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Region

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DRAFT COMPILATION OF RESEARCH PROTOCOLS FOR MARINE MAMMALS

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I. Background

1. This document was produced in response to recommendation III, Article IV, of the III Meeting of the Scientific and Technical Advisory Committee (STAC) to the Protocol Concerning Specially Protected Areas and Wildlife (SPA) in the Wider Caribbean Region, held in Caracas, Venezuela, 4-8 October 2005.
2. Having reviewed the recommendations of the "Report of the Regional Workshop of Experts on the Development of the Marine Mammal Action Plan (MMA) for the Wider Caribbean Region", Bridgetown, Barbados, 18-21 July 2005 (UNEP(DEC)/CAR WG.27/3), STAC recommended that the secretariat and the SPA/RAC work toward implementing Recommendation No. 3 of the Annex IV of the Report of the Workshop of Experts as a priority action, which states:


"...a. The SPA/RAC in collaboration with Governments and relevant organizations compile and make available the following:


v. Research protocols ...noting that this process is ever-evolving."

3. The present document provides a summary compilation of general research protocols associated with strandings (clinical/health studies, tagging, genetics, desentanglement, age determination) and other general research protocols (whale-watching, by-catch) of relevance to the context of the Wider Caribbean region. It also lists a number of references and links to literature which is related to the subject. This document should also be read in conjunction with another compilation prepared by the CEP Secretariat dealing specifically with Techniques and Protocols for responding to strandings. As work on marine mammals progresses in the region, the present compilation will require refining and updating to the local context of the WCR as well as being enriched with other topics and references of interest.
4. Submissions of errors, omissions and new materials for inclusion can kindly be made directly to SPA/RAC.

FROM INTERNATIONAL ORGANISATIONS

The Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and contiguous Atlantic area -ACCOBAMS

 [\(1,5 Mb\) Guidelines for Commercial Cetacean-Watching activities](#)

 [\(97,79 Kb\) Guidelines to minimise cetacean-fishery conflicts in the ACCOBAMS Area](#)

LINKS

[Acoustics](#)

[Age determination](#)

[Biochemistry, Histology, Immunology, Toxicology](#)

[Biopsy sampling, Tagging, Telemetry, Marking](#)

[Stable isotopes](#)

[Genetics](#)

[Biostatistics, Modelling](#)

[Photo-identification, Photogrammetry](#)

[Surveys: Acoustic, Aerial, Vessel-based, Shore-based, Combined](#)

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The International Whaling Commission

- SHIP STRIKES WORKING GROUP- FIRST PROGRESS REPORT 58th Annual Meeting of the International Whaling Commission. 22pp.
- Special issue 12: Individual Recognition of Cetaceans: Use of Photo-Identification and Other Techniques to Estimation Population Parameters EDS P.S. HAMMOND, S.A. MIZROCH AND G.P. DONOVAN. 1990 i-v + 440PP. ISBN 0 906975 23 9
- Special issue 13: Genetic Ecology of Whales and Dolphins ED. A.R. HOELZEL. 1991 i-viii + 311pp ISBN 0 906975 25 5

IWC GENERAL PRINCIPLES FOR WHALEWATCHING

Agreed general principles to minimise the risks of adverse impacts of whalewatching on cetaceans. These general principles were agreed by the IWC Scientific Committee in 1996

CONTENTS

(1) MANAGE THE DEVELOPMENT OF WHALEWATCHING TO MINIMISE THE RISK OF ADVERSE IMPACTS:

- i. implement as appropriate measures to regulate platform¹ numbers and size, activity, frequency and length of exposure in encounters with individuals and groups of whales;
 - management measures may include closed seasons or areas where required to provide additional protection;

- ideally, undertake an early assessment of the numbers, distribution and other characteristics of the target population/s in an area;
- ii. monitor the effectiveness of management provisions and modify them as required to accommodate new information;
- iii. where new whalewatching operations are evolving, start cautiously, moderating activity until sufficient information is available on which to base any further development;
- iv. implement scientific research and population monitoring and collection of information on operations, target cetaceans and possible impacts, including those on the acoustic environment, as an early and integral component of management;
- v. develop training programs for operators and crew on the biology and behaviour of target species, whalewatching operations, and the management provisions in effect;
- vi. encourage the provision of accurate and informative material to whalewatchers, to:
 - develop an informed and supportive public;
 - encourage development of realistic expectations of encounters and avoid disappointment and pressure for increasingly risky behaviour.

(2) DESIGN, MAINTAIN AND OPERATE PLATFORMS TO MINIMISE THE RISK OF ADVERSE EFFECTS ON CETACEANS, INCLUDING DISTURBANCE FROM NOISE:

- i. vessels, engines and other equipment should be designed, maintained, and operated during whalewatching, to reduce as far as practicable adverse impacts on the target species and their environment;
- ii. cetacean species may respond differently to low and high frequency sounds, relative sound intensity or rapid changes in sound;
 - vessel operators should be aware of the acoustic characteristics of the target species and of their vessel under operating conditions; particularly of the need to reduce as far as possible production of potentially disturbing sound;
- iii. vessel design and operation should minimise the risk of injury to cetaceans should contact occur; for example, shrouding of propellers can reduce both noise and risk of injury;
- iv. operators should be able to keep track of whales during an encounter.

(3) ALLOW THE CETACEANS TO CONTROL THE NATURE AND DURATION OF 'INTERACTIONS':

- i. operators should have a sound understanding of the behaviour of the cetaceans and be aware of behavioural changes which may indicate disturbance;
- ii. in approaching or accompanying cetaceans, maximum platform speed should be determined relative to that of the cetacean, and should not exceed it once on station;
- iii. use appropriate angles and distances of approach; species may react differently, and most existing guidelines preclude head-on approaches;
- iv. friendly whale behaviour should be welcomed, but not cultivated; do not instigate direct contact with a platform;
- v. avoid sudden changes in speed, direction or noise;
- vi. do not alter platform speed or direction to counteract avoidance behaviour by cetaceans;
- vii. do not pursue², head off, or encircle cetaceans or cause groups to separate;
- viii. approaches to mother/calf pairs and solitary calves and juveniles should be undertaken with special care;
 - there may be an increased risk of disturbance to these animals, or risk of injury if vessels are approached by calves;
- ix. cetaceans should be able to detect a platform at all times;
 - while quiet operations are desirable, attempts to eliminate all noise may result in cetaceans being startled by a platform which has approached undetected;
 - rough seas may elevate background noise to levels at which vessels are less detectable.

¹ Any vessel (with or without engine), aircraft or person in the water.

² Chase (as opposed to follow), causing the whale to change its course or speed

FROM NATIONAL ORGANISATIONS

National Marine Fisheries Service – USA

Marine Mammal Hearing and Acoustic Impacts Bibliography

Bibliography sections

General Texts, Reports and Review Articles

Marine Mammal Hearing: Cetaceans

Marine Mammal Hearing: Pinnipeds

Marine Mammal Hearing: Sirenians

Behavioral Reactions to Sound Sources - Marine Mammals: Cetaceans

Behavioral Reactions to Sound Sources - Marine Mammals: Pinnipeds

Marine Mammal Auditory Masking

Marine Mammal Temporary Threshold Shift

Non-Auditory Effects of Acoustic Exposure - Marine Mammals

Ambient Noise

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