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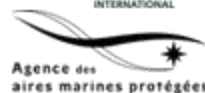
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Regional Workshop on Marine Mammal Watching in the  
Wider Caribbean Region

Panama City, Panama  
19-22 October 2011

## Report of the Regional Workshop on Marine Mammal Watching in the Wider Caribbean Region





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## **PREFACE**

1. In 2000, the Protocol Concerning Specially Protected Areas and Wildlife in the Wider Caribbean Region (SPAW) entered into force. This Protocol, one of three supplementing the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (Cartagena Convention), is the only regional biodiversity legal agreement for the advancement of the conservation and protection of the marine environment in the Wider Caribbean Region (WCR). The SPAW Protocol calls for the development and implementation of conservation, recovery or management programmes, as well as guidelines and criteria for the management of protected species.
2. As part of its obligations under the Action Plan for the Conservation of Marine Mammals in the Wider Caribbean Region (MMAP), the United Nations Environment Programme – Caribbean Environment Programme (UNEP-CEP), through the SPAW Protocol, and with the support of the National Environmental Authority of the Government of the Republic of Panama (ANAM), convened a regional Workshop on marine mammal watching which brought together marine mammal tour operators and government regulators from across the WCR to discuss the marine mammal watching industry in the region. The Workshop took place on 19-22 October 2011 in Panama City, Panama.

## **INTRODUCTION**

3. Marine mammal watching may be defined as “tours by boat, air or from land, with some commercial aspect, to see and/or listen to [marine mammals]”. Since its inception in 1955 with observing grey whales (*Eschrichtius robustus*) in California, marine mammal watching has grown, with whale watching (whales, dolphins and porpoises) predominating. It is estimated that approximately 15 million people go on whale watching trips in 119 countries, generating USD\$2.1 billion dollars in revenue and supporting 13,000 jobs worldwide annually. Along with the many socio-economic benefits associated with marine mammal watching, the industry may also provide transformative experiences for the participants leading them to contribute to marine conservation. However, the industry is not without problems and potential negative impacts associated with marine mammal watching include:
  - The destruction and pollution of habitat from coastal development;
  - Noise pollution from increased vessel traffic;
  - Increased risk of vessel strikes;
  - The disruption of marine mammal behaviours; and
  - Changes in distribution
4. Though Central America and the Caribbean only contribute to approximately 2.3% of whale watching worldwide, marine mammal watching in the region continues to grow. In an effort to limit the problems associated with marine mammal watching in the Caribbean, the SPAW Protocol recognised through its MMAP that “it is important for the tourism industry and government agencies to develop and adopt guidelines, codes of conduct or regulations to preclude or minimize such impacts.” As the initial step towards this goal UNEP-CEP through its SPAW sub-programme hosted this Workshop.
5. Support for the Workshop was provided by UNEP-CEP, the SPAW Regional Activity Centre (RAC), the National Fish and Wildlife Foundation, U.S. Marine Mammal Commission, Humane Society International, the Pacific Whale Foundation, Animal Welfare Institute, the World Society for the Protection of Animals, International Fund for Animal Welfare, the French Marine Protected Area Agency and the Agoa Marine Sanctuary.

### **GENERAL MEETING OBJECTIVES**

6. The objectives of the 4-day Workshop were to:
  - Assess the extent of problems and needs in existing marine mammal watching operations;
  - Identify opportunities in existing marine mammal watching operations;
  - Discuss the formulation of a regional code of conduct for observing marine mammals;
  - Standardize data collection forms and organize baseline research on marine mammals;
  - Document existing marine mammal educational materials; and
  - Discuss next steps with regards to marine mammal watching in the WCR.
7. The objectives were met through a series of presentations and group discussions held over the course of the Workshop. A copy of the Workshop's agenda may be found in Appendix I.

### **OVERVIEW AND MEETING PARTICIPATION**

8. Naomi Rose from Humane Society International was asked to Chair the Workshop and to open the proceedings. Workshop participants were also welcomed by Sr. Edgar Chacón, Director of Protected Areas and Wildlife at the National Environmental Authority in Panama, followed by brief introductions by the participants.
9. The Workshop was held in three languages and hosted 39 participants from 23 countries from South America and the WCR. The participants included tour operators and/or government representatives from the WCR as well as representatives from UNEP-CEP and SPAW RAC in Guadeloupe. The Workshop presenters were:
  - Carole Carlson – Director of Research and Education, Dolphin Fleet of Provincetown; Adjunct Scientist, Provincetown Center for Coastal Studies;
  - Erich Hoyt – Research Fellow and Head of the Marine Protected Area Programme, Whale and Dolphin Conservation Society;
  - Gregory Kaufman – President and Founder, Pacific Whale Foundation;
  - Merrill Kaufman – Chief Operations Officer, Pacific Whale Foundation;
  - Jooke Robbins – Senior Scientist and Director – Humpback Whale Studies Program, Provincetown Center for Coastal Studies; and
  - Alessandra Vanzella-Khouri – SPAW Programme Officer, UNEP-CEP
10. Titles of the presentations are included in the Workshop's agenda (Appendix I). A detailed list of all the participants may be found in Appendix II.

### **ASSESSMENT OF MARINE MAMMAL WATCHING IN THE WIDER CARIBBEAN REGION**

11. Meeting participants were asked to complete an online survey before the Workshop on the status of marine mammal watching in their country (<https://sites.google.com/a/pacificwhale.org/spaw-questionnaire/>). Revisions to the survey were suggested during the Workshop and this, combined with the limited number of responses received, led to the decision that participants would encourage tour operators from their countries to complete a revised survey by February 2012, with the results posted at a later date. A copy of the original survey may be found in Appendix III.

### **THE SUSTAINABLE DEVELOPMENT OF MARINE MAMMAL WATCHING**

12. Unregulated development of the marine mammal watching industry may lead to serious problems such as disturbances to wildlife, water pollution and strains on local infrastructure, that continue to exist even as the growth of the industry begins to slow. Conversely, slow, regulated growth, with an

emphasis on research and conservation, may lead to fewer problems. In order to minimise the problems associated with marine mammal watching in the WCR it is recommended that countries establish/maintain high quality sustainable marine mammal watching. The creation of a successful, sustainable marine mammal watching industry requires:

- Good, long-term financial management;
- Reduction of costs(including social, ecological and financial);
- Scientific input and output;
- Educational input and output;
- Attention to conservation;
- Investment in people, local and visiting; and
- Enhancement of benefits for all stakeholders.

### **Environmentally Sound and Economically Viable Marine Mammal Watching**

13. There are both costs and benefits associated with the social, environmental and economic effects of marine mammal watching. Some of the social, environmental and economic costs associated with marine mammal watching include:

- Possible job losses in some sectors, strain on local services due to an influx of tourists, conflicts with local fishing boats and other community interests (Social Costs)
- Use of boat gas, water pollution, litter and disturbance to marine mammals and other wildlife (Environmental Costs)
- Infrastructure problems and cost implications associated with managing the marine sector (Economic Costs)

14. In order to reduce the costs, while maximizing the benefits, associated with marine mammal watching it is important to understand the needs and expectations of visiting tourists as well as of the area/community, and to understand the biology and ecology of the species being targeted in order to specifically address them.

#### Environmental Costs

15. Developing marine mammal watching infrastructure that takes into consideration the effects that marine mammal watching may have on the habitat could help reduce the environmental costs associated with marine mammal watching (e.g. use of boat gas, water pollution, litter, and disturbance to marine mammals and other wildlife). This may include the development of guidelines and regulations on marine mammal watching, to limit the amount of disturbance experienced by the animals, investing in purpose-built boats and products that may have a minimal effect on the animals and to work with researchers to understand and protect the wildlife being watched.

16. Boats used specifically for marine mammal watching should try to limit the amount of noise entering the environment as well as seek to reduce emissions, wake and cavitation, while increasing fuel efficiency. The use of equipment that might minimize the amount of harm caused by boats, e.g., whale protection devices which may reduce damage caused by propellers, is also encouraged. In an effort to reduce the impact that marine mammal watching will have on the surrounding environment, environmentally friendly products should be used as much as possible. This includes cleaning supplies, food containers and/or any other materials that may impact wildlife and the surrounding marine and terrestrial environments.

### Social Costs

17. The introduction of marine mammal watching may lead to job losses in some sectors (e.g., movement of people from one tourism sector, such as sport fishing, into the whale watching tourism sector), a strain on local services as more tourists visit the area and conflicts with local fishing boats and other community interests. In order to reduce these costs, tour operators are encouraged to set up community meetings to devise local strategies that will increase the benefits associated with marine mammal watching while at the same time reducing costs. Involving the community in the tour operations as well as encouraging both tour operators and tourists to perform community outreach, may reduce the social costs associated with marine mammal watching.

### Economic Costs

18. In order to minimise the economic costs associated with marine mammal watching, the industry should focus on the international market, encouraging overseas visitors to participate in these tours. High-quality, naturalist-led marine mammal watching tours, as well as broader based nature or wildlife tours will also increase the overall price of the tours and maximise profits.

### **Marine Mammal Watching as a Platform for Education**

19. Eco-tourism may provide an opportunity for people to re-connect with nature and marine mammal watching tours can be used as a learning opportunity to teach participants about the ecosystems and habitats that they see, as well as the species present. The information provided to participants must be relevant to the environment in which it takes place and must be collaborative. Information imparted to tour groups may occur during any of the five phases of a marine mammal watching experience:
- Preparation – this occurs prior to boarding and allows staff to alleviate any discomfort participants may have and provide them with information on the size of the boat and how their personal needs/comfort will be met.
  - Pre-Contact – this occurs before any wildlife is sighted as participants begin to ask questions about the types of animals that may be seen and how far offshore they will be going. Tour operators may use this opportunity to provide participants with information on what to look for, and establish credibility with visitors so that they begin to view tour operators as a resource.
  - Contact – this occurs while observing wildlife. The participants may ask questions on species identification and behaviour. This is the opportunity to allow them to make observations on the animal's behaviour on their own.
  - Post-Contact – this occurs after directly observing wildlife. Participants will relate the experience that they have had to others in an effort to understand the situation. They may also transition from understanding the situation to modifying their behaviour accordingly.
  - Actionable Alternatives – this will occur within a week of the experience. Participants will begin to compare their personal behaviours and discuss broader environmental issues. Tour operators are able to use the experience to offer immediate opportunities to change their behaviour.
20. In order to provide guests with as much information as possible, naturalists on board the boat should be trained, experienced guides and be able to:
- Establish credibility and provide accurate information;
  - Assess the learner's prior knowledge and tailor their presentations accordingly;
  - Receive and offer critical feedback from a variety of perspectives; and
  - Stay informed on the status of the species and ecosystems they work in.

21. All crew/staff should also be able to answer any questions that may be asked and provide tour participants with credible information and realistic expectations.
22. Tour operators and staff may also use tours as an opportunity to effect behavioural change. By modelling environmentally friendly behaviours, tour operators can impart these behaviours to others. This may make the marine mammal tours not only more sustainable but tour participants may begin to make more sustainable decisions in their own lives.

#### Workshop activity

23. Members of the Workshop participated in an activity whose goals were to:
  - Identify the communication and behavioural cues that indicate different cognitive states in experience-based and nature-based learning; and
  - Identify the precursor to learning – the point at which a person is ready to learn and seek answers.
24. Participants formed three groups, based on language preference (English, French and Spanish) with one person in each group designated as the note taker. Each group was then asked to go to a specific area in the meeting venue and await further instructions from the presenter. A copy of the instructions may be found in Appendix IV. Each group went outside into the natural areas surrounding the venue and participated in a short nature walk. After returning to the meeting venue participants were then asked:
  - 1) What they expected when they began the exercise;
  - 2) If they experienced anything that was new to them;
  - 3) To describe anything that challenged what they already knew; and
  - 4) If they wanted to explore further, why or why not.
25. At the end of the activity participants remained in their groups and discussed what types of educational materials/training would be needed to provide effective, sustainable marine mammal watching to the Wider Caribbean Region. The suggestions made have been incorporated into the recommendations section of the report.

#### **Marine Mammal Watching as a Platform for Data Collection**

26. Since marine mammal watching tours often make frequent excursions to key habitat areas, they are often seen as an excellent opportunity for data collection. With knowledgeable observers on board who can identify behaviours of scientific interest marine mammal tour operators may be able to collect data that researchers may be unable to because of limited funding, or because of a lack of research opportunities in areas that are not well studied. Data collection may also prove to be beneficial to marine mammal tour operators since it provides them with a greater understanding of the studied species/population, enhances the education and outreach aspects of the tour operation and helps to protect the resource that the tour operators depend upon.
27. The involvement of marine mammal watching operations can include:
  - Collecting basic data such as
    - Sightings Data – information on date, start and end times, location, species, number of animals, etc.;
    - Effort Data – information on where the trip went, weather conditions and vessel used;
    - Individual Data – the documentation of individuals through photo-identification; and
    - Environmental Data – information on marine debris, fishing gear, vessel activity, water temperature, water depth, etc.



- Sharing boat space with dedicated scientists/observers;
- Having tour operators become involved in analyses; and
- Raising awareness/funds for local research

28. While data collection can help provide valuable insight into population structure, individual characteristics, habitat use and movement, there are some disadvantages associated with the collection of data by marine mammal tour operations. Some of the disadvantages include:
- Data collection is not the first priority while at sea and the crew may at times not be available to collect data;
  - Data is collected over a limited time period and geographic range;
  - Data collectors' skills may vary;
  - High volume of data received, but it may be of a lower quality;
  - Useful data collections may take a long time to accumulate;
  - Biases and limitations associated with the data collection must be carefully evaluated; and
  - Data collected during tour operations may not be appropriate for all research.
29. However, the data collected during marine mammal watching operations have the potential to answer many questions about the marine mammal populations in the Wider Caribbean Region. This data should not be collected in isolation but should instead involve a large network of collectors that cover larger field areas. Data collected should be archived so that it can be easily accessible and facilitate collaborations.

#### Standardized Data Form

30. During the Workshop, the development of a standardized data collection form for use in the WCR was discussed. Based on the discussions held, a template data form was developed based on the form currently used by the Provincetown Center for Coastal Studies. A copy of the proposed data form for the WCR may be found in Appendix V. The data proposed for collection includes information on:
- species present;
  - the minimum/maximum number of animals sighted;
  - the time when the encounter began and ended;
  - the compass bearing and distance of the animals from the vessel;
  - the location of the vessel;
  - behaviours observed;
  - photos taken;
  - any additional information pertinent to the sighting; and
  - presence of birds

### **DEVELOPMENT OF OVERARCHING PRINCIPLES AND BEST PRACTICE GUIDELINES FOR MARINE MAMMAL WATCHING IN THE WIDER CARIBBEAN REGION**

31. To date, at least 19 countries worldwide have developed whale watching regulations while 28 countries have either guidelines or whale watching codes of conduct and five countries have both. In addition to this 19 local and international groups have developed general codes for cetacean watching and at least nine operator's associations have established voluntary codes.

32. Following a review of the existing guidelines and codes of conduct in the WCR, participants were asked to form four groups based on the primary species targeted during their marine mammal tour operations (i.e. humpback whales, odontocetes with the exception of sperm whales, sperm whales and manatees) and provide recommendations on the types of guidelines that should be established for each group. The structure of the proposed document was based on the 2008 IFAW report “Pacific Islands, Regional Guidelines for Whale and Dolphin Watching”. It was noted by the Workshop that the proposed guidelines/principles could not be more stringent than those already established in the WCR. Some of the guidelines developed included recommendations on:
- the types of vessels prohibited for marine mammal watching;
  - the most appropriate angles and distances of approach to a whale or dolphin; and
  - swimming and diving with marine mammals in the wild.
33. For a comprehensive look at the overarching principles and best practice guidelines in the WCR please refer to Appendix VI.

### **RECOMMENDATIONS**

34. The Workshop produced a set of overarching principles for marine mammal watching, guidelines for responsible marine mammal watching, a template for the standardization of data collection, and a set of recommendations as outlined below.
35. UNEP-CEP will present the report of the Workshop with recommendations and outputs to the Seventh Conference of Contracting Parties to the SPAW Protocol for consideration and decision on further action.
36. Participants at the Workshop recommended that:
- 1) UNEP-CEP distribute the Workshop list of participants to all participants with a view to encourage continued regional dialogue on this matter and explore the possibility of developing a sub-group on this topic under the MMAP E-Group coordinated by the SPAW-RAC.
  - 2) Tour operators who participated in the Workshop identify additional marine mammal tour operators in their countries, and ask them to complete the survey on marine mammal watching activities in the Wider Caribbean Region. The results will be analysed and report on by the Pacific Whale Foundation (PWF), with the results posted at a later date.
  - 3) The Workshop Steering Committee identify the equipment needed to collect basic marine mammal data during tours and the costs associated with providing each operator participating in this Workshop with this basic equipment.
  - 4) UNEP-CEP, in collaboration with the SPAW RAC, develop Training of Trainers workshops in each of the three languages of the Wider Caribbean Region so that they can return to their countries to train others. Training of Trainers workshops must be differentiated for captains/operators, naturalists/guides and local tour guides. A standardized certification programme will address broad themes such as marine mammal natural history and behaviours; interpretation techniques and managing learning opportunities; passenger safety and customer service expectations; and green business practices. Support materials, including an interactive DVD, could be produced to address unique regional features and community specialization, as well as accommodate training budget restrictions for operators and guides in remote locations.

### Marine Mammal Tours

- 5) Countries should consider the creation of a Wider Caribbean Region Whale Watching Association (WCRWWA), with the goal of improving coordination and communication and of creating a unified body to adopt voluntary operational standards and advocate on behalf of the operators within the industry. This Association would include existing national and sub-regional associations, *inter alia*, CARIBWHALE and country associations from the Dominican Republic, Venezuela, etc.
- 6) WCRWWA develop standardized training and certification for marine mammal tour operators and crew throughout the Wider Caribbean Region, to train/teach tour operators who want to improve their work and get industry recognition/accreditation, as an aid to tourists to choose “better” operations. This training may include participation from government, non-government organisations and other eco-tour operators on a wide variety of topics, including information on the coastal and terrestrial ecosystems within their islands.
- 7) Tour operators develop accurate resource materials specific to the region, including websites, fact sheets, and information on a country’s natural history.
- 8) Marine mammal tour operators and local academic institutions/organisations develop alliances with a view to forge and/or strengthen research programmes, education and awareness in their countries.

### Data Collection

- 9) Tour operators work towards the standardization of data collection methodology and sheets for use across the Wider Caribbean Region.
- 10) UNEP-CEP in collaboration with SPAW RAC and partners identifies a centralized regional database to house marine mammal viewing data from across the region, whose data could be accessible to the public. The database could be developed and hosted by a regional academic partner, the SPAW RAC, or another already existing database host or mechanism (e.g. OBIS-SEAMAP).
- 11) UNEP-CEP, SPAW RAC, partners and sponsors host and conduct national, sub-regional or regional workshops that bring together tour operators and researchers, allowing them to discuss ways to best energise/educate the public on marine and coastal issues.
- 12) UNEP-CEP and SPAW RAC should consider establishing a regional coordinator to collect, store and disseminate data collected during marine mammal tour operations until a regional Association is formed.

## **APPENDIX I – WORKSHOP AGENDA**

# AGENDA

## Regional Workshop on Marine Mammal Watching in the Wider Caribbean Region

Panama City, Panama

19 – 22 October 2011

### 19 October

9:00 am

#### 1. General Objectives

- Welcome of Participants and Introductions

#### 2. Action Plan for the Conservation of Marine Mammals in the Wider Caribbean Region (MMA) and Goals of the Workshop – A. Vanzella-Khouri (UNEP-CEP) and C. Carlson, Provincetown Center for Coastal Studies and Dolphin Fleet of Provincetown

- The SPAW Protocol and the MMA
- Assess the extent of problems and needs and identify opportunities in existing marine mammal watching operations
- Identify areas with potential for marine mammal watching activities
- Discuss the formulation of regional codes of conduct for observing marine mammals
- Standardize data collection forms and organize baseline research on cetaceans
- Document existing marine mammal educational materials
- Discuss next steps (i.e. development of WCR intern training programme; establish or collaborate with existing data base that optimizes information exchange across the WCR)

**Coffee Break (10:30 am – 11:00 am)**

#### 3. Presentations

- Whale Watching Worldwide with a View to Management in the Wider Caribbean– E. Hoyt, Whale and Dolphin Conservation Society (**Keynote Speaker**)
- Doing Well by Doing Good: How to Develop an Economically Viable and Ecologically Sound Whalewatch Operation- G. Kaufman, Pacific Whale Foundation (**Keynote Speaker**)

**Lunch (1:00 pm – 2:15 pm)**

#### 4. Review of Documents / Results

- Review of Survey Results and Discussion
- Review of Overarching Principles – C. Carlson, Provincetown Center for Coastal Studies and Dolphin Fleet of Provincetown

**Coffee Break (4:15 pm – 4:30 pm)**

- Review of Overarching Principles and Discussion (continued)

**Dinner (7:00 pm)**

## **20 October**

**9:00 am**

**5. Review of Documents / Results (Continued)**

- A Review of Whale Watch Regulations and Guidelines Around the World and Discussion - C. Carlson, *Provincetown Center for Coastal Studies and Dolphin Fleet of Provincetown (Keynote Speaker)*
- Review of Pacific Islands Regional Guidelines for Whale and Dolphin Watching (revised for Atlantic and Caribbean) and Discussion

***Coffee Break (10:30 am – 11:00 am)***

**6. Continued Discussion/ Consensus Building-**

- Breakout Groups (Area/Keystone Species To Highlight Relevant Aspects of the Pacific Islands Regional Guidelines for Whale and Dolphin Watching (Revised For Atlantic And Caribbean))

***Lunch (1:00 pm – 2:00 pm)***

**7. Discussion (continued)**

- Results from Breakout Groups

***Coffee Break (3:30 pm – 3:45 pm)***

**8. Recommendations**

- Outline and discussion on the Code of Conduct for the Wider Caribbean Region

***Dinner Break (6:30 pm – 8: 30 pm)***

**9. Possible Evening Session**

## 21 October

9:00 am

10. **Whale Watching as a Platform for Education and Discussion-** *M. Kaufman, Pacific Whale Foundation (Keynote Speaker)*

11. **Sharing Materials-** Breakout Groups By Language

*Coffee Break (11:00 am – 11:30 am)*

12. **Discussion and Recommendations**

*Lunch Break (1:00 pm – 2:00 pm)*

13. **Whale Watching as a Platform for Research and Discussion-** *J. Robbins, Provincetown Center for Coastal Studies (Keynote Speaker)*

*Coffee Break (3:30 pm – 3:45 pm)*

14. **Discussion (continued)**

15. **Final Inputs to the Draft Code of Conduct**

*Dinner Break (6:30 pm – 8:00 pm)*

16. **Continue Discussion and Recommendations (possible)**

## 22 October

8:30 am

17. **Leave with Packed Lunch for Field Training –** *G. Kaufman, Pacific Whale Foundation and M. Iñiguez, Fundación Cethus and Whale and Dolphin Conservation Society*

*Return (1:30 pm)*

18. **Debrief From Field Training**

*Coffee Break (3:30 pm – 4:00 pm)*

19. **Recommendations and Next Steps**

*Dinner (7:00 pm)*

## ABSTRACTS

### WHALE WATCHING WORLDWIDE WITH A VIEW TO MANAGEMENT IN THE WIDER CARIBBEAN

**Erich Hoyt**

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From its origins in southern California in 1955, whale watching (commercial tours to see whales, dolphins and porpoises in the wild) has spread to 119 countries around the world. The International Fund for Animal Welfare's 2009 report documents nearly 13 million people going whale watching per year spending \$2.1 billion USD. Supporting 13,000 jobs worldwide, whale watching worldwide grew at a rate of 3.7% a year over the past decade compared to 12.8% growth per year in the Caribbean and Central American region (the second fastest growing area in the world).

Whale watching in the Caribbean began in the early to mid-1980s with dolphin tours in the Bahamas and humpback whale watching off the Dominican Republic. In 1988, commercial whale watching started up in the eastern Caribbean with tours to see sperm whales and dolphins off Dominica. Whale watching now occurs in 23 Caribbean and Central American countries attracting more than 300,000 people who spend nearly USD \$54 million per year.

Three implications from the success of whale watching are discussed to inform the "state of whale watching 2011" and the future challenges the industry faces if it wants to remain competitive in the overall tourism industry:

- (1) The fast growth of the late 1980s and 1990s worldwide and the continuing fast growth in the Caribbean has led to problems with whale watching that need to be addressed (too many boats, lack of regulations or poor enforcement, lack of good naturalist guides).
- (2) As the whale watch industry matures in many locations, the whale watch customer is changing from the initial wave of pioneer eco-tourists and whale enthusiasts to a more general or mass tourist. This has implications for management, educational approach, infrastructure needs and overall community development.
- (3) The current size and growth rate of the whale watch industry and the focus in many areas on close encounters may be unsustainable in the medium to long term and needs re-thinking.

Whale watching has great potential to be managed effectively within the framework of marine protected areas. This already occurs in a number of places in the US, Australia, Canada, and in the Marine Mammal Sanctuary of the Dominican Republic.

Whale watching has become very popular worldwide but in order for it to become a sustainable, healthy activity that is successful for communities and competitive on the world market, it is necessary to establish high quality whale watching that promotes research, education and conservation goals. On an individual operator and community level, there may be value in embracing whale watching's smaller-scale, customer-care oriented ecotourism roots.



**DOING WELL BY DOING GOOD: HOW TO DEVELOP AN ECONOMICAL VIABLE AND  
ECOLOGICALLY SOUND WHALEWATCH OPERATION**

**Gregory D. Kaufman**

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In its infancy, whale and dolphin watching was primarily an activity for those seeking adventure; it attracted many eager and uninformed participants who hoped to catch a glimpse of the target species. Today's "watchers" (numbering more than 13 million annually) are increasingly informed, savvy and sophisticated consumers spending their "watching" dollars more discretely -- seeking out and rewarding operators who promote and practice "green" operations, support environmental stewardship and display best practices around cetaceans. Consumer demand for greener products (products that offer an environmental benefit) is changing the world. As vessel operators compete for the attention of "green" consumers and for profit, they must innovate and evolve in that pursuit.

Pacific Whale Foundation has developed a fleet of eight state-of-the-art environmentally friendly vessels, purpose-built for wildlife watching in Hawaii. The vessels are powered with low emission, low noise, and high performance engines and are equipped with Whale Protection Devices. All vessels are fitted with low-flow toilets, water saving fixtures, and clean oil filtration systems. Pacific Whale Foundation also operates its own pump-out truck (powered by 100% biodiesel), uses recycled and recyclable products and supplies, and sources all food products locally. We employ green business practices in all phases of our business from office operations, to paperless marketing, to guest services, to fuel type, to staff training. Testament to these best practices, Pacific Whale Foundation was awarded the United States Coast Guard highest environmental award, the William M. Benkert Marine Environmental Bronze Award, for Excellence for Outstanding Achievements in Marine Environmental Protection, in December 2010.

This presentation will detail how Caribbean whale and dolphin watch operators can easily adopt environmentally friendly and cost-effective "Best Green Business Practices" in key areas of their operations. The operational benefits of supporting cetacean research, environmental education opportunities and conservation initiatives will also be described.

## **A REVIEW OF WHALE WATCH REGULATIONS AND GUIDELINES AROUND THE WORLD**

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Commercial whale watching is a rapidly growing industry worldwide. While whale-watching activities may enhance environmental tourism, regional economics, environmental education and research, it is critical that whale watching does not cause undue stress or harm to cetacean individuals or populations. To encourage responsible whale watching, ad hoc rules of behavior have been established in many areas.

These regulations and guidelines vary worldwide according to area, species and the use of their habitat. Whales may have different reactions or tolerance to disturbance depending on the species and whether it is resident, migrating, feeding, socializing or involved in calving or mating. Appropriate codes of conduct, complimented by the opportunity for scientific and education programs aboard commercial whale watch vessels will help to bring the message of cetacean and marine conservation to the public while ensuring cetacean safety and maximum socioeconomic benefits from the activities. In this presentation, guidelines, regulations and codes of conduct from around the world are analyzed and summarized.

### **WHALE WATCHING AS A PLATFORM FOR EDUCATION.**

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As whale and dolphin watching has grown exponentially world-wide, issues related to the impacts of the behavior of humans in the vicinity of marine mammals have also grown. Typically, regulation and/or education are proposed as mechanisms to prevent or mitigate those impacts. The two approaches are dramatically different in focus, execution and results. In this presentation, a framework is explored for establishing education programs that differentially target multiple elements within the consumer lifecycle, create data-driven initiatives, employ measurable performance indicators, and operate within a context of outcomes assessment. Whale- and dolphin-watching venues throughout the Caribbean differ widely in terms of who participates as a customer; who provides the service; platform of client arrival; size and nature of platform of observation; impact on target species; and economic impact on local community. Consequently, the issue of education must be seen as a network of initiatives, distributed over time and space, to ensure a set of converging operations which culminate in a whale- or dolphin-watching industry that promotes an informed and sustainable experience. In brief, every constituent who shares responsibility for enabling a marine mammal tourism event has something to learn, and a responsibility to participate in the broad effort to improve the experience.

## **WHALE WATCHING AS A PLATFORM FOR RESEARCH**

Jooke Robbins, Ph.D.  
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Commercial whale watching operations can contribute to the understanding cetaceans by collecting and sharing data with scientists and managers. Data collection is now performed from a wide range of commercial operations world-wide, and a few data collection programs have now operated continuously for more than three decades. Whale watching develops in some areas before there are formal studies underway and basic data can be valuable for designing systematic studies. In some areas of the world, data collection programs have produced enough information on their own to make significant contributions to studies of distribution, stock identity, reproduction and survival rates, population composition, migratory destinations, behavior and human impacts. This presentation will discuss the benefits of data collection programs for whale watching companies, scientists and managers. It will also discuss the challenges of developing a program that is both efficient and useful.

## SPEAKERS

### **Carole Carlson Ph.D.**

Carole Carlson, Ph.D., is the Director of Research and Education for the Dolphin Fleet Whale Watch, an Adjunct Scientist at the Provincetown Center for Coastal Studies and a Research Associate at College of the Atlantic. She has spent over thirty years studying large cetaceans off the east coast of the United States, Puerto Rico, Brazil, Chile, the Dominican Republic and the Eastern Caribbean and is an acknowledged expert on photo-identification techniques, humpback whales and whale watching. Dr. Carlson is an active member of the Scientific Committee of the International Whaling Commission, has organized and conducted five international whale-watching workshops and assisted in the development of whale watch guidelines and regulations for Puerto Rico, Bonaire, Dominica, Iceland, St Lucia, South Africa, Brazil, Chile, Argentina and the USA. She has worked actively on the promotion of the SPAW Protocol of the Cartagena Convention of the United Nations Environmental Programme (UNEP) since 1997 and helped to draft its Marine Mammal Action Plan. She has authored scientific papers as well as education materials for distribution in the United States, the Wider Caribbean Region, Japan, Taiwan and South America.

### **Erich Hoyt**

Erich Hoyt is a Research Fellow with WDCS, the Whale and Dolphin Conservation Society, and leads its Critical Habitat / Marine Protected Areas Programme. He is the author of 18 books, published in 15 languages, and has written more than 500 articles, chapters, reports and papers. His latest book (2011) is *Marine Protected Areas for Whales, Dolphins and Porpoises* (Earthscan/Taylor & Francis/WDCS, London and New York, 477pp). Erich is a member of the IUCN SSC Cetacean Specialist Group, the World Commission on Protected Areas (WCPA), as well as the IUCN High Seas MPA Task Force. He co-directs the Far East Russia Orca Project and the Russian Cetacean Habitat Project in Kamchatka and the Commander Islands, Russia. He has written several reports and given talks on whale watching around Latin America and in the Caribbean. He is based in North Berwick, Scotland.

### **Miguel A. Iñíguez**

Miguel A. Iñíguez was born in Buenos Aires, Argentina. He is the President and Founder of Fundación Cethus, Argentina. He has been involved in cetaceans work for 25 years, including field studies on Commerson's dolphins, orcas, bottlenose dolphins, Peale's dolphins, southern right whales and sei whales in Patagonia. Since 1998 he has specialized in responsible whale watching, working on capacity building for this activity along the Latin American coast. He authored *Orcas de la Patagonia Argentina* (Propulsora Literaria, 1993) and *Toninas overas, los delfines del fin del mundo* (Zagier & Urruty, 1996). He is also the author and co-author of several scientific papers and popular science articles. He is an Associate Professor at both the Universidad Nacional de Costa Rica and the Universidad Marítima Internacional de Panamá. Iñíguez holds a M.Sc. in Málaga, Spain. He has acted as a consultant to the Whale and Dolphin Conservation Society since 1991 and, from 2002 to date, he has been part of the Argentine delegation to the International Whaling Commission, including acting as the Alternate IWC Commissioner in recent years for his country.

### **Gregory D. Kaufman**

Gregory D. Kaufman is the founder and president of Pacific Whale Foundation and author of numerous books, scientific and popular publications. A pioneer in non-invasive humpback whale research in the mid-1970s, Greg founded Pacific Whale Foundation in 1980, and committed his new organization to educating the public, from a scientific perspective, about whales and their ocean habitat. Greg is a world leader in addressing whale protection issues, and has pioneered responsible whale- and dolphin-watching programs throughout the Pacific. He is widely acknowledged as an innovator and leader in marine ecotourism. Greg also is an Invited Participant to the International Whaling Commission's Scientific Committee and is a contributor to the subcommittees on Whalewatching, Southern Hemisphere Whales and Bycatch.

**Merrill Kaufman**

Merrill Kaufman is currently the Chief Operations Officer for Pacific Whale Foundation in Maui, Hawaii. She has been involved in whale and dolphin conservation and education programmes in formal and informal settings for more than 20 years. Ms. Kaufman obtained her BSc.in Education and Montessori Early Childhood Credential from Chaminade University (Honolulu, Hawaii) and served as a member of the Hawaii Ecotourism Association Certification Advisory Board tasked with developing certification guidelines and scoring systems for eco-tour operators in Hawaii. She has also been certified as an Interpretive Guide by the National Association of Interpretation.

As Director of Education of the Pacific Whale Foundation for nearly two decades, she has developed marine mammal curriculum for children for pre-school through high school, conducted educator workshops and worked actively with management agencies and public interest groups to promote innovative and effective frameworks for whale and dolphin interpretation programs. Her current professional efforts include the development of Eco-U; an interpretative training center focused on the professional development of vessel captains, naturalists, educators and crew, including field testing a model for professional development of the marine naturalist as the conduit of a mission merging sound science with public advocacy.

**Jooke Robbins Ph. D.**

Jooke Robbins, Ph.D. is a Senior Scientist at the Center for Coastal Studies in Provincetown, Massachusetts. She undertakes studies of humpback whales in the North Atlantic, the North Pacific and South Pacific Oceans. Dr. Robbins' research focuses on cetacean population biology, human impact assessment and facilitating the development of new research techniques. In the Gulf of Maine, she directs one of the most respected and detailed longitudinal studies of humpback whales in the world. Whale watching data have made important contributions to this research since the late 1970s. Dr. Robbins provides advice and technical support to three U.S. National Marine Sanctuaries, the U.S. National Marine Fisheries Service and is a U.S. delegate to the Scientific Committee of the International Whaling Commission.

**Naomi A. Rose, Ph.D.**

Dr. Naomi Rose is Senior Scientist for Humane Society International (HSI). She oversees HSI campaigns to protect wild and captive marine mammals and is a member of the International Whaling Commission's Scientific Committee. She has published popular and scientific articles, authored book chapters, and lectures annually at several universities. She participates in workshops and task forces at the international, national and state level.

## **APPENDIX II – LIST OF MEETING PARTICIPANTS**

## LIST OF PARTICIPANTS

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**APPENDIX III – MARINE MAMMAL WATCHING SURVEY**

# SPAW Questionnaire

## General Questions

**Country of Operation**

**City/Town of Operation**

**Name of Operation**

**Number of Vessels**

**Vessel Type(s)**

Please check all that apply.

Power

Sail

Monohull

Catamaran

Inflatable/RIB/Raft

Other:

**Vessel Engines:**

Please check all that apply.

Inboard Engines

Outboard Engines - 2 stroke

Outboard Engines - 4 stroke

Diesel Fuel

Gas/Petrol

Other:

**Number of Crew (including captains) per vessel?**

**Number of Passengers per vessel?**

**Passenger Types**

Do the majority of your passengers tend to be:

- Local (regional or national)
- Tourists
- International Tourists
- Mix

**Do your passengers primarily come from cruise ships?**

- Yes
- No

**If you answered NO to the previous question do your passengers primarily arrive by:**

- Airplane
- Train
- Bus
- Public Transit
- Personal Car
- Other:

**Is there safety equipment available? If so select all that apply.**

- EPIRB
- Life Jackets
- Life Rafts
- Fire Fighting/Supression
- Safety Rails
- No Safety Equipment Available

**Is your vessel handicap accessible?**

- Yes
- No

**Number of Trips Per Day**

**Length of Trips. If there are multiple trips please separate with a comma.**

**Trip Price Per Adult**

**Trip Price Per Child**

**Trip Price Per Senior Citizen Student (Special Pricing)**

**Cetacean Species Watched (Whale)**

Please check all that apply:

- Blue whale
- Fin whale
- Sei whale
- Minke whale
- Byrde's whale
- Humpback whale
- Sperm whale
- Pygmy Sperm whale
- Dwarf Sperm whale
- Cuvier's Beaked whale
- Blainville's Beaked whale
- Gervais' Beaked whale
- Sowerby's Beaked whale
- Trues Beaked whale

**Cetacean Species Watched (Dolphin)**

Please check all that apply:

- Orca
- Melon-headed whale
- Pygmy killer whale
- False killer whale
- Short-finned pilot whale
- Rough-toothed dolphin
- Fraser's dolphin
- Short-beaked common dolphin
- Long-beaked common dolphin
- Common bottlenose dolphin
- Pantropical spotted dolphin
- Atlantic spotted dolphin
- Striped dolphin
- Spinner dolphin
- Clymene dolphin
- Tucuxi

**Other Species Encountered**

**Do you have a guide or naturalist?**

- Yes
- No

**If YES to the previous question what are the qualifications of guide/naturalist?**

**Is the guide a crew member (captain/mate)?**

- Yes
- No

**Do you collect cetacean sightings data?**

- Yes
- No

**Are there regional codes of conduct?**

- Yes
- No

**Are you managed or regulated by guidelines or regulations or a combination of both?**

- Guidelines
- Regulations
- Combination of both

**Do you have an on-board education program?**

- Yes
- No



How many other operators are there in your area?

Are there other areas in your country/region where opportunities for future development of whale/dolphin watching exist? If yes please describe where:

## Data Collection

Do you collect data on cetaceans? If yes please complete section. If no please go to Education section.

- Yes  
 No

Who collects data? Please check all that apply.

- Crew  
 Naturalist/Guide  
 On-board researcher  
 Other:

Do you have established protocols/data forms?

- Yes  
 No

Please identify data collected (check all that apply):

- Date  
 Time  
 Location  
 Species  
 Pod Composition  
 Age/Class  
 Heading  
 Behaviors  
  
 Other:

**Do you share the data collected?**

- Yes
- No

**If YES to the previous question with who do you share the data with?**

**Do you have a database?**

- Yes
- No

**If YES to the previous question describe the format of your database**

i.e. written/hardcopy electronic (SQL Access other)

## Education

**Do you have a designated educator/guide?**

- Yes
- No

**Do you conduct educational programs on:**

- Land
- Vessel
- Both
- N/A

**Do you provide passengers with educational program/guide about species encountered?**

- Yes
- No

**Did you produce the brochure/guide?**

- Yes
- No
- N/A

**If NO to the previous question was the brochure/guide produced by:**

- NGO
- Government Agency
- Other:

**Are there books/charts on board the vessel?**

- Yes
- No

**Do you use materials in your presentations?**

i.e. baleen, plankton

- Yes
- No

**Are there educational displays on board or on land?**

- Yes
- No

**Do you have a dedicated program for children?**

- Yes
- No

**Do you conduct passenger satisfaction surveys?**

- Yes
- No

## Conservation

**Do you have a green policy?**

- Yes
- No

**If YES to the previous question what green practices do you employ (please check all that apply)?**

- Biodiesel
- Recycling
- Use of recycled paper/goods in education and promo materials
- Energy wise appliances in operations
- Use of pump out facilities
- Minimal packaging for lunch
- No smoking on board
- Prop guards
- Low emission engines
- Other:

**Do you provide petitions or information for passengers to learn more about campaigns or programs to protect the species?**

- Yes
- No

**Do you support environmental organizations?**

- Local
- National
- International
- None
- Other:

**If YES to the previous question please list the organizations supported:**

**Does a percentage of your ticket sale go to protect whales/dolphins being watched?**

- Yes
- No

**If YES to the previous question what percent of the ticket is donated?**

**Have you made a cash or in-kind donation to support research on whales/dolphins being watched?**

- Yes
- No

**What is the annual amount of your cash or in-kind donation?**

**Have you hosted or supported in-kind on board research activities?**

- Yes
- No

**Thank you for taking the time to complete this survey. Please feel free to add any comments below:**

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## **APPENDIX IV – ACTIVITY INSTRUCTIONS**

### Goal of Exercise:

1. Identify with the communicative and behavioral cues that signal differentiated cognitive states in experiential, nature-based learning.
  2. Isolate the precursor to learning- the point at which one seeks answers.
- 

### Instructions for Participants:

1. Form homogeneous groups by language preference (English, Spanish, French).  
One person in each group, be designated the **note taker** and bring a pen/paper along.  
Go immediately outside into the foyer and await my instructions.

**Note Taker:** please make general notes concerning the discussion of the group.

2. Each group will go to their appointed starting area and additional instructions will be given.

A. Spanish Speakers: Begin at the path by shade cloth enclosure by walking outside the main hotel entrance, down the stairs to your left, turn left and walk along path to enclosure.

Once at your starting point, **note taker** reads instructions: “We will begin walking up the gravel nature trail.

**Share ideas and questions. If you know something about this place or have been here before, share with the group.”**

B. French Speakers: Begin at the start of the gravel nature trail past the swimming pool and gymnasium.

Once at your starting point, **note taker** reads instructions: “We will begin walking up the gravel nature trail.

**Share ideas and questions. If you know something about this place or have been here before, share with the group.”**

When someone in the group stops to notice something or asks for clarification from someone else who serves as a resource, **note taker** should make note and describe.

When you reach the end of the trail by the swimming pool, return to meeting room for further instructions.

C. English Speakers: Gather at

Once at your starting point, **note taker** reads instructions: “We will begin walking up the gravel nature trail.

**Share ideas and questions. If you know something about this place or have been here before, share with the group.”**

When someone in the group stops to notice something or asks for clarification from someone else who serves as a resource, **note taker** should make note and describe.

When you reach the end of the trail, return to the meeting room for further instructions.

3. Upon returning to the meeting room, gather in a group and **note taker** will pose the following reflections: (please record responses)

- What were you expecting when you began the exercise?

- Did you experience anything that was new to you?
- Describe anything that challenged what you already knew.
- Would you like to explore further? Why or why not?

**APPENDIX V – TEMPLATE DATA FORM**



# EXAMPLE SIGHTING DATA FORM

# Wider Caribbean Region

Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Trip number \_\_\_\_\_ Vessel name \_\_\_\_\_ Start time \_\_\_\_\_ End time \_\_\_\_\_

Departure Port \_\_\_\_\_ Operator \_\_\_\_\_ Data collector \_\_\_\_\_ Assistant(s) \_\_\_\_\_

Areas Covered\* \_\_\_\_\_ Notes \_\_\_\_\_

WEATHER: \_\_\_\_\_ Cloud cover (10ths) \_\_\_\_\_ Swell ht (ft) \_\_\_\_\_ direction \_\_\_\_\_ Wind direction \_\_\_\_\_

Wind speed (knots) [0] [1-3] [4-6] [7-10] [11-16] [17-21] [22-27] [28-33] [34-40] Sea ht [Glass] [ Catspaw] [3'-1.5'] [>1.5'- 3'] [> 3'-6'] [>6']

## SIGHTINGS:

#	Species	Count		Time Start/End	Bearing (degrees)	Dist. (mi)	Location		Behaviors Observed*	Photos Taken?*	Calf present? (Y/N)	Birds present? (Y/N)	Environmental data*
		Min	Max				Lat	Long					
01				/	o								
02				/	o								
03				/	o								
04				/	o								
05				/	o								
06				/	o								
07				/	o								
08				/	o								
09				/	o								
10				/	o								
11				/	o								
12				/	o								
13				/	o								
14				/	o								
15				/	o								

\*Additional data sheets can be developed for more detailed data

**APPENDIX VI – OVERARCHING PRINCIPLES AND BEST PRACTICES FOR MARINE MAMMAL  
WATCHING IN THE WIDER CARIBBEAN REGION**

## **PREAMBLE**

The people of the Wider Caribbean Region (WCR) depend greatly on coastal and marine resources for their economic, social and cultural well-being. One of the region's major economic activities—tourism—is dependent on these resources and, therefore, it is critical that it be developed and carried out in a responsible and sustainable manner. A growing, yet not fully realized component of tourism in the WCR is marine mammal watching.

With a potential for growth in existing operations and the possibility of new ones emerging, it is an opportune time to develop a regional plan for the development of a high-quality, responsible marine mammal tourism industry that conforms with best practices, including enhanced coordination and partnering among stakeholders and information sharing.

In 2000, the Protocol Concerning Specially Protected Areas and Wildlife in the Wider Caribbean Region (SPA-W) entered into force. This Protocol, one of three supplementing the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (Cartagena Convention), is the only regional biodiversity legal agreement for the advancement of the conservation and protection of the marine environment in the Wider Caribbean Region. The SPA-W Protocol calls for the development and implementation of conservation, recovery or management programmes, as well as guidelines and criteria for the management of protected species (<http://www.cep.unep.org/about-cep/spaw>).

As part of its obligations under the Action Plan for the Conservation of Marine Mammals in the Wider Caribbean Region (MMAP), the United Nations Environment Programme – Caribbean Environment Programme (UNEP-CEP), through the SPA-W sub-programme, convened a Regional Workshop on Marine Mammal Watching in the Wider Caribbean Region which brought together marine mammal tour operators and government regulators from across the WCR to discuss the marine mammal watching industry in the region. The Workshop, with funding provided by the National Fish and Wildlife Foundation, U.S. Marine Mammal Commission, Humane Society International, the Pacific Whale Foundation, Animal Welfare Institute, the World Society for the Protection of Animals, International Fund for Animal Welfare, the French Marine Protected Area Agency and the Agoa Marine Sanctuary, took place between the 19-22 October 2011 in Panama City, Panama to:

- Assess the extent of problems and needs in existing marine mammal watching operations;
- Identify opportunities in existing marine mammal watching operations;
- Discuss the formulation of a regional code of conduct for observing marine mammals;
- Standardize data collection forms and organize baseline research on marine mammals;
- Document existing marine mammal educational materials; and
- Discuss next steps with regards to marine mammal watching in the WCR.

A product of the Workshop was the development of overarching principles and best practice guidelines for marine mammal watching in the WCR. These principles and guidelines take into consideration pre-existing codes of conduct and regulations from countries within, and outside, the WCR, on issues such as swimming with marine mammals in the wild, and the type of vessels that should be used during interactions, and closely follows the steps and language used in the document, Pacific Islands Regional Guidelines for Whale and Dolphin Watching (IFAW, 2008). All of the principles and guidelines developed for the WCR were agreed upon by the tour operators and regulators present at the workshop and may serve as the basis upon which each country's own codes of conduct and regulations may be developed.

These overarching principles and best practice guidelines for marine mammal watching in the WCR will be presented by the UNEP-CEP Secretariat to the Seventh Conference of the Parties to the SPAW Protocol for consideration and decision on further action.

## **INTRODUCTION**

The Wider Caribbean Region (WCR) region is important for a great number of marine mammals, whether as a permanent habitat, a breeding ground or a migration corridor. Currently, at least thirty-two species of marine mammals have been identified in this area. The presence and diversity of marine mammals in the WCR region has led to the development of marine mammal watching, both on a commercial and recreational basis. Marine mammal watching, in this context, is defined as viewing activities in the natural environment, of any marine mammal species from land, sea or air.

In order to ensure the conservation of marine mammals in the WCR region, it is our responsibility to minimize the disturbance caused by our presence. An initial step towards that goal is the development of best practice guidelines for the WCR to ensure the sustainable development of the marine mammal watching industry. These codes would apply to all types of marine mammal watching, including dedicated, seasonal and opportunistic, commercial operators, and recreational vessels.

## **OVERARCHING PRINCIPLES**

Overarching principles of these guidelines might include:

- Ensure the conservation of marine mammals and their habitats in the Wider Caribbean Region;
- Ensure a precautionary approach to the development and management of marine mammal watching in the Region;
- Minimise the impact of viewing activities on marine mammals, other species and the ocean ecosystems in the Region;
- Provide long-term benefits for the livelihood of local communities;
- Promote local knowledge and understanding of marine mammals and the marine environment through training, education and dedicated research.

The following management considerations and guidelines for marine mammal watching were developed for the Wider Caribbean Region (WCR) in 2011<sup>1</sup> taking into account the existing national guidelines, decrees and regulations in the Region.

## **MANAGEMENT CONSIDERATIONS**

In an effort to minimize the risk of adverse impacts caused by marine mammal watching and to ensure the sustainable development of this industry, effective management strategies need to be implemented. Several tools and approaches should be considered:

- National licensing or permitting schemes to regulate:
  - The number, size and type of vessels,
  - Standards of operation
  - Site specific and species specific requirements
  - Research and media
  - Training for operators

and sanctions for non-compliance, such schemes subject to change and improvement;

- National measures to regulate approaches, frequency, length and type of exposure in encounters with marine mammals;
- Development of cooperative regional management provisions wherever appropriate;
- Management measures, to include closed seasons, exclusion zones, and 'no approach times' to provide additional protection to habitats, populations, and individuals;

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<sup>1</sup> Regional Workshop on Marine Mammal Watching, Panama City, Panama 19-22 October 2011

- Assessment of the numbers, distribution and other characteristics of the target population/s before the implementation of tourism operations to establish the feasibility of the industry and a baseline for monitoring;
- Where new marine mammal watching operations are evolving, start cautiously, moderating activity and adapting management until sufficient information on populations and species is available to guide further development;
- Monitoring the effectiveness of management provisions and modifying them as required to reflect new information and circumstances, with the consultation of stakeholders;
- Establishment of an enforcement framework to ensure compliance with regulations;
- Scientific and socio-economic research and monitoring, assessment of potential impacts on marine mammals, and collection and sharing of information by all stakeholders;
- Dissemination of information on best practice and research to improve public awareness, including all stakeholders;
- Ongoing operator and naturalist training and accreditation programmes on the biology and behaviour of target species, local ecosystems, navigation, culture, best practice of marine mammal watching operations, and the management provisions in effect;
- Supporting, protecting and empowering WCR communities' participation and ownership of the marine mammal watching industry;
- Educational standards for the provision of accurate and informative material to marine mammal watch participants, to:
  - Develop an informed and environmentally responsible public;
  - Encourage development of realistic expectations during encounters;
  - Encourage the provision of naturalist guides on all boats; and
  - Encourage public participation in on-board programmes

### **GUIDELINES FOR WATCHING MARINE MAMMALS**

Marine mammal watching activities can potentially have adverse impacts on marine mammal populations, including disruption of important behaviours, displacement from habitat, chronic stress and serious injury. Therefore, persons should:

- Operate watercraft, and aircraft so as not to disrupt the normal movement or behaviour of marine mammals.
- Stop watching a marine mammal at any sign of the animal becoming disturbed or alarmed.
- Allow marine mammals to determine the nature, duration and proximity of watching and possible 'interactions'.

Therefore, the following recommendations should be considered:

- Do not touch a marine mammal.
- Do not feed a marine mammal.
- Do not make any loud or sudden noises that are transmittable under water.
- Do not make sudden or repeated changes in direction or speed.
- Do not carry out any activities that might condition marine mammals to approach watercraft.
- Do not throw litter into the water.
- Dedicated observer(s) should be on duty, in addition to the captain of the vessel.
- Do not place a vessel in a position where it will drift into marine mammals.
- When watercraft are in known manatee habitat, speed should not exceed 5 knots.
- Leave boat engine on and in idle, or drop sails, when watching marine mammals.
- Do not disperse or separate a group of marine mammals.

- Watercraft should not chase, encircle, leap-frog, block the direction of travel of marine mammals or access to the open sea, or position itself in the middle of a group.
- If marine mammals approach the watercraft, slow down gradually, put engines in idle or drop sails.
- If dolphins approach a vessel to bow-ride or wake-ride, maintain a steady speed and avoid changes in course.
- When departing from marine mammals, determine where the animals are relative to the watercraft to avoid collisions or coming too close to the animals, and increase speed gradually only after confirmation that the animals are outside the no approach zone.
- Watching marine mammals for more than 30 minutes, or 3 dive sequences with sperm whales, is discouraged.
- Any accidents or collisions with marine mammals should be documented and reported to relevant authorities.

## **WATERCRAFT**

Watercraft should meet appropriate safety standards.

Certain watercraft should not be used for marine mammal watching. These include jet skis and similar crafts (e.g. all motorized personal watercraft), parasail, remotely operated craft, wing in ground effect craft, hovercraft, windsurfers, kite surfers. The use of aircraft and helicopters for marine mammal watching is discouraged, except in the case of permitted scientific research and media.

## **ANGLES AND DISTANCES OF APPROACH**

### Approach

The most appropriate method for approaching a whale or a dolphin is from the side and slightly to the rear of the animal. Avoid approaches from head on or directly from behind. In the case of sperm whales, approach animals from the rear and slightly to the side.

### Caution zone

A caution zone is an area in which watercraft should proceed at a no-wake speed (6 knots or less).

The caution zone is the area within 300m from a whale, 150m from a dolphin and 50m from a manatee. Within 50m of a manatee, engines should be shut off.

- No more than 3 watercraft should be in the caution zone of a marine mammal at a time.
- When there is more than one watercraft in the caution zone, operators should coordinate movements and maintain radio contact.
- Observe marine mammals at a speed not exceeding the speed of the slowest animal.

### No approach zone

The no approach zone is the minimum distance to which a watercraft may approach a marine mammal. Engines should be in neutral, or sails dropped.

### Watercraft:

- Minimum approach distances for whales in the region range from 50-250m. Minimum approach distances for dolphins in the region range from 30-100m, including the area directly in front of and behind a pod. During discussion a standardized minimum approach distance of 50m for whales and dolphins was recommended but there may be conditions under which it would be recognized that a greater distance would be appropriate e.g. mother-calf pairs.

- Minimum approach distance for manatees is 30m. It was recognized that there may be conditions where greater distances may be appropriate, e.g. mother-calf pairs.

#### Aircraft:

If permitted, the group recommended that aircraft may not approach (in height or distance) to within 500m of a marine mammal.

#### **MOTHER AND CALF PAIRS**

A marine mammal with a calf, lone calves/mothers or groups with calves, are particularly vulnerable to disturbance and require additional protection. In areas where approaches are allowed:

- Exercise extreme caution with groups containing calves.
- Site-specific restrictions on length of encounter and distance of approach should be considered for groups with calves.

#### **SWIMMING AND DIVING WITH MARINE MAMMALS IN THE WILD**

Swimming with marine mammals may increase the potential for disturbance and displacement and puts people at risk. The group acknowledges that there are existing swim with marine mammal programmes (commonly known as swim with programmes) but discourages the further development of these programmes. For those countries where swim-with activities are currently being undertaken, it is recommended that the following standards be applied to these operations.

(Countries may also refer to the national examples and standards in Appendix 1):

- Scientific studies should be initiated to assess: a) the associated risk to the safety of the people participating in swim-with activities; and b) the current and potential future impacts of these activities on the target cetacean species. Any accidents should be documented and reported to relevant authorities.
- Particularly sensitive animals (e.g. mothers with calves) and habitats (e.g. calving and feeding grounds) should be provided additional protection (refer to Management Considerations)
- No sub-surface swimming activities should be allowed, including the use of any underwater breathing apparatus and scooters.
- Underwater flash photography or lighted filming should not be allowed.
- An adaptive precautionary approach should be taken when reviewing swim-with operating procedures. Consideration should be given to:
  - Regular review of operational standards as credible scientific information on the impacts of swim-with programmes becomes more available;
  - All persons in the water with marine mammals should be accompanied by an appropriately trained local guide;
  - Limiting the maximum number of vessels permitted to undertake swim-with activities in a region;
  - Limiting the number of swimmers allowed in the water at any one time with a marine mammal or group of marine mammals;
  - Limiting the maximum amount of in-water time allowed with a marine mammal or group of marine mammals per day, including maximum swim time for each interaction, time required between successive swims with each animal and maximum cumulative interaction time with each animal per day;
  - Appropriate drop-off distance for swimmers and minimum swimmer distance from animals;
  - Entering the water with marine mammals during behaviourally sensitive situations should be discouraged;
  - Swimming with mothers and calves should be discouraged;



- Prohibit leap-frogging and limit the number of swimmer drop offs or attempts.

## **BIBLIOGRAPHY**

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**APPENDIX I - SUMMARY OF WHALE WATCHING REGULATIONS, GUIDELINES AND DECREES IN  
THE WIDER CARIBBEAN REGION (WCR)**

## A SUMMARY OF WHALE WATCHING REGULATIONS, GUIDELINES AND DECREES IN THE WIDER CARIBBEAN REGION (WCR)<sup>2</sup>

The following is a compilation of guidelines and regulations in the WCR. It is intended to be used as a reference and guide in the development of general best practice codes for the Region.

### KEY

**D** DECREE  
**G** GUIDELINES  
**R** REGULATION

<b>BA</b>	<b>BAHAMAS</b>	<b>Guidelines: Wild Dolphin Project, Bahamas National Trust, Bahamas Department of Fisheries,</b>
<b>BVI</b>	<b>BRITISH VIRGIN ISLANDS</b>	<b>Guidelines:</b>
<b>CO</b>	<b>COLOMBIA</b>	<b>Federal law and decrees for Port of Buenaventura and Gorgona Island</b>
<b>CR</b>	<b>COSTA RICA</b>	<b>Executive Decree 32495</b>
<b>DO</b>	<b>DOMINICA</b>	<b>Guidelines: Drafted by Department of Fisheries, CARIBWHALE, NDC and IFAW</b>
<b>DRr</b>	<b>DOMINICAN REPUBLIC</b>	<b>Regulations: The Ministry of Environment</b>
<b>DRd</b>	<b>DOMINICAN REPUBLIC</b>	<b>Decree 319 The Ministry of Environment</b>
<b>GU</b>	<b>GUADELOUPE</b>	<b>Guidelines: Drafted and signed by French authorities, fishing representatives and Evasion Tropicale</b>
<b>ME</b>	<b>MEXICO</b>	<b>Decree NOM 131 ECOL for humpback whales</b>
<b>PA</b>	<b>PANAMA</b>	<b>Decree ADM/ARAP N°1</b>
<b>PR</b>	<b>PUERTO RICO</b>	<b>Regulation: Department of Natural Resources and Environment</b>
<b>SL</b>	<b>ST LUCIA</b>	<b>Regulation: Drafted by Department of Fisheries and local NGO's</b>
<b>T&amp;C</b>	<b>TURKS AND CAICOS</b>	<b>Guidelines</b>
<b>US</b>	<b>UNITED STATES</b>	<b>Guidelines: Southeast Region, National marine Fisheries Service</b>

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<sup>2</sup> Although some of the guidelines and regulations apply to the Pacific coast, they address key species that are watched in the WCR

## A SUMMARY OF WHALE WATCHING REGULATIONS, GUIDELINES AND DECREES IN THE WIDER CARIBBEAN REGION

COUNTRY/TERRITORY	BA	BVI	CO	CR	DO	DRr	DRd	GU	ME	PA	PR	SL	T&C	US
Guidelines or Codes (G), Regulations (R), Decree (D)	G	G	R	D	G	R	D	G	D	G	R	R	G	G

### GENERAL CONDITIONS

Permits					X	X	X		X	X	X			
Boat captains association						X								
Training programs						X		X	X	X				
Operator have sufficient experience with marine mammals					X			X	X					
Operator have sufficient experience and knowledge of the local area, sea and weather conditions					X			X	X					
One crew member should be a dedicated lookout										X		X		
Certified/trained local guides								X		X				
Vessel meets appropriate safety standards/safety equipment					X	X								
Guidelines/regulations displayed										X				
Educative material available onboard commercial whale watching boats/education materials developed			X	X	X	X								
Maintain a daily log of sightings including infractions					X									
Do not to disrupt the normal movement or behaviour of any marine mammal		X			X	X	X	X	X	X	X	X	X	x
Allow the marine mammals to determine the nature and duration of the encounter	X				X									
Avoid touching any marine mammal	X	X	X										X	X
Do not deliberately feed or attempt to feed a wild whale or dolphin	X		X	X				X		X	X			X
No objects, rubbish or food shall be thrown near or around any marine mammal	X			X	X		X							
Do not empty holding tanks near marine mammal habitat	X													
Do not take or capture cetaceans	X						X							
Do not approach any fishing activity												X		

COUNTRY/TERRITORY	BA	BVI	CO	CR	DO	DRr	DRd	GU	ME	PA	PR	SL	T&C	US
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#### APPROACH AND DEPARTURE METHOD

Approach and depart from a direction that is parallel and slightly to the rear of the animal			X	X					X		X	X		
Approach sperm whales slowly from behind or from an angle					X			X						
Follow a parallel route to the animals, without overtaking				X				X	X		X	X	X	
Do not approach from head-on			X	X				X				X		X
Do not scatter or separate members of a group of cetaceans		X	X	X	X			X	X		X	X		X
Do not box cetaceans in, cut off their path or prevent them from leaving					X	X	X	X	X		X			X
Vessel operators should coordinate their movements by radio contact					X			X				X	X	X
If a cetacean approaches your vessel:														
1) place the engines in neutral and let the animal(s) come to you or pass; or		X					X	X					X	X
2) slow down and continue on course, avoiding potential collisions; or														
3) steer a straight course away from them				X										
When watching whales keep gear in neutral and slow engine to idle					X	X						X	X	
Avoid sudden or repeated changes in direction or speed			X		X		X	X	X			X		X
If cetaceans show disturbance activities, withdraw immediately at a 'no wake' speed				X	X			X	X					X
Whales should not be chased/persued								X						X
Move off at a slow 'no wake' speed to the outer limit of the caution zone and gradually increasing speed			X		X			X				X		
Sailboats should start engine and keep it in neutral when near cetaceans								X						
Do not drift down on whales					X									
Do not approach a breaching whale			X		X									
Do not approach resting whales					X							X		

#### NOISE

Avoid making loud or sudden noises near cetaceans				X			X	X						X
Avoid excess engine use, gear changes, manoeuvring or backing up to cetaceans					X									
Do not use echo sounders near cetaceans										X				

COUNTRY/TERRITORY	BA	BVI	CO	CR	DO	DRr	DRd	GU	ME	PA	PR	SL	T&C	US
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#### APPROACH DISTANCE- WHALES

50 metres					X	X	X							
50 metres for stationary whales								X						
80 metres									X					
100 metres	X										X	X	X	X
100 metres for moving whales								X						
200 metres when feeding or socializing				X										
200 metres (vessels less than 35')			X											
250 metres										X				
300 metres (vessels larger than 35')			X											
Caution zone within 300 metres of whales	X													
Vessels waiting to watch whales must maintain a distance of 500m						X								
Restricted distance to whales being studied by researchers			X											

#### APPROACH DISTANCE- DOLPHINS

30 metres with engines off				X										
50 metres	X				X									X
50 metres with engines on				X										
100 metres		X								X				
100 metres when feeding or socializing				X										

#### SPEED

Avoid sudden or repeated changes in speed when within the caution zone		X	X		X			X		X		X	X	
Avoid speeds over 10 knots within 1500 feet of a whales		X											X	
When within the caution zone of a cetacean, move at a constant, slow ('no wake') speed			X		X				X	X		X		
Slow down to 6k at first sighting of a cetacean								X						
Do not move faster than the slowest moving cetacean		X	X	X					X		X	X	X	

COUNTRY/TERRITORY	BA	BVI	CO	CR	DO	DRr	DRd	GU	ME	PA	PR	SL	T&C	US
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#### TIME

Do not stay with whales for more than 30 minutes			X	X		X	X			X	X	X		X
Do not stay with dolphins for more than 20 minutes					X									
No boat should approach the same whale for a period of 60 minutes			X											
Do not stay with whales for more than 3 dive sequences					X									

#### SPECIFIC CONDITIONS FOR GROUPS WITH CALVES

Limit observation time				X						X				
Do not approach a lone calf on the surface					X			X						
Do not approach closer than 80m to whales with calves						X	X							
Do not approach closer than 100m to any pod with calves or mother/calf pairs		X		X										
Do not approach closer than 150m to whales with calves				X										
Do not approach closer than 200m to whales with calves												X		
Do not approach a pod with calves or a mother/calf pair			X						X		X			
Do not come between a mother and calf		X									X		X	X

#### NUMBER OF BOATS

Limited to one boat within the caution zone/or one boat on each whale or group of whales			X				X				X			X
No more than one large boat (>9 m) and 2 small boats(< 9m) on a whale or group of whales at the same time						X								
No more than 2 boats on a whale or group of whales at the same time										X		X		
No more than 3 boats within the whale watch area					X									
Do not enter the caution zone if already 2 boats present within 200 metres of a whale or group of whales				X	X									
No more than 15 boats at a time within the whale watch area			X											

#### TYPE OF VESSEL

No jet skis/para-sails				X					X		X			
No windsurfing, canoes or kayaks				X					X					
Rapid response steering and engines with minimal noise/vibration												X		
4-stroke engines with propeller guards										X				

COUNTRY/TERRITORY	BA	BVI	CO	CR	DO	DRr	DRd	GU	ME	PA	PR	SL	T&C	US
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#### AERIAL OBSERVATIONS

Maintain a distance of over 150 metres			X											
Maintain a distance of over 300 metres							X			X	X			
Maintain a distance of over 500 metres					X									
Maintain a distance of over 1000 metres						X	X							
No helicopters or aircraft			X		X				X					

#### SWIM-WITH ENCOUNTERS

Do not swim with cetaceans		X		X	X	X		X	X	X	X		X	X
No diving/scuba	X			X	X	X	X		X	X	X			
Snorkeling with whales allowed							X							
No touching or riding dolphins	X													
No chasing/ rapid swimming towards dolphins	X													
Low ration of people to dolphins in water	X													
Do not play music or whale sounds into the water	X													
Anchoring preferred/ secondary movement towards dolphins discouraged	X													
Vessels should stay ½ nautical mile away from vessel with swimmers in water	X													