vessel Collisions in HI

Reports of vessel collisions are increasing in Hawaii. Various factors are likely to contribute to this increase, including: increasing whale population, increasing numbers and speed of vessels, increased outreach and subsequent reporting. The addition of high speed ferry transport to the Islands has increased public and NOAA's concern about potential collisions. Part of NOAA's (Fisheries and Sanctuaries) and the State of Hawaii's response is to attempt to more fully document any collisions and their subsequent outcomes. Initial response protocols and some examples will be presented.

### References

Robbins J., J. Kenney, S. Landry, E. Lyman and D. Mattila. *Reliability of eyewitness reports of large whale entanglement*. Unpublished report to the Scientific Committee of the 59th meeting of the International Whaling Commission: SC/59/BC2, 2007, Anchorage Alaska, USA

Mattila, D. K., S. Landry, E. Lyman, J. Robbins and T. Rowles. *Scientific information that can be gained through large whale disentanglement*. Unpublished report to the Scientific Committee of the 59th meeting of the International Whaling Commission: SC/59/BC1, 2007, Anchorage Alaska, USA