

FINAL REPORT

OF THE

REGIONAL WORKSHOP FOR EFFECTIVE IMPLEMENTATION OF
MARINE MAMMAL STRANDING RESPONSE IN THE DUTCH CARIBBEAN

ORGANIZED BY THE



SOUTHERN CARIBBEAN CETACEAN NETWORK (SCCN)
IN COOPERATION WITH EASTERN CARIBBEAN CETACEAN NETWORK (ECCN)



AND THE CURACAO SEA AQUARIUM AND THE DUTCH CARIBBEAN NATURE ALLIANCE (DCNA)

5 - 7 NOVEMBER 2009
CURACAO, NETHERLAND ANTILLES

SUBMITTED BY
PAUL HOETJES (SCCN) AND NATHALIE WARD, PHD (ECCN)

TABLE OF CONTENTS

- I. Introduction
- II. SCCN Objectives
- III. Stranding Training Topics
- IV. Workshop Recommendations
- V. Regional Context
- VI. Appendices
 - Appendix I: Participant List
 - Appendix II: SCCN Agenda
 - Appendix III: SCCN Compendium—Table of Contents
 - Appendix IV: Incident Command System
 - Appendix V: Workshop Recommendations
 - Appendix VI: Curacao Press Release
ECCN Newsletter

INTRODUCTION

The Dutch Caribbean Regional Workshop for Effective Implementation for Marine Mammal Stranding Response (DCSW) was hosted by at the Curacao Sea Aquarium from 5 to 7 November 2009 in the Netherland Antilles. The Southern Caribbean Cetacean Network (SCCN), recently established on Curaçao, organized this stranding workshop in cooperation with the Dutch Caribbean Nature Alliance (DCNA), and the Eastern Caribbean Cetacean Network (ECCN), which organized the first stranding workshop in Trinidad & Tobago (2005).

The goal of the Workshop was to build capacity to review the techniques and protocols for responding to stranding incidents for marine mammals and to facilitate possibilities for collaboration in the Dutch Caribbean islands. The workshop is a priority action identified by the UNEP's Specially Protected Areas and Wildlife (SPAW) Programme's Marine Mammal Action Plan (MMAP) for the Wider Caribbean Region (WCR), modeled after the first Eastern Caribbean stranding response workshop held in Trinidad & Tobago in 2005 and was the second such workshop in the region.

Twenty-one participants representing Protected Area management organizations, government departments, and non-governmental organizations from six Dutch Caribbean islands attended—Aruba, Bonaire, Curacao, St. Eustatius, St. Maarten, and Saba. The US Marine Mammal Commission, DCNA, the Netherlands Antilles' government, and the Curaçao Sea Aquarium/Dolphin Academy provided funding for the workshop. Trainers and presenters included Charles Potter (Smithsonian Institute's Marine Mammal Laboratory), Dr. John Reynolds (Mote Marine Laboratory), Dr. Janet Whaley (NOAA Fisheries), Dr. Nathalie Ward (Eastern Caribbean Cetacean Network/U.S. National Marine Sanctuary Program); Ms. Andrea Bogomolni (Eastern Caribbean Cetacean Network/Woods Hole Oceanographic Institution), and Helene Souan (SPAW Regional Activity Centre, Guadeloupe.) Paul Hoetjes was the SCCN Coordinator in Curacao and Dr. Nathalie Ward (ECCN) served as coordinator for workshop training preparations. (See Participant List: Appendix I).

WORKSHOP OBJECTIVE

The objective of the Dutch Caribbean Marine Mammal Stranding Workshop (DCSW) was to provide stranding response and necropsy training—a core of marine mammal stranding expertise and tools—for the Dutch Caribbean islands. Specifically, the Workshop was designed to build capacity to include standardized protocols, methods of sample collection, archiving of samples, establishment of an online database for findings, and build a network to ensure sharing of information in cases of marine mammal strandings across the region.

STRANDING TRAINING TOPICS

The participants received classroom and hands-on instruction in stranding response, necropsy, and supportive animal care (See Agenda: Appendix II). A comprehensive SCCN Compendium was prepared by ECCN for all participants (See Compendium—Table of Contents: Appendix III). Participants were introduced to the 'Incident Command System (ICS)— a method of organizing stranding events that involve multiple agencies with a set pyramid of authorization (See Incident Command System: Appendix IV). They also participated in a mock stranding response demonstration on the beach and in a facilitated debrief discussion. As part of the discussion, participants identified their needs for stranding response, analytical capabilities, and technology and information exchange. Development of an international network of stranding responders, an archive of samples, and a database of findings was explored. The workshop participants were expected to promote the above goals on their island after returning from the workshop.

Specifics of training included the following:

- Training participants from each of the Dutch Caribbean islands in effective response in cases of strandings of whales or dolphins, allowing for maximum chance of successful recovery of stranded animals;
- Training participants in the use of standardized techniques and protocols for preparation, handling, transport and storage of marine mammal specimens when responding to marine mammal strandings, to ensure effective sample collection for research to answer conservation questions;
- Establishing a clear "Incident Command System" (ICS) on each of the islands to organize stranding events with clearly defined roles for all involved agencies/organizations and a set pyramid of authorization;
- Establishing a Southern Caribbean (but also including the Dutch islands in the northeastern Caribbean) stranding response network with the SCCN as a center of expertise for the (sub)region;
- Establishing standardized data collection methods and database; and,
- Creating a link with other sub-regional stranding networks in the Caribbean such as the ECCN, ensuring better communication and cataloging of stranding events.

WORKSHOP RECOMMENDATIONS

Participants commended the workshop's organization and learning opportunities provided. They applauded the new *exposure to and relevance of marine mammal strandings to ocean health*. Participants compiled a list of recommendations for next steps (See Workshop Recommendation's specifics: Appendix V).

Recommendations from participants included:

- 1) Formation of island *stranding* networks and *sighting* networks (modeled on ECCN standards) with endorsement of their island government;
- 2) Development of a *centralized, regional* stranding and response network (i.e. SCCN);
- 3) Standardization of data collection/data base for strandings and sightings (i.e. ECCN model) and establishing on-the-beach and in-the-water protocols;
- 4) Improvement of existing and developing region-specific education and *public awareness* programmes;
- 5) Improvement of *communication* with Dutch Caribbean islands through electronic eGROUP and/or *ftp* site and ECCN;
- 6) Identification of *equipment, funding and training needs* and opportunities. A stranding response tool kit will be put together and provided to each of the islands. Further training will take place in the future and each island will regularly refresh the stranding response training;
- 7) Commitment to pass on information to their stakeholders and government/NGO networks with stated motivation to practice what they learned;
- 8) *SCCN Mission statement*: To promote the expansion of knowledge with respect to dolphins and whales worldwide, focused on their protection and research of their status and habitats in the Southern Caribbean. SCCN will collect all information provided by the stranding networks on each of the islands and act as a conduit to make the information available to everyone; and,
- 9) Finally, the workshop agreed that *designation of a marine mammal sanctuary* in Dutch Caribbean waters should be pursued in conjunction with the existing '*sister sanctuaries*' of the Dominican Republic and U.S. Stellwagen Bank National Marine Sanctuary (SBNMS), such as SBNMS and Saba Bank/ SBNMS and the French initiative to establish a marine mammal sanctuary around the French islands.

REGIONAL CONTEXT—NEXT STEPS

In the Wider Caribbean Region, there is an urgent need for capacity building in the area of unusual mortality events of marine mammals, specifically on-the-ground response to animal strandings and collection of relevant data; training in methods of sample collection, archiving of samples and establishment of an on-line database for findings; and, as it applies to insight into ocean health.

Because marine mammals are trans-boundary animals, successful conservation of marine mammals in the Wider Caribbean Region will ultimately depend upon the commitment of countries there to build and maintain, with international assistance, internal capacities for setting conservation priorities and achieving high standards of population and habitat protection.

With the adoption of SPAW's MMAP (2008) and support from the Caribbean Environment Programme secretariat, participants agreed to strengthen capacities and infrastructure within and between islands (and hopefully regions such as ECCN) to identify and monitor threats to marine mammals, ecosystems, and humans by accomplishing priority activities as outlined in MMAP (2.7):

- Establishing inasmuch as possible, 'injury' networks which have a reporting mechanism to respond to marine mammal injury, wherein information which should be made available to all other countries. (MMAP 2.7.5)
- Creating appropriate archives of samples for diverse studies such as pathology, contaminants, parasitology and genetics. (MMAP 2.7.6)
- Building capacity to include standardized protocols, training in methods of sample collection, archiving of samples, and establishment of an on-line database for findings. (MMAP 2.7.7)

The attendees valued the opportunity to have a forum to address and discuss their shared challenges. SCCN discussions addressed the future establishment of regional cooperation programmes to increase scientific, technical, and educational exchange among relevant national, regional, and international organizations. As part of networking, a strong effort should be made to transfer essential skills, resources and capacity building, especially within Dutch Caribbean, French and Lesser Antilles region. Additionally, it was stated that with the increased exposure to marine mammal stranding science and interdisciplinary, ecosystem-wide research questions, it is important to promote a precautionary approach when addressing risks and uncertainty when making decisions regarding conservation of marine mammals.

CONTACTS

For further information, please contact Paul Hoetjes (SCCN) paul@mina.vomil.an or Dr. Nathalie Ward (ECCN) nath51@verizon.net .

APPENDIX I—TRAINERS (**) and PARTICIPANTS LIST

ANDREA BOGOMOLNI, MS **

STRANDING AND DATABASE COORDINATOR, EASTERN CARIBBEAN CETACEAN NETWORK
WOODS HOLE OCEANOGRAPHIC INSTITUTION
MAIL STOP #50
WOODS HOLE, MA 02543 USA
CELL: (508) 631-2130

EMAIL: andreab@whoi.edu

PAUL C. HOETJES

Senior Policy Advisor
Department of Environment & Nature (MINA)
Ministry of Public Health & Social Development (VSO)
Schouwburgweg 26 (building E)
Curaçao, Netherlands Antilles
Tel. +(599-9)466-9307; fax: +(599-9)461-0254

E-mail: paul@mina.vomil.an

CHARLES W. POTTER **

COLLECTION MANAGER, MARINE MAMMALS
NATIONAL MUSEUM OF NATURAL HISTORY
SMITHSONIAN INSTITUTION
MRC 108 PO Box 37012
WASHINGTON, DC 20013-7012 USA
TEL: (202) 633-1261 (OFFICE)

(301) 238-1157 (CELL)
Email: potterc@si.edu

DR. JOHN REYNOLDS **

SENIOR SCIENTIST, MOTE MARINE LABORATORY
1600 KEN THOMPSON PARKWAY
SARASOTA, FL 34236 USA
TEL: (941) 388-4441

FAX: (941) 388-5225
Email: reynolds@mote.org

DR. NATHALIE WARD **

DIRECTOR, EASTERN CARIBBEAN CETACEAN NETWORK (ECCN)
P.O. Box 130 BQ
BEQUIA, SAINT VINCENT AND THE GRENADINES, WEST INDIES
P.O. Box 573
WOODS HOLE, MA 02543-0573 USA
TEL: (784) 458-3624 OR USA (508) 548-3313

Email: nath51@verizon.net

DR. JANET WHALEY **

MARINE MAMMAL HEALTH AND STRANDING RESPONSE PROGRAM
NATIONAL MARINE FISHERIES SERVICE OFFICE OF PROTECTED RESOURCES
1315 EAST WEST HIGHWAY
SILVER SPRING MD 20910 USA
TEL: (301) 713-2322 CELL: (301) 675-1827

Email: janet.whaley@noaa.gov

HÉLÈNE SOUAN

SPA-W-REGIONAL ACTIVITY CENTER (RAC), DIRECTOR
GUADELOUPE

Email: helene.souan.carspaw@guadeloupe-parcnational.fr

GEORGE KIEFFER

CHAIRMAN, SOUTHERN CARIBBEAN CETACEAN NETWORK (SCCN)
DIRECTOR OF DOLPHINS, CURAÇAO SEA AQUARIUM/DOLPHIN ACADEMY
BAPOR KIBRÁ Z/N
CURAÇAO

TEL: (5999) 465-8900 CELL: (5999) 670-5414 Email: gkieffer@carib-online.net

GERARD VAN BUURT

SCCN BOARD MEMBER
CURAÇAO

Email: gvanbuurt@gmail.com

FAISAL DILROSUN

AGRICULTURE AND FISHERIES SERVICE (LVV)
CURAÇAO

Email: Faisal.Dilrosun@curacao-gov.an

ELINE VAN DER KRAAN

DOLPHIN ACADEMY, TRAINER
CURAÇAO

Email: elinebonbini@yahoo.com

DOLF V/D GIESSEN

VETERINARIAN
ANIMAL CARE CENTER
CURAÇAO

Email: dolf-oei@onenet.an

PAUL STOKKERMANS

DEPARTMENT OF ECONOMIC AFFAIRS
CURAÇAO

Email: Paul.Stokkermans@curacao-gov.an

DIEGO MARQUEZ

NATIONAL PARK ARIKOK
ARUBA

Email: d.marquez@arubanationalpark.org

IRENE CROES

ARUBA VETERINARY SERVICE
ARUBA

Email: Irene.Croes@aruba.gov.aw

ANGIOLINA HENRIQUEZ

ARUBA MARINE MAMMAL FOUNDATION
ARUBA

Email: angiolinah@gmail.com

MARCO GRAVENHORST

DEPARTMENT OF ENVIRONMENT & NATURAL RESOURCES
BONAIRE

Email: marco.gravenhorst@bonairegov.com

FERNANDO SIMAL

BONAIRE NATIONAL PARKS FOUNDATION (STINAPA BONAIRE)
BONAIRE

Email: washingtonpark@stinapa.org

MABEL NAVA

SEA TURTLE CONSERVATION BONAIRE (STCB)
BONAIRE

Email: stcb@bonaireturtles.org

RUEBEN THOMPSON

EMILIO WILSON ESTATE FOUNDATION
ST. MAARTEN

Email: rjthompson@epicislands.org

NICOLE ESTEBAN

ST. EUSTATIUS NATIONAL PARKS
MANAGER
ST. EUSTATIUS

Email: manager@statiapark.org

TADZIO BERVOETS

ST. EUSTATIUS NATIONAL PARKS
MARINE PARK MANAGER
ST. EUSTATIUS

Email: research@statiapark.org

JESSICA BERKEL

ST. EUSTATIUS NATIONAL PARKS
ASST. MARINE PARK MANAGER
ST. EUSTATIUS

Email: info@statiapark.org

KAI WULF

SABA CONSERVATION FOUNDATION
MARINE PARK MANAGER
SABA

Email: sabapark.manager@gmail.com

GREG VAN LAAKE

SABA CONSERVATION FOUNDATION
MARINE PARK RANGER
SABA

Email: sabapark.ranger@gmail.com

APPENDIX II—SCCN WORKSHOP AGENDA

MARINE MAMMAL STRANDING RESPONSE IN THE DUTCH CARIBBEAN— A REGIONAL WORKSHOP FOR EFFECTIVE IMPLEMENTATION 5 - 7 November 2009

WORKSHOP AGENDA

DAY 1—Thursday, 5 November 2009

- 9:00 AM Welcome (George Kieffer/Paul Hoetjes)
Introductions: Trainers, Participants, Staff, Workshop Logistics
- 9:45 – 10:30 Workshop: Agenda, Goals and Objectives—Compendium (Nathalie Ward)
Marine Mammals of the WCR—
- 10:30 *Coffee Break*
- 10:45 – 11:15 The Conservation Value of Strandings (John Reynolds)
- 11:15 – 12:15 Why Strandings? Life History Parameters (Charlie Potter)
- 12:15 PM *Lunch*
- 1:30 – 2:15 Threats to Marine Mammals in the WCR (Reynolds)
- 2:15 – 3:00 Pathology of Disease and Collection of Specimens (Andrea Bogomolni)
- 3:00 – 3:30 Sample Collection/Archival/Analyses for Contaminants (Reynolds)
- 3:30 – 4:00 Introduction to Stranding Terminology and Human Interaction
(Bogomolni)
- 4:00 – 5:45 External Examination: Dolphin Necropsy—Lab I: Health and Safety,
Terminology, Sample Collection, Species ID and Skeletal Specimens
Dichotomous Key (Trainers)

DAY 2—Friday, 6 November 2009

- 8:00 AM Announcements (Hoetjes)
- 8:15 – 9:15 Incident Command System (ICD)—On the Beach Protocol (Bogomolni)
- 9:15– 11:00 Field Trip: Mock Stranding Response (on the beach) (Bogomolni)
- 11:00– 12:00 Stranding Response Discussion: Live; Single vs Mass Stranding Protocols
(Bogomolni)

- 12:00 PM *Lunch*
- 1:30 – 5:00 Internal Necropsy—Lab II (Potter and Bogomolni)
- 7:00 PM *Dinner*
- 8:00 Public Presentation

DAY 3 Saturday, 7 November 2009

- 8:00 AM Announcements
- 8:15 – 8:45 SPAW/MMAP—Stranding Response Context for Wider Caribbean Region (Hélène Souan)
- 8:45 – 9:30 NOAA Stranding Program: Stranding Accomplishments and Future Direction (Janet Whaley)
- 9:30 – 10:30 Marine Mammals in the Dutch Antilles (Historical and Current)—Working Group Discussions (Ward)
Existing efforts, current and future needs, pitfalls (divided into 4 topic groups with team lead)
- *Response to Stranding Events*—(Needs (e.g. specific equipment/necropsy kits, sample collection, preparation, handling, archiving samples); decision making & reporting mechanisms; building capacity for stranding response, funding, etc.)
 - *Island versus Dutch Caribbean Regional Coordination*—Needs (e.g., stranding protocols, data collection, data base management, data sharing (i.e., Aruba, Bonaire, Curacao, St. Maarten, St. Eustatius, Saba)
 - *Stranding Education Materials, Public Outreach and Communication* (i.e., media events and public support; educational materials needed; creating volunteer networks and interest; educate stakeholders on the scientific importance of reporting and investigating strandings.)
 - *Marine Mammal Research and Health Evaluation* (i.e., create appropriate archives of samples for diverse studies such as pathology, contaminants, paracytology and genetics; compile and analyze data and samples from strandings and apply the results to assessments and mitigation of impacts of human activities.)
- 10:30 – 11:30 *Report from Working Groups*: Dutch Caribbean Existing Stranding Framework and Future Needs (@ 10 minutes each (Team Leads)
We will put together list of specific prompts/ questions for each group:
- How realistic are the data collection exercises in your country?
 - Live versus dead Strandings: single versus mass strandings?
 - Human interaction?

- Collection (physical documentation), data sharing and analysis
- Specific Equipment Needs
- Communication between Islands and Networks
- Potential Issues/Conflicts

11:30 – 12:00 Discussion and Synthesis: Working Group Recommendations for Dutch Caribbean (Hoetjes)

12:15 *Lunch*

1:30 – 2:30 Regional Recommendations and MMAP Stranding Priorities (Ward)

- Communications (T&T: Live animal, entangled animal, divisions of labor)
- Education and Outreach
- Research/Regional Text for MMAP for SPAW meeting
- National MM Stranding Plan
- Lesser Antilles CARIB Consortium

2:30 – 4:15 Workshop Recommendations Discussion: Next Steps (Reynolds)

4:15 *Break*

4:30 – 4:45 Rapporteur Summary (Paul Hoetjes)

4:45 – 5:00 Closing Remarks

APPENDIX III—TABLE OF CONTENTS: SCCN WORKSHOP COMPENDIUM
(Prepared by ECCN: CD Available through Curacao Sea Aquarium)

TABLE OF CONTENTS

1. INTRODUCTION
 - Workshop Goals
 - Executive Summary
 - Provisional Agenda
2. WHY STRANDINGS?
 - Conservation Value of Marine Mammal Strandings
 - Why Respond to Marine Mammal Strandings
3. DATA AND SAMPLE COLLECTION
 - External Examination
 - ECCN Morphometrics
 - Level A Form
 - Level A From Examiners Guide
4. NECROPSY MANUAL
 - Internal Examination
 - WHOI Necropsy Manual
 - Pininiped, Dolphin, Manatee Basic Anatomy
5. NECROPSY FORMS
 - ECCN Necropsy Examination Report
 - Exam Report Sample
6. MARINE MAMMAL THREATS
 - ECCN Human Interaction Indicators
 - Action Plan for the Conservation of Marine Mammals
7. MARINE MAMMAL HEALTH
 - Diseases of Marine Mammals
 - Gas Bubbles
 - Contaminants
8. ON-THE BEACH RESPONSE
 - DOs and DON'Ts of Stranding
 - Incident Command System
 - Stranding Response—Stretchering
 - Stranding Response Power Point
9. SPECIES IDENTIFICATION
 - Marine Mammal Species List
 - Cetacean Dichotomous Key
10. PUBLIC OUTREACH
 - ECCN Newsletter
 - Wanted Stranding Poster (ECCN)

11. MMAP/WORKSHOP RECOMMENDATIONS

APPENDICES for COMPENDIUM

12. Dutch Antilles Historical Profile
 - Records Leeward Dutch Antilles
 - Curacao
 - ECCN Dutch Antilles
13. Wider Caribbean Region Marine Mammal Literature
14. ECCN Sighting Forms
15. Bios and Participant's Contacts
16. Resources and Websites
17. Anatomy Powerpoints (Raymond Tarpley)
 - Abdominal Cavity of Cetaceans
 - Thoracic Cavity of Cetaceans
 - Integument of Cetaceans
18. Questionnaire

APPENDIX IV—INCIDENT COMMAND SYSTEM

The Stranding Response command system in the U.S. begins with the legal authorization by the federal government to approach or interfere with marine mammals. A 'Letter of Authorization (LOA)' is given to each stranding organization to comply with the Marine Mammal Protection Act. Volunteers of the stranding network must have permission from their network before approaching marine mammals.

Marine Mammals can single or mass strand. Organizing a mass stranding requires proper organization and emergency response teams ready to act before the event ever occurs. Mass Stranding response is organized under the same system that human emergency response teams utilize known as the 'Incident Command System (ICS). It is a method of organizing events that involve multiple agencies with a set pyramid of authorization.

Once a stranding report is received, the *Incident Command System* is established. The Incident Commander is the person who received the report, or a person who is already designated to take control before an event ever occurs. An Incident Commander must oversee and appoint a Site Coordinator, Media Coordinator, Personnel Coordinator, and any other roles that may be necessary (e.g. Safety, Equipment, etc.) and be accessible at a Central Operation Base or via telephone/radio communication, if in the field. All information and decisions must be relayed from the Site Coordinator(s) to the Incident Commander. Each Site Coordinator appoints an on-site team with rescuers, technical specialists (e.g., veterinarians, veterinarian technicians, trained volunteers) and other volunteers, as necessary. Every person should know *what* their role is and *whom* they will take orders from. The Site Coordinator and team perform triage for each animal, while rescuers and volunteers give supportive care.

Options are evaluated within a single stranding site or within various sites. Animals can then be released whether in small groups, one large group, relocated, euthanized, or held until all animals are evaluated. Final decision for releasing the group of animals is determined by the Incident Commander once information is received from all stranding sites from each Site Coordinator. After the event, a debrief at the Incident Command Center/Central Operation Base *needs to occur with all involved*. Check-in of ALL personnel at the beginning of an event and checkout after is necessary. Dead animal recovery and site clean up can then take place.

APPENDIX V—WORKSHOP RECOMMENDATIONS

I. Immediate Country Commitment

- Commit to prioritize establishment of a stranding network in their country
- Frame marine mammal strandings as indicators of marine ecosystem health—identifying anthropogenic influences, etc.
- Establish improved relationship within islands and between islands
- Hold stakeholder discussions to get NGO's, government agencies on same page with regards to stranding response

II. Further Training Needs

- Training of frontline responders (e.g. MM Course at Mote Marine Lab)
 - *Do's and Don'ts of Strandings*
 - Species ID basics
 - "Who" to call and "What: information technical response team will need
- Island Stranding Network Technical Response Team (i.e., group that goes to the beach to respond to the animal: unique specific training sessions for each island)
 - Beach protocol: incident command, stabilizing live animals, recovering dead animals, etc.
 - Necropsy training
 - Sample collection needs and protocols
 - Combination of lecture and hands-on sessions
 -

III. Public Awareness Programs

- All islands agreed had capacity for producing educational materials
- Island level education needed for all stakeholders
- Regional Newsletter disseminating results and research
- Promote economic potential of marine mammal resources

IV. Data collection/standardization

- Adopt ECCN stranding Level A data form (as originally adapted from U.S. NOAA Fisheries)
- Adopt basic ECCN sample collection of skin and blubber protocol
- Clearinghouse/central database for stranding data and voucher (reference) materials, which can be reviewed/updated on agreed upon timeframe
- Standardization of numbering of specimens needed to be agreed on locally and regionally
- Identification of advanced analysis capabilities for collected samples (incorporating feedback for the collectors)

V. Equipment Needs

- First Response Kit (ECCN provided list)
- Personnel from each island will be identifying stranding response equipment needs, (hopeful that NOAA Fisheries will provide within the next few months)

VI. Communication: Mailing List-serve/website/FTP site creation

- Sharing of files, photos news, etc.
- Know "who" to contact for further information, to answer questions, etc.

VII. Further funding needs

- Sample analysis
- Creation of pooled funds to allow for opportunistic hands-on inter-island exchange of stranding response team members (in case of a major stranding event on one island, personnel from a different island can respond to assist)

VIII. Capacity Building

- Stranding response training (i.e. Mote Marine Lab)
- Island action plan and kits
- Island level education
- Data collection, Do the actual data collection for sighting, strandings, and share

IX. Organizational Structure

- Nomination of Paul Hoetjes as SCCN Regional Coordinator
- Annual Meeting
- Nomination of Island Coordinator by 15 December 2009
- Develop Mission Statement
 - Develop Guidelines for data use
 - Develop structure in wider context
 - Organogram- flowchart
 - UNEP/SPAW
 - Establish Marine Mammal Sanctuary and possible SS with Saba Bank and SBNMS
 -

X. Legislative needs

- Future development of National Stranding Action Plans to assist with MMAP (2.7) future Workplan Priority Actions
- National MMAP from Dutch Caribbean for SPAW MMAP
- Establishment of MM MPAs and Humpback Whale Sister Sanctuary

XI. Overall Benefits of MMS Workshop

- New exposure to the world of marine mammal strandings—seeing relevance to other disciplines, importance of data from stranded animals, identifying data that can be collected, hands-on pathology experience
- Interdisciplinary, ecosystem-wide research questions and identification of potential collaborators
- Fostering international cooperation: networking and commonality of research goals
- Identification of what can be prepared prior to a stranding event

XII. Products Resulting from the Workshop

- CD-ROM SCCN Compendium
- CD-ROM with Power Point presentations by all lecturers
- Books, reprints, brochures, and other reference materials as requested by participants
- Updated participant list and contact information
- Request for published Dichotomous key for Caribbean marine mammal species identification
- Suggested priority sample collection list
- Final Conference Report, including data collected during internal and external examination of necropsied animals

- Summary of available resources of workshop participants (e.g., professional expertise, institutional logistics)

APPENDIX VI—PRESS RELEASE

MARINE MAMMAL STRANDING RESPONSE WORKSHOP

Dutch Caribbean islands discuss optimum response to marine mammal strandings.

Willemstad – Nov. 13, 2009.

From Nov. 5-7 a three-day training workshop took place on Curaçao about how to respond and what measures to take when whales or dolphins are found stranded. The workshop was attended by participants from all the Dutch Caribbean islands (including Aruba) representing both NGOs and government departments that would likely be involved in marine mammal strandings. The participants also included a number of experts from the USA, such as the chairman of the US Marine Mammal Commission (MMC),

the national stranding coordinator from NOAA/NMFS, representatives from the Smithsonian Institution and Woods Hole Oceanographic Institute, as well as a representative of the Regional Activity Center (RAC) of the SPAW (Specially Protected Areas and Wildlife) Protocol of which both the Netherlands Antilles and Aruba are parties. The workshop was organized by the SCCN (Southern Caribbean Cetacean Network) in cooperation with the Eastern Caribbean Cetacean Network (ECCN), and the Dutch Caribbean Nature Alliance (DCNA), with financial support from the US Marine Mammal Commission (MMC), and hosted by the Sea Aquarium/Dolphin Academy Curaçao. NOAA/NMFS donated its field guide for strandings, "Marine Mammals Ashore" for all the workshop's participants. This workshop is part of the activities coming out of the Marine Mammal Action Plan (MMAP) for the Wider Caribbean, recently adopted by the SPAW Protocol.



A stranding simulation exercise on the beach

The workshop was all the more relevant considering the recent stranding of a pilot whale at Jan Thiel Bay some four months ago now. The participants were able to take a look at this real-life stranding case, even though this was not a typical case, since in 90% of stranding cases the animal in question is either dead or dying and cannot be saved. The participants were even there during the first real attempt to release the pilot whale with a passing group of pilot whales, but regrettably this attempt failed.

The objective of the workshop was to set up a response mechanism for strandings ensuring that everyone is prepared as well as possible and knows what to do when a dolphin or whale stranding happens. Even when the animal in question cannot be saved or has been dead for a while, the incident can still greatly benefit our understanding of marine mammals in our region and can provide clues to determine the cause of the

stranding. The USA has been organizing the response in cases of strandings for over 30 years already, through its Marine Mammal Health and Stranding Response Program under NOAA/NMFS, and various tools, regulations, and guidelines have been developed, analogous to oil spill emergency response plans. These regulations were developed not in the last place to safeguard the health of both public and rescuers, since marine mammal diseases can be contagious to humans. In addition criteria were developed to enable quick decisions as to what is feasible or not when the animal is still alive. When one animal is stranded things are relatively easy, but when twenty or fifty whales strand simultaneously (as has happened on St. Maarten a few years back), or when a fifty feet long, thirty ton decomposing whale washes ashore on a public beach, quick and effective action is essential. NOAA offered it's assistance to the islands and looks forward to future cooperation.



Andrea Bogomolni of the Eastern Caribbean Cetacean Network instructing how to perform a Necropsy of a stranded dolphin

The participants were all very positive about the workshop. They were very happy about the possibility of working with the other islands in the future and exchanging data. "When a stranding happens you often feel powerless and are forced to take hard decisions on your own. It is a lonely feeling. Now, I feel I can fall back on others" said one of the participants. Another participant commented on the usefulness of what he had learned: "we learned what to look at, how to use various indications to deduce how the animal died. For example how to recognize scars from monofilament fishing

line when the line itself is gone, or how to distinguish the deep cuts caused by propellers from similar cuts from sharp rocks. We also learned to tell whether an animal drowned or not. You know CSI, that television series? We are now Stranding Scene Investigators!"

The workshop participants agreed to set up a structured response mechanism on their island when they get back, and get the approval and endorsement of the island government for that. The participants also committed to start a focused program of collecting whale and dolphin sightings, where possible documented with photographs that can help identify the individual animals, so they can be recognized when they subsequently show up at another island. The islands agreed to cooperate and exchange their findings and data by way of a sub-regional network that would in turn connect with other (future) sub-regional networks such as the Eastern Caribbean Cetacean Network (ECCN). A stranding response tool kit will be put together and provided to each of the islands. Further training will take place in the future and each island will regularly refresh the stranding response training. Finally the workshop agreed that designation of a marine mammal sanctuary in Dutch Caribbean waters should be pursued in conjunction with the existing 'sister sanctuaries' of the Dominican Republic and the US and the French initiative to establish a marine mammal sanctuary around the French islands.

To learn more details about the Dutch Stranding Workshop see:
ECCN Newsletter: <http://www.eccnwhale.org>