

## Annex T

### Planning for a Workshop on Methods for Whale Research

#### Introduction

Research on cetacean biology and ecology can use information collected from dead and from living animals. The nature of samples, and of possible analyses of them, vary with methods of collection. The usefulness of different sampling and analysis methodologies for different research goals needs to be assessed. An important distinction that has been addressed by the Scientific Committee on many occasions is the need for and value of samples from dead animals, especially those from directed research takes. However, many of the properties and value of samples from research whaling also arise from analysis of samples and data from bycatch, strandings and live animals. The intention here is to focus on information obtainable from samples from or observations of whales. Such information is often considered in a wider context of feeding ecology, but the focus in this workshop would be narrower, expecting that those considerations would be addressed in the competition workshop.

#### Draft Terms of Reference

The Scientific Committee will host a workshop on methods for whale research, focusing particularly upon the relevance and efficacy of tools available for assessing stock structure, population dynamics, and cetacean health. Emphasis will be given to:

- (1) identification of recent advances in both lethal and non-lethal methodologies and technologies,
- (2) comparison of lethal and non-lethal techniques,
- (3) examination of the practicability and cost associated with conducting the research and/or collection using the respective methodologies.

#### Draft Agenda

1. Opening remarks
2. Election of Chairman and appointment of rapporteur
3. Terms of reference and background
4. Available documents and data
5. Comparison of scientific values of selected cetacean research methodologies
  - 5.1 Stock structure
    - Morphology [1]
    - Genetic analysis [2]
    - Non-genetic markers [3]
    - Individual movements [4]
  - 5.2 Population dynamics
    - Biological parameters [5]
    - Vital rates [6]
  - 5.3 Diet and energetics [7]

#### 6. Practicability and cost performance

This topic would address issues of representativeness of samples, potential precision of analyses based on them, as well as costs of collection and laboratory analyses. These topics would be discussed for sampling under the following categories.

- 6.1 Strandings
- 6.2 Bycatch
- 6.3 Directed takes
  - 6.3.1 Commercial or aboriginal whaling
  - 6.3.2 Research whaling
- 6.4 Live animal sampling
  - 6.4.1 Biopsy
  - 6.4.2 Captivity
  - 6.4.3 Other observations

#### 7. Conclusions

#### 8. Adoption of report

#### *Annotations to the Agenda*

The Scientific Committee is encouraged to identify specific analysis methods to aid in planning for invited expertise. Analyses could usefully be prepared following table 1 of Annex I.

- [1] Morphology: body, skeletal measurements; pigmentation.
- [2] Stock structure, Genetic differences: DNA; enzymes.
- [3] Stock structure, Non-genetic markers: Parasites; fatty acids, pollutants, rare elements, age and sex distribution, age and length at sexual maturity and recruitment.
- [4] Stock structure, Individual movement: Photographic identification; genetic individual identification; satellite tagging; song variation.
- [5] Biological parameters: Determining sex and pregnancy from genetic analysis; body condition from lipids; age; age at sexual maturity, age at weaning, numbers of previous pregnancies; blubber thickness, breeding season, calving rate, age from eye lens and ear plugs or teeth.
- [6] Vital rates: Photographic identification; photographic for lengths, pregnancy, calving; hormone levels from faecal samples.
- [7] Diet and energetics: Isotopes of carbon and nitrogen; recoverable time-depth recorder, VHF for dive duration; infrared imaging; stomach contents for prey items, consumption and preference; genetic analysis of faecal samples; body condition from lipids; digestion rate; condition factor

#### Timing and place

The workshop will require four days, and would be in the latter half of January 2002. The venue will probably be Norway.

**Organisation and budgets**

Read agreed to convene this workshop with the advice of Hatanaka and Smith. Ten Invited Participants (IPs) are likely to be required to cover the range of topics to be addressed. A

series of four or five review papers for the major topics to be discussed will be commissioned. The total costs (primarily travel costs for IPs) are estimated to be £20,000.

---