



REPORT
of the **SECOND**
MEETING of the
CARI'MAM network

Dates

9 - 11 Mai 2019

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Place

Créole Beach Hotel,
Le Gosier
Guadeloupe



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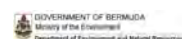
Créole Beach Hotel, Le Gosier
Guadeloupe

Objectives

This second meeting of the networks' partners aimed at informing and share feedbacks of the latest achievements reached within the project. It was the occasion to solicit the partners among 4 axes, organized as half-day workshops.

Organized by

The Agoa Sanctuary





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Whale watching and legislation workshop 19



Appendix :

Attendees list

Appendix of the whale watching and legislation workshop



PROGRAMME

MAY 9TH

8h30 am

Welcoming of participants

9h00 - 11h40 am

Opening plenary session

2h00 - 5h00 pm

Communication and Awareness-raising Workshop

» [Laura Pittino, CARI'MAM communication manager \(Agoa/AFB\)](#)

Marine Protected Areas and management plans Workshop

» [Gérald Mannaerts, CARI'MAM project manager \(Agoa/AFB\)](#)

7h00 pm

Partners' diner



MAY 10TH

8h00 am

Reception of participants

8h30 - 11h30 am

Stranding data Workshop

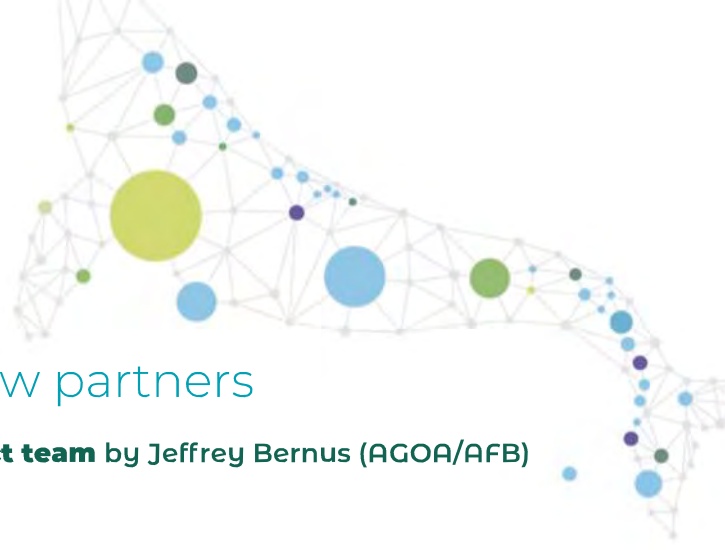
» [Léa Henry, CARI'MAM data manager \(Agoa/AFB\)](#)

Whale watching and legislation Workshop

» [Samuel Henry, Mike Helion \(SPAW-RAC\)](#)

2h00 pm

Field trip and time off



Plenary meeting

Technical achievements and new partners

Presentation of the technical progress of the project team by Jeffrey Bernus (AGOA/AFB)

OBSenMer Workshop


12 - 15 February 2019
Réserve Naturelle de l'Île du Grand-Connétable, French Guyana

This workshop brought together around 15 managers in February 2019 in French Guiana to present the free tool OBSenMer (<http://www.obsenmer.org>). We will try to develop this tool (translate it) to adapt it across the entire CARI'MAM network in order to standardize and above all, facilitate transect and opportunistic observational data collection.

A detailed report of the workshop is available.

Mixed data analysis

An agreement will be signed soon with the CEFE to promote existing data through mixed, large-scale analysis. Anyone will be able to share their data for analysis using occupancy models for the entire Caribbean.



The environmental objectives defined at the first CARI'MAM meeting aimed to establish a state of reference by using standardized methods to ensure replicability and comparison between the islands. Its methods will primarily be used to study the diversity, seasonality and distribution of all marine mammal species in the Caribbean. Where possible, they will also be used to analyze the human impacts.

The following pages present the outcomes of technical actions realized lately.

Passive acoustic monitoring of marine mammals

During the first meeting, the partners agreed on the large-scale deployment of around twenty hydrophones that would be able to detect all species (recording range from 5Hz to 125kHz), in addition to artificial intelligence-based analysis and standardized equipment for inter-island comparison. Since then, a preliminary study has been carried out in Saint Barthelemy and Saba (whom we thank for their support), with the installation of JASONBLUE hydrophones supplied by SMIoT in partnership with the University of Toulon (Pr. Hervé Glotin). Two 10-day continuous recording sessions will be carried out on each site. We are currently half-way through this test session and already appreciate how easy the hydrophones are to use and install. In just 10 days, 3 species have already been identified. The final report will be sent to all partners and feedback will be presented at the next technical meeting.

TERRITORIES
REUNITED

19

REPRESENTED
ORGANISMS

37

PARTICIPANTS

57

A catalogue of Caribbean sounds for species identification

The aim is to build a database with examples of sounds from all cetacean species in the Caribbean. This shared catalogue will be an excellent communication and teaching tool that will be used to help identify species via passive acoustics so that they can be properly managed and protected. We would like to thank our main contributors, which currently include the NOAA, OMMAG, University of Toulon, Saint-Martin Nature Reserve and BMMRO. As a Caribbean network, CARI'MAM would like to promote sharing between Caribbean organizations. Please send us any examples you have of species' sounds in order to help us to create this catalogue.

(jeffrey.bernus@afbiodiversite.fr)

Photo Identification : Flukebook

<https://www.flukebook.org> was chosen as the shared photo identification catalogue. Tests have just been completed and show that artificial intelligence algorithms can also be used to identify sperm whales, thanks to OMMAG which was willing to share its catalogue with us. A contract has just been signed with Flukebook to provide a French translation; support for mass photo + metadata imports; creation of an administrator account (Léa Henry) for data administration and quicker account creation in the network. We will therefore soon be asking network members to add their various photos to this shared catalogue.



Next technical workshop

The next CARI'MAM meeting is scheduled for late October. Please enter the date into your calendars (last week of October). This will be a technical workshop including feedback from the preliminary mission, training and a workshop on passive acoustics. The initial results of the use of Flukebook will be shared, in addition to the preliminary results of mixed occupancy data models. Some additional training may be organized at the same time (Disentanglement, Biopsy, Stranding, etc.).

Gerald Mannaerts welcoming participants

May 9th / Agoa - Agence française pour la Biodiversité



Project beneficiaries

Mission MEGARA

Nicolas Maslach, Michel Vely,
Steeve Ruillet

The Saint-Martin Nature Reserve and MEGAPTERA Association presented the MEGARA mission, which is one of the actions financed by the CARI'MAM project.

It happened from the 16th to the 30th of march 2019, on the Sint-Maarten, Anguilla, Saint-Barths, Saba and Sint-Eustatius waters. The 11-day mission included the installation of 6 ARGOS transmitters, 8 biopsies that will be used for genetics studies, and will be compared to already existing data at the dutch University of Groningen. A dozen of caudal fins were pictured and will be added to the Natural Reserve's photo-identification catalogue and humpback whales drone images and songs were recorded.

Data are still being analyzed, but the satellite tracking already shows that one of the tagged whales are heading towards North America and Europe.

Aerial transects by GEPOG

Juliette Benth

The GEPOG, managing the Grand-Connetable Natural Reserve in French Guiana, is one of the beneficiaries of the CARI'MAM project. They presented their future aerial line transect campaign. A standardized protocol will be used with 5 flights over French Guiana's coastal waters, up to 30 km off the coast. The flights will take place during the dry season and the teams have already been formed. Data analysis will be carried out in 2020.

New partners of the network

The new organizations then presented their territories and work to the rest of the network.

University of Technology of Jamaica

Christine O'Sullivan presented her work on the interaction between dolphins and fishermen. She also presented the difficulties in organizing a stranding network across such a large territory.



Barbados Marine Mammals

Until the importance of marine mammals is better understood within its territory, this Barbados-based association uses its limited resources to manage a stranding network, opportunistic data collection / sightings (photo ID) and focuses the majority of its work on communication, especially whale watching recommendations.



Bahamas Marine Mammal Research Organization

This organization was founded in 1991 and uses a multidisciplinary approach (photo ID, tracking, biopsy, acoustic and visual transects) to improve knowledge concerning the ecology of species in the region. Some downward trends have already been identified. In addition to this considerable scientific effort in the Caribbean, they are also responsible for awareness raising and coordination of a stranding network.



Whales Bermuda

Andrews Stevenson presented his extensive results on humpback whales in Bermuda along with a beautiful film. He also presented his exciting work on photo identification and passive acoustics.



The CARI'MAM team would also like to thank the Anguilla Department of Fisheries for joining us for the first time and for their motivation to get involved in the CARI'MAM network.

Workshop

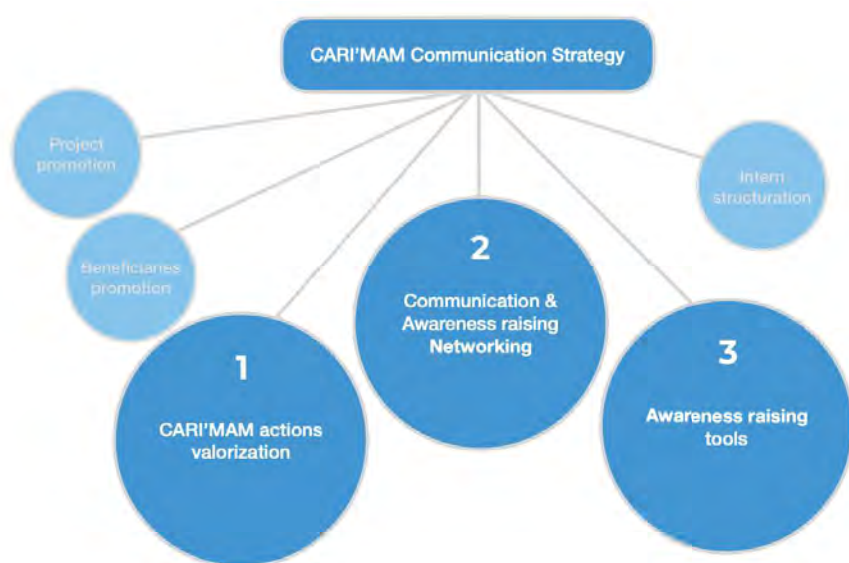
Communication and awareness raising

Presentation of the networking objectives for the CARI'MAM project communication by Laura Pittino (AGOA/AFB)

Communication objectives

CARI'MAM is now a network of marine mammal conservation stakeholders. The network enables them to share data and collaborate in various fields of work. It is currently coordinated by a project team from the Agoa Sanctuary, but is set to become independent when the Agoa mission comes to an end in 2020. The communication objectives fall under this same strategy of securing the future of the network and therefore its communication tools. This network of communicators will need to be coordinated so that it eventually becomes self-sufficient and helps members support one another in awareness-raising operations focused on marine mammal conservation issues.

The project's communication strategy has already been developed, but the communication plan will be based on the network's needs in order to develop the tools actually expected by its members, who will then ensure their subsequent use and development.



The purpose of this workshop was to address the following three components of the communication plan in order to collectively define guidelines for promoting the actions of the CARI'MAM project, creating or developing awareness-raising tools and the opportunity of cooperating in these areas within the network.



Reminder : communication targets

The prior communication targets were defined during project design. However, the issue was raised by the first members of the network at the project launch meeting. The targets identified at the time consisted of:

- » Specialists, in particular members of the CARI'MAM network,
- » Policy makers in the Caribbean,
- » Marine stakeholders and professionals (boaters, fishermen, whale watchers, maritime transport operators, etc.),
- » Training of Trainers for awareness raising (rather than school children, teachers and teaching instructors),
- » Donors and contributors to management institutions and network associations were added to the targets by participants.

Nota bene: The general public has been identified as a secondary target, not for marine mammal conservation issues, but for the CARI'MAM project.

Group brainstorming : identifying the right messages

In small groups, participants were asked to determine the messages that need to be communicated to these targets, with no more than one post-it per message. If there was one thing to remember from these discussions, it would be to always keep in mind, not the message that we want the targets to get, but the message that they are able to hear. This non-exhaustive list was established collectively by combining repetitions between groups:

- » The Caribbean is a hotspot for marine mammals,
- » Decision makers are not only managers of citizens, but managers of their environment,
- » No economy without ecology
- » Marine mammals have an economic value
- » Marine mammals are key-species / indicators of the environment state of health,
- » To scientists : simplify and share your data !
- » Knowledge is power,
- » Marine mammals are similar to humans (mammals, social behavior, etc),
- » Marine mammals don't recognize borders,
- » Humans are a threat to marine mammals,
- » Existence of the CARI'MAM network, of participatory science networks,
- » Marine mammals are not a threat to humans/are not dangerous.



After reviewing the targets affected by each message, participants were asked to select a single priority message for each target identified. The result of this collective work is presented here :



The choice of communication tools is a key aspect in communicating these messages. The participants were therefore asked to share their experience in this area.

Awareness raising tools

The following table was completed by the participants in two steps :



List of communication and awareness-raising tools with which they have (positive or negative) experience

They were asked to stand up and fill in a shared table. (Each participant's structure in blue and tools in red). This exercise stimulated conversation between participants in order to promote networking on the topic.

Feedbacks

Each participant gave their feedback on colored post-its:

- green: tools already produced (with "+" or "-" to show whether or not successful)
- yellow: tools under development
- red: tools they need more

Name (Green Island)	Radio	Podcast	Video	3D model	Field trip	Workshop	Conference	Workshop	Workshop	Workshop	Workshop	Workshop	Workshop	Workshop
BMMRO	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
MEGAPEDIA	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Com. Ecology Na Bole me	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
ATE (St. Brel)	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
BANANAS HAWAII HAWAII	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Rescue Correlab Guyane	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
UTech, Sa.	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
SPAW-RAC	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Agua	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
RNN SM	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
WHALES BERMUDA	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Anguilla Fisheries Dept	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
CEP/SPAW	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

In conclusion, it would appear that the media is used by everyone but does not generate much positive feedback, with the exception of social media.

- » Radio podcasts have positive feedback and numerous participants would like to have the means to develop them.
- » Educational kits are not very common, but are under development on various islands, which are struggling to produce them.
- » Events (interventions, extra-curricular programs for children, field trips) are very successful and are developing, with a few difficulties.
- » Conferences open to the general public are also widespread tools that receive positive feedback.
- » An identification guide for the field would be appreciated by most participants. Just one organization has one and two others are under development.
- » Finally, 3D species models have been very successful for members that have them. Several other organizations would like to have them.

Définition des difficultés les plus courantes à réaliser ces outils

Tool	MONEY	HUMAN RESOURCES	SKILLS	MATERIALS	TIME
Videos	△	△	△	△	△
Photos	△	△	△	△	△
Audio	△	△	△	△	△
Text	△	△	△	△	△
Educational aids	△	△	△	△	△
Public engagement	△	△	△	△	△

The following workshop looked further at the various obstacles encountered by the network members in producing their tools.

A table was produced collectively to show the sources of any difficulties encountered (columns) for all the most popular tools (lines).

Through symbols, each participant was asked to complete it.

Once again, moving around stimulated discussions

△ meaning “I struggle, I am limited by this resource”

☺ meaning “I don’t face this problem”

» The major obstacle shared by all was a lack of time/human resources. This was followed by a lack of financial resources, structure and skills to produce all of the tools.

Networking for awareness raising

Teamwork



The TeamWork platform is presented to the participants. The CARI’MAM project has already been set up on the platform by the SPAW-RAC and

will be frequently fed by the team project. We will ensure that all members have access to it and every working documents and resources will be uploaded. It includes an online topic conversations feature, that will be up brought and moderated by the project team. One of the advantages of this tool is that it is accessible to everyone, without the need for regular consultation, because any activity on the platform (document download, when a member reacts to a conservation topic, etc.) generates an email which is sent to all members. The network will therefore be directly contacted by emails, with access to a collaborative interface.

» Participants considered this tool useful, as long as the entire network commits to using it. The project team would therefore need to coordinate the frequent activity of this platform throughout the duration of the project to ensure that all the relevant stakeholders get into the habit of using it.

Facebook



The partners in attendance proposed creating a closed “CARI’MAM” Facebook group that would initially include network

members having a Facebook page or account. The group’s members will be able to use the group to share news and keep up with each other’s activities more informally. The group administrator will be the CARI’MAM team throughout the duration of the project. Depending on the group’s success, it may be taken over by a volunteer member.

If the group’s activity allows, it could be opened up to other members, particularly students in fields relevant to CARI’MAM. Up-and-coming scientists in the Caribbean are the future of the CARI’MAM network and this would be a way for them to discover the network, its partners and the actions carried out within the network over time.

2

Awareness
raising
Networking

Instagram



An Instagram account was also suggested. The various partner organizations already have an account, or plan to create one. They see CARI'MAM as a way of sharing their publications with a wider audience and extending the network to future generations of marine areas managers. Indeed, marine mammals can be presented through beautiful images and Instagram is the most advanced and widely used tool for this.



As there were numerous reactions and discussions, participants agreed that the work would be continued at the next CARI'MAM meeting.

At the start of the session, each participant was asked to complete an additional exercise: leave with at least 2 new business cards from people they had met within the network, with potential opportunities for exchange. The exercise appears to have been successful and participants seem satisfied with discussions.

Group discussions

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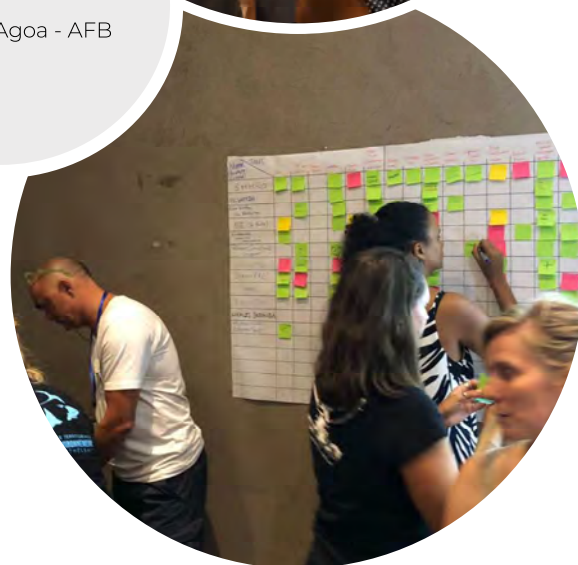
Communication Workshop

May 9th / Agoa - AFB



Presentation of structures' communication tools

May 9th / Agoa - AFB



Interpreters for french - english instant translations

May 9th / Agoa - AFB



Workshop

Marine Protected Areas and management plans

Presentation of the “management plan” methodology used for the (marine) protected areas in France par Gérald Mannaerts (AGOA/AFB) et Sophie Bédél (Parc national de la Guadeloupe)

The “French” methodology for developing management plans was presented (see diagram below). It involves several steps that are spread over numerous time scales and can be assessed and modified independently over time:

The state of play

This includes all analysis and the state of knowledge on species and threats in the marine protected area (MPA).

Issues at stake

These define what you set to gain or lose in your marine protected area (species, habitats, etc.) and is based on the state of play. For marine mammal sanctuaries, they are generally species or groups of species. For example, the Agoa Sanctuary defined the sperm whale (as a reference species for all deep divers) as a key issue.

An issue is defined on the basis of

- » Representativeness of the MPA for the item in question: proportion present in the MPA compared to a larger, regional or global scale (percentage of population, surface occupied, etc.)

- » The functional role of the MPA for the item in question: functional importance of the site (feeding, breeding, socializing areas, etc.)

- » Sensitivity of the item: based on the species’ fragility and resilience. The IUCN has identified various factors used to define the Red List.

Long term objectives and level of requirements

This is the desired trend for the selected issue, with regard to the current situation (maintain a population, restore a habitat, etc.). It is always linked to a level of requirement (number of individuals, specific diversity, etc.).

These objectives must be defined over a long period of time (generally 15 years) in accordance with other action plans and strategies linked to the species or area in question.

For example, a long-term objective could be to “restore sperm whale populations, thereby generating positive population dynamics”

Influential factors and operational objectives

The issues’ influential factors (which may be positive or negative) can be generated either directly by actions within the marine protected area (awareness-raising, policing, etc.) or on a broader geographic or time scale.

The operational objectives are management targets for various medium-term influential factors (reduce disturbance, support sustainable activity, monitor proliferation of ..., etc.)

For example, an operational objective could be to reduce the number of collisions between sperm whales and ships.

Actions

The concrete actions act on the operational objectives and are defined for a short period, with specific time phasing. They must be prioritized according to the importance of the issue and the manager’s capacities (time/money, etc.)

An action targeting the operational objective mentioned above could be awareness-raising actions with maritime pilots or the implementation of regulatory speed limits.



Round table

The workshop participants each introduced themselves.

To facilitate the ensuing discussions, the marine protected area managers stood up and participants were asked whether they had a management plan. The Agoa Sanctuary (France), the Saint Barthelemy Reserve (France) and the Silver Bank (Dominican Republic) were the only participants with a management plan.

Group discussion : identifying your MPA's issues

Participants were split into 5 groups and each discussed one example of a marine protected area and how to define potential issues with the help of the following table. The aim was to find out more about another marine protected area and its issues, while gaining an understanding of the “French” methodology for drawing up a management plan.

Based on the description of the MPA (.....) by the manager, fill in the table
++ high ++medium -low --very low

Species	Sensitivity (use Red list!)				Representativity (what is the part of local population in the general population? Is there local specificity?)	Functional role of the MPA (MPA serving as reproductive area, foraging area, ... for the general population?)
	Tolerability to change	Habitat reliance	Species reliance	Dispersion		

Group discussion : Identifying threats (influential factors) in management plans

Participants identified the main threats facing marine mammals, firstly in groups and then collectively using post-it notes. Their answers were then compared with the SPAW Protocol's Action Plan for the Conservation of Marine Mammals (MMAP) in the Wider Caribbean Region. This action plan was launched in 2008 and was set to finish in late 2011. Not all actions were completed and the CARI'MAM project is also an opportunity to reintroduce this document within a global strategy.

The threats identified by participants were generally the same as those defined in 2008:

- » Interaction with fishing: participants mainly discussed mammals getting tangled in fishing equipment, especially drift netting
- » Habitat degradation: this point was identified by participants
- » Pollution and marine mammal health: identified by participants who underlined the issue of waste ingested by marine mammals, in addition to chemical pollution of the environment
- » Research: participants considered lack of knowledge on species to be a potential threat
- » Whale Watching: participants identified bad whale watching practices, and more generally, disturbances to marine mammals
- » Marine mammals in captivity: this specific point was not mentioned by participants
- » Acoustic disturbance and underwater noise: noise pollution was widely mentioned by participants, particularly from seismic surveys
- » Collisions with ships: similarly, increased maritime traffic and collisions were identified as a significant threat
- » Climate change: some participants mentioned that climate change can affect food sources and influence migration patterns

Two additional points were identified specifically for the Caribbean, and were included in potential interactions with fishing in the action plan:

- » Depletion of food resources due to overfishing
- » The hunting (or poaching) of marine mammals on some islands.

Presentation of the Transatlantic project by Gérald Mannaerts (AFB/AGOA) on behalf of Francis Staub

The Transatlantic Marine Protected Areas project is a cross-border cooperation project financed by the European Union. Its aim is to consolidate a new Atlantic partnership for Europe on the issue of MPAs and to contribute to the protection of marine biodiversity (Aichi Target 11). Three areas of work were identified for the first phase: marine protected area networks, resilience and marine mammals. A meeting was held in Martinique on marine mammals in early 2019, with representatives of marine protected areas from numerous African, American and European countries.

The group's goal is to define a tool that would be added to the numerous existing management plan creation guides, focusing specifically on marine mammals. The current output, presented as a working document, is a list of information that potentially needs to be taken into account when drafting marine mammal management plans (checklist).

Participants wanting to test the tool can contact Francis Staub (fstaub@biodiv-conseil.fr) and Puri Canals (pcanals@tinet.org).

OBJECTIVES	SECTIONS
MANAGEMENT STRUCTURE	<u>1. Clear and Comprehensive Management Objectives with respect to Marine Mammals</u> <u>2. Statutory Power and Legal Framework</u> <u>3. Coordination Between Agencies with respect to Marine Mammal Conservation</u> <u>4. MPA Management Structure and policy Alignment</u>
BASELINE KNOWLEDGE	<u>5. Baseline Knowledge - Current Activities and Stakeholders</u> <u>6. Baseline Knowledge - Ecology of Marine Mammals and their Resources</u> <u>7. Baseline Knowledge - Threats to Marine Mammals in the MPA</u>
SPECIFIC MANAGEMENT ELEMENTS	<u>8. Zoning and Permitting</u> <u>9. Specific conservation programs/action plans for marine mammal species</u> <u>10. Marine Mammal Research / scientific permits / agreements</u> <u>11. Involvement of and partnerships with stakeholders, in marine mammal management</u> <u>12. Education / Communication / awareness raising</u> <u>13. Compliance and Enforcement</u> <u>14. Monitoring (general policies and documentation)</u> <u>15. Reporting - reviewing management effectiveness</u> <u>16. Overall management capacity across all operations affecting marine mammal conservation</u> <u>17. Planned responses and contingency plans for major incidents</u>
MANAGEMENT OF SPECIFIC POTENTIAL THREATS TO MARINE MAMMALS	<u>18. Whale and dolphin watching</u> <u>19. Noise management</u> <u>20. Entanglement in fishing gear and other installations</u> <u>21. By-catch (fishing)</u> <u>22. Collision / strike</u> <u>23. Strandings</u>
MONITORING OF MARINE MAMMALS AND THEIR THREATS	<u>24. Resource Allocation to Research, Monitoring and Enforcement</u> <u>25. Ecological Monitoring - protocols and techniques</u> <u>26. Measured Ecological Variables (by MPA management or partner organisations)</u> <u>27. Frequency of Monitoring</u> <u>28. Analysis capacity / protocols</u> <u>29. Data sharing</u> <u>30. Socio-economic monitoring</u> <u>31. Where applicable, specific monitoring/impact studies are enforced for:</u>

Group discussion : Managing threats

Based on the 3 categories of threats previously identified (noise pollution, collision and interaction with fishing), the participants were asked to work in groups to:

- 1) Define the objectives that they could set up for a marine protected area and the actions that could be carried out to achieve them
- 2) Analyze part of the checklist defined under the Transatlantic project related to this threat and provide feedback on the relevance of the information identified

The outputs are the first step in providing managers with tools that help them develop management plans via a checklist of information to be taken into consideration and a catalogue of potential actions to be implemented.

Basic preliminary information identified by the participants:

Interaction with fishing

Objectives identified

Reduce the mortality and morbidity of marine mammals linked to fisheries

Reduce collisions with fishing boats

Stop hunting and disturbing marine mammals

Improve knowledge of interactions between fishing and marine mammals in the Caribbean.

Potential actions

Educate fishermen and provide training
Develop alternative professions
Create “no-take” zones
Create seasonal closures
Monitor success

Reduce boat speeds
Create “no-take” zones

Educate and raise awareness
Develop new technologies

Create a map of regional fishing methods
Organize scientific workshops
Create data-sheets for fishermen monitoring



Collisions

Objectives identified

Reduce the number of collisions between boats and marine mammals

Potential actions

Create a network for sightings and transmission of information to skippers
Merge traffic information with marine mammals sightings
Create “no-take” zones
Develop a collision avoidance device (app)
Develop permits for organizing boating events
Identifying new ‘particularly sensitive sea areas’ by the International Maritime Organization
Raise awareness about marine mammal safety (including manatees) in the boat license process
Set up propeller covers in manatees routes (or other little and slow marine mammals)
Create boat speed limits
Redirect maritime transport routes

Noise pollution

Objectives identified

Shift towards shared regulations for all marine protected areas in the Caribbean

Implement a strict stranding protocol to designate responsibilities

Potential actions

Establish an inventory of applicable regulations
Organize awareness-raising and communication actions
Search for protocols

Carry out biopsies on the carcasses in order to quickly identify the causes of death
Train volunteers to respond to stranding incidents
Raise stakeholder awareness



MPAs & management plans Workshop

May 9th / Agoa - Agence française pour la Biodiversité



Workshop

Stranding data

Facilitation by Léa Henry (AFB/AGOA)

The aim of this workshop was to identify the needs associated with establishing a network of stranding managers in the Caribbean. In particular, the network should increase skills and provide a forum for sharing experience and centralizing data (especially from samples) in order to perform large-scale, species- or pathology-based analysis throughout the whole Caribbean region.

Participants were reminded of the background to the Caribbean stranding network, with three workshops held in 2009 and 2010, in Spanish-speaking areas, the Dutch Caribbean and the French Antilles, organized by SPAW-RAC. These workshops produced recommendations for the future:

- » Consolidate the capacity to operate as a network
- » Create links with existing subregional networks
- » Develop and improve collection methods and tools, provide kits and training, and facilitate the transport and storage of samples
- » Établir une base de données centralisée et standardisée pour les échouages de mammifères marins
- » Establish a centralized, standardized database for marine mammal stranding
- » Incorporate existing data-sheets
- » Develop a regional database for resources, veterinarians, etc.
- » Develop a focal point on each island/in each territory for local and regional coordination
- » Use the ECCN form
- » Include marine mammal stranding in research and other marine environment data
- » Prioritize research on stranding incidents in order to better understand the health of individuals and their conservation status to improve management decisions
- » Create a network of scars and injuries
- » Create a samples database in order to launch studies

These recommendations should be used as a basis to move forward together. The participants introduced themselves, stated whether or not there is a stranding network in their territory, and shared some of their experiences and/or problems.

The struggles mentioned were due to the low frequency of stranding, which can lead to a loss of skills on stranding management. The tools differ greatly from one territory to the next. Some networks are well established with people trained in both stranding and disentanglement, while others have no measures, trained people or guidelines.

The experiences also vary significantly: some have managed one or more incidents involving stranded individuals, and others have already had to manage mass stranding. The lack of training and updated training is a recurring problem. Some manatee stranding result from collisions with boats.

Samples and specimens have generally not been analyzed or studied. Some no longer exist (due to natural disasters) and in any case, there are conservation issues. A directory of reference and resource people needs to be established, along with a list of samples and their storage locations.

Everyone agreed that there needs to be a list of reference and resource people in the Caribbean and a list of samples in order to pursue work in this field. Everyone agreed to work with OBSenMer for stranding due to its practicality and geo-positioning functionality.

A database of samples, contacts and resource people needs to be set up and will be implemented on the Teamwork platform, created by the SPAW-RAC. Eventually, an « EMERGENCY STRANDING WHATSAPP » and the use of the OBSenMer App to record and manage stranding with an Alert option. This should be implemented shortly and will include the creation of dedicated forms. No guarantees can be given concerning the network alert function via the application.

REPCET, the french regulatory collision avoidance system is presented.



Stranding data group discussions

9th May 2019 \ Agoa -
Agence française pour la
Biodiversité

Workshop

Whale watching and legislation

Facilitation by Samuel Henry, Sandrine Pivard, Mike Héliou (CAR-SPAW) and Charline Fisseau (AGOA/AFB)

The workshop on Whale Watching and Legislation consisted in two main sessions: the Brainstorming and the « World Café » Group Thematic Work. Built on the previous workshop on Whale Watching activities, this second sequence aimed at discussing region-wide harmonization and commitments in Whale Watching as well as in Marine Mammal protection in general.

Brainstorming session

During this first session, participants have reflected individually and shared some insights on the five following topics :

- » Obstacles and needs
- » Success stories
- » “In 2025, I would like WW activities to be...”
- » “In 2025, I would like marine mammals legislation to be...”
- » General assessment of whale watching activities per territory

Focusing on communication, education and awareness, as well as creating certifications and strengthening legislation through participative work have been the key elements identified during this exercise.

World Café – Thematic group work

The following exercise and central element of the workshop consisted in small group works (5-6 persons per group) to discuss five topics (see below, with comments from participants):

Creating a regional Label or certification for whale watching :

Defining objectives, content, le checks, les benefits and sharing

Comments :

- » Necessary steps to harmonize good practices
 - Similar trainings
 - Safety
 - Based on marine mammals knowledge
- » Confronted to resistance from WW operators
- » Annual certifications after trainings?
- » Turn-over schedules prepared beforehand to avoid non-stop harassment of marine mammals
- » Limit the number of boats
- » Ensure local involvement and access to labelization
- » Usefull but may be too early

Legislation on marine mammals protection :

Improvements, needs, incoherences and constraints

Comments:

- » Adapt to behavior, policy makers, give example in CARI'MAM
- » More communication with users
- » Relevant to the specific marine mammal population
- » Absence of marine mammals population status data
- » Lack of means to investigate and control
- » Provide examples of punishments
- » More communication and data on current legislation for users and decision-makers



Review of the Regional Marine Mammal Action Plan

Successes, failures and gaps

Comments:

- » Guidelines already exist but need review
- » Implementation needs to be ensured by each country, by involving all stakeholders, not only whale watching operators
- » Licensing system at country level to include marine mammals interaction awareness-raising
- » Develop communication tools & campaigns targeting relevant sectors (yachting magazines, divers, mariners)
- » Review by an expert group
- » Common recommendations across the Wider Caribbean Region in terms of behavior with marine mammals
- » Find common ground to tackle different regulations, means and expectations

Multi-scale cooperation : How to improve cooperation mechanisms ?

Example: international, regional and local partners – How to gather key stakeholders ? (MPA managers, Fisheries sector, NGOs, local authorities, schools etc.)

Comments

- » With fishermen, under a regional label recognizing the importance of civil society consultation
- » Cooperation between enforcement agencies to share tools and methods
- » Between territories that share the same or neighboring waters as well as cetacean populations
- » Whale watchers and fishermen
- » Regional label
- » Annual meeting with every stakeholders to assess statuses
- » Scientific cooperation (data sharing)

Good practices of whale watching

An environment-friendly activity

Example: approach methods, animal behavior, on-field reality

Comments:

- » About the animals, not the money
- » Certification requirements
- » Local involvement
- » Limit the number of tour-operators in the area
- » Legislation supporting restrictions and enforcement
- » Engagement with science
- » Plastic free
- » Large scale education program for public regarding whale watching regulations

Additionally, feedback was asked from the audience on the surveys relative to Whale Watching activities as well as legislation on Marine Mammal Protection. Samples were made available as support documents. It was also noted that providing clear data sets and good visuals was crucial to harness these results.

Concluding remarks asserted the essential collaboration between stakeholders in marine mammal protection and sustainable whale watching activities, to make sure every actor is encompassed in the decision-making process. It was argued that this project is an opportunity for the region to create and enforce a regional label, to steadily progress towards the common objective of sustainable WW activities and marine mammal protection, and while the perspective of a regional legislation may appear too early, it could be a first step in this direction.

In parallel with this, CARI'MAM also provides a good chance to review the Marine Mammal Action Plan and ensure its implementation.





Brainstorming session

10th May 2019 \
Agoa - AFB



World café

10th May 2019 \
Agoa - AFB





Contact

Gérald Mannaerts
Project Manager

gerald.mannaerts@
afbbiodiversite.fr

CARI'MAM PROJECT

2nde meeting of the
network

organized by the Agoa Sanctuary



Réserve Naturelle
ILE DU GRAND-CONNETABLE



Réserve Naturelle
SAINT-MARTIN

