Workshop for strategic planning of large-scale whalewatching research

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INTRODUCTION

Last year the whalewatching sub-committee agreed that it was now necessary to concentrate research effort on understanding the interactions between whalewatching impacts on cetaceans and both other anthropogenic disturbances and ecological factors. To do so, the sub-committee proposed that a dedicated workshop to develop a global scale research design would be very helpful to this process and recommend that such a workshop be held. It was agreed that the goal of the workshop should give strong consideration to:

(a) Inclusion in research designs of species of varying taxa and life history strategies and exposed to different environmental factors;

(b) Experimental studies with appropriate controls and use of innovative technology and analytical techniques, including modelling; and

(c) Determining the availability of specific pre-existing data (e.g. local history of whalewatching activities, baseline data, longitudinal data on species in question, ecological data, human impacts including exploitation history).

DESCRIPTION

This paper proposes a programme for this workshop to design a study which will be replicated at different sites, and to select appropriate sites where it will be carried out. Participants will be asked to review pertinent pre-existing data before the workshop to present a review to the workshop participants. Teams will be set up before the workshop to tackle each broad data category (impacts, long-term study sites, whalewatch exposure). The goal of this exercise will be to both find study sites for which some relevant information, such as population biology or whalewatching information, is already existing and draw attention to studies which have already highlighted interactions between whalewatching impact and other environmental factors (natural or anthropogenic).

After reviewing the pre-existing information, a robust study design will be developed to detect biologically significant impacts of whalewatching on individuals and populations. Examples of such impacts would be significant alterations of individual's energetic budgets,

impacts on population parameters, and reduction in the fitness of individuals and the survivability of populations. This study will not only focus on whether whale-watching can alter population biology parameters, but also will determine whether whalewatching can act as an evolutionary selective force on targeted individuals and populations. This study will also endeavour to detect the mechanisms involved in these impacts.

A wish list of candidate species and the specific populations which would make ideal study subjects will be developed to maximise the precision and implications of the results while minimising the number of study sites involved. This wish-list will be then compared with sites highlighted in the review and desirable sites will then be determined.

The final session of the workshop of the at least two-day programme will be dedicated to collating the information from the three previous sessions into a comprehensive proposal for a single, multi-dimensional study. We will assign tasks for the next six months, which will include approaching field site directors and highlighting potential funding sources.

PROPOSED PROGRAMME

Day 1

Morning session: Review of existing data relevant to the study

- Whalewatching impacts
- Whalewatching interaction factors influencing targeted species
- Whalewatching exposure and temporal trends
- Long-term population biology study sites
- Ecological data
- Exploitation data (including incidentals)

Afternoon session: Characterisation of relevant populations

- Categorisation of life history characteristics
- Categorisation of key environmental factors likely to interact with whalewatching impacts (predation pressure, food temporal and spatial availability, etc…)
- Industry maturation categories

Evening Session: Selection of study sites

- Sites feasibility (highlight challenges and likelihood for research to continue at those sites for the next ten years).

Day 2

Morning session: Study design

- Environmental factors
- BACI design interactions with highlighted sites
- Modelling needs

Afternoon session: Study realisation

- Research proposal
- Logistic needs
- Task assignment
- Funding proposal discussions

PARTICIPANTS

In addition to IWC participants, four to six individuals will be invited to complement knowledge about specific field sites, field techniques to be used, or relevant advanced analytical techniques. The workshop will remain small with approximately 10-12 participants and some additional space allocated for observers.

We anticipate participants to contribute expertise in the following fields:

- Physiological ecology
- Population biology and ecology
- Behavioural ecology
- Regional field expertise
- Large-scale experimental design
- Endocrinology
- Bioacoustics
- Remote-sensing
- Biostatistics and biomathematics

Participants will be asked to provide working papers relevant to the workshop's programme prior to the meeting.

TIMEFRAME

We propose that this workshop could be held in May 2008 in Chile prior to the general meeting of the Scientific Committee. This will allow us to minimise the cost of the workshop since many participants will already be participating in the IWC/SC meeting.