



## REPORT of the **THIRD** **CARI'MAM** network MEETING

Date  
2 - 3 November 2019

Place  
Bahia Principe Hotel, La  
Romana  
Dominican Republic

The CARI'MAM project is cofinanced by the Interreg  
Caribbean cooperation program under the European Regional Development Fund

# SUMMARY

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

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SATURDAY NOVEMBER 2<sup>ND</sup> 2019

08:00 – 09:00 AM

Welcoming of the participants

09:00 – 11:30 AM

Presentation of the partners projects on marine mammals

» Heike Dumjhan (ATE), Charlotte Dunn (BMMRO), Nataly Castelblanco (UQRoo), Liliana Betancourt (ECOMAR), Franck Roncuzzi (RNSM), Ayumi Kuramae (SCF), Stéphane Jérémie (SPENAMAR), Shane Gero (DSWP)

11:30 AM – 01:00 PM

Presentation of the « Transatlantic MPA Network » MPA management tool

» Sandrine Pivard (SPAW-RAC)

02:00 – 06:00 PM

Workshop « Communication »

» Laura Pittino (Agoa Sanctuary) with the participation of « Mon Ecole Ma Baleine »



SUNDAY NOVEMBER 3<sup>RD</sup> 2019

7:45 – 10:10 AM

Workshop « Whale Watching »

» Géraldine Conruyt (SPAW-RAC)

10:45 AM – 01:30 PM

Workshop « By-catch »

» Samuel Henry (SPAW-RAC)

02:30 – 06:30 PM

Workshop « database » : ObsEnMer and Flukebook

» Léa Henry (Agoa Sanctuary), with the participation of « Wild Me » and « Allied Whales »



## The **CARI'MAM** project

The CARI'MAM project, for Caribbean Marine Mammals Preservation Network or "Caring for marine mammals", work towards the strengthening of the network of marine protected areas dedicated to the preservation of marine mammals in the Greater Caribbean Region (GCR).

This project is co-financed by the European Regional Development Fund (ERDF) thanks to the Interreg Caribbean program.

The project is jointly managed by four organizations who benefit from this fund:

- › the Regional Activity Centre for the Protocol SPAW for the Wider Caribbean Region (SPAW-RAC),
- › the National *Nature Reserve* of *Saint Martin*,
- › the Grand Connétable Island national nature reserve in French Guyana,
- › the Agoa sanctuary ( French Biodiversity Agency), head of the project.

Launched in 2018, the CARI'MAM project aims to:

- › Create a network of stakeholders involved in the conservation of marine mammals,
- › Strengthen the skills of the marine protected areas' managers,
- › Develop joint management and assessment tools;
- › Support the development of sustainable and wildlife-friendly commercial whale watching activities across the Caribbean and beyond.

To achieve these objectives, the participants of the project are involved in several workpackages:

WP 1 - Diagnostic study of knowledge and legal tools concerning marine mammals

WP 2 - Project-scale knowledge acquisition

WP 3 - Capacity-building for managers

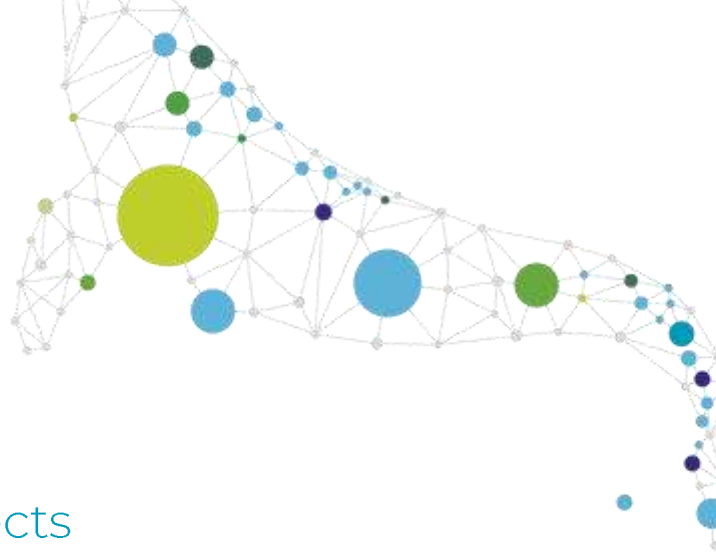
WP 4 - Development of joint acoustic monitoring strategies

WP 5 - Support for developing sustainable and wildlife-friendly commercial whale watching activities

WP 6 - Management plan for marine protected areas with "marine mammal" responsibility

WP 7 – Communication and awareness raising

To coordinate this network, international meetings are organized to allow the partners to present their organizations and projects, and make them work collectively on common thematic through specific workshops. .



## Plenary session

### Presentation of partner's projects

#### Heike Dumjahn - Agence Territoriale **de l'environnement** de Saint Barthélemy

The Territorial Agency for the Environment (ATE) of Saint Barthélemy, who manages among other things the nature reserve of the island and depends of the local authority, centralizes the data about marine mammals of the different partners. The ATE also follows the strandings and raise awareness during large nautical events.

In the CARI'MAM project, the team of the ATE installed a test hydrophone in March 2019, which validate the presence of sperm whales in the region and identified signals from young individuals.

#### Charlotte Dunn - Bahamas Marine Mammal Research Organization

The BMMRO presented its projects of acoustic monitoring, including about sperm whales, tursiops and kogia. The BMMRO also led a specific study after the Dorian hurricane, about the impact of the reduction of acoustic pollution on cetaceans, in particular the sperm whales.

#### Nataly Castelblanco – University of Quintana Roo

The aquatic caribbean megafauna monitoring program is a 10 years project led by the University of Quintana Roo and supported by the CONACYT (National Council on Science and Technology), and aims to develop surveys of megafauna in the fresh and coastal waters of the caribbean basin of Mexico. It follows specifically cetaceans and manatees, through biopsy, bioacoustic and photoID.

#### Liliana Betancourt - EcoMar

The Programa EcoMar is a non lucrative institution of scientific and educational character in Dominican Republic. The work, among other things on the humpback whales in the bay of Samana, through the study of their distribution, behaviour, social structure or groups in the population. They also inform whales watching operators on the good approach practices.

Recent sightings records of marine mammals in the region of La Romana-Bayahibe overlap with an area of intense tourist and fishing uses. A better understanding of their distribution is thus needed to enhance their conservation

#### Franck Roncuzzi - Réserve naturelle de Saint Martin

The presentation of the several missions of the nature reserve of Saint Martin included especially the Megara mission, organized each year with the support of the NGO Megaptera represented by Michel Vely. It aims to better understand humpback whales by at sea campaign including photoidentification, biopsy and satellite tagging.



## Ayumi Kuramae - Saba Conservation Foundation

The Saba Conservation Foundation is the manager of the Saba Bank National Park. This marine protected area overlaps the Yarari sanctuary for marine mammals. For this reason, and as partner of the CARI'MAM project, the team of the Foundation deployed in its waters one hydrophone made available for a preliminary test.

## Stéphane Jérémie - Société pour l'Etude, la Protection et l'Aménagement de la Nature Martiniquaise

The SEPANMAR works since 2003 on visual and acoustic monitoring of cetacean populations in the waters of Martinique. The data were gathered through at sea transect and passive acoustic monitoring on several stations around the island.

## Shane Gero - Dominican Sperm Whale Project

The Dominican Sperm Whale Project is looking into the population of sperm whales in Dominica and its region, including the socio-cultural aspect of this species, through their communication mode (coda). Their social interactions allow to determine cultural groups between individuals, and to study more closely their ecology at this scale instead of the whole population.



02.11.19  
Liliana Betancourt  
Presente le programme  
EcoMAR



## Workshop Communication and awareness

### Laura Pittino –Agoa Sanctuary (French Biodiversity Agency)

The main conclusions of the previous workshops dedicated to communication during the last CARI'MAM meetings have been highlighted, including the target audience and main messages.

Peggy Van Gysel, of the NGO « Mon Ecole Ma Baleine », presented the different awareness tools that the organization developed, for schoolchildren, and the general public.

The workshop itself focused on the development of an identification guide of marine mammals of the Caribbean, a specific need mentioned by several partners. The participants, divided in groups, worked each on a different animal, and selected the most important information needed in the guide. Afterward, they designed an example/concept of species data sheet.





02.11.19  
LOOKING FOR  
INSPIRATION

Several tools already  
exists, let's follow their  
ideas.





02.11.19  
DRAWING TIME

Each group designs  
his own data sheet for  
one species.



# Workshop Commercial Observation of Marine Mammals

Géraldine Conruyt – SPAW-RAC

At the scale of the Greater Caribbean, several reports from workshops and expert consultations indicate the difficulties encountered by countries in supervising the activity of marine mammal (MM) observation activities (MMA 2008, UNEP 2011). The need to create guides for best practice appears as of 2008 (MMA 2008) and the need to create a regional quality label for the activity of MM observation activity was issued by experts and professionals from the region. who have drafted a guide for best practices in 2011 (UNEP, 2011). As part of the CARI'MAM project, the results of the two previous Whale Watching workshops confirm the interest and the need to develop a harmonized regional label allowing the sustainable development of the activity.

The workshop aims to make a collegial progress on the definition of a regional label for the commercial observation activity of marine mammals..

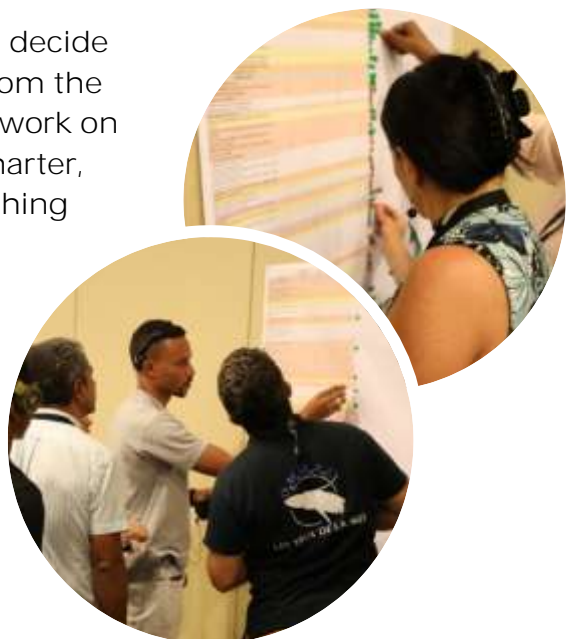
The workshop began with a reminder of the main results from the last workshops and the presentation of the main information from the analysis of the survey "current status of the GM observation activity in the Greater Caribbean" proposed to participants of the 2nd CARI'MAM meeting. The information from the questionnaires is available on the sharing platform of the CARI'MAM project ([Teamwork](#)).



## Le contenu idéal d'un label régionale pour l'activité d'observation des MM

As a first step, participants were invited to discuss and decide on the interest of keeping or not recommendations from the bibliography and the main regional and international work on the subject (High Quality Label, ACCOBAMS, AGOA Charter, results from a Regional Workshop on the Whale Watching activity of 2011 (UNEP), recommendations from an international bibliographic synthesis (50 countries) and supported by the IWC).

This was done through a table that lists a series of affirmations from the bibliography and to frame the activity of commercial observation of MM.



In front of each affirmation the actors were invited to decide on the interest of preserving or not the recommendation by the use of stickers. A green sticker indicates that the recommendation deserves to be retained as part of the definition of a quality regional label for the commercial observation activity of MM. On the other hand, a red sticker indicates that the recommendation should not be retained.

The active participation of the participants made it possible to identify the main unavoidable recommendations, which must be kept (in green in the table), those that need to be reworked or explained because they are not unanimous (in yellow in the table) and those that should not be included in the specifications of a potential regional label for marine mammal observation professionals (in red in the table).



	High Quality Label (Mayotte, Fr)	AGOA	UNEP workshop 2011	Carlson C guideline for IWC	informations from CAR/MAM III meeting		
					FOR	AGAINST	comments
Preventives rules							
Special exemption (scientist...)	reg	reg	X	X	6		
Operator training (biology, navigation, best practice...)	X	X	X	X	6		
National measures to regulate (permit...)	X	X	X	X	6		
Periods during the day when the animals are not subject to marine mammals (MM) watching	X	X	X	X	6		
Environmental impact assessment before the implementation of tourism operator/operation	X		X	X	5	1	
Aerial scouting is forbidden	X	X	X		3	2	
Dedicated observer(s) in addition to the captain of vessel			X	X	5	1	
Site specific and species specific requirements			X	X	3	1	
Do not watch cetaceans inside 5 miles coastal strip						5	
close seasons			X		2	1	
Machinery							
The use of aircraft and helicopters for WW is not recommended except in the case of permitted scientific research		X	X	X	5		
Submersible or semi-submersible machines are forbidden in the caution area		X			4	4	
The following machines are not used for WW : jet skis and similars cerails, parasail, remotely operated craft, wing in ground effect craft, hovercraft, windsurfers, kite surfers			X		5	3	
General rules							
Do not chase, leap-frog, block the direction of travel of marine mammals (MM) or access to the open sea	X	X	X	X	4		
Rules for approaching marine mammals	X	X	X	X	8		
Specially regulated areas	X	X	X	X	3		
Swimming with MM is forbidden or not recommended	X	X	X	X	5	1	
No throwing litter into the water	X	X	X	X	5		
Stop WW at any sign of the animal becoming disturbed or alarmed	X	X	X	X	5		
No dispersing or separating a group of marine mammals	X	X	X	X	5	1	
If MM approach the watercraft, slow down gradually, put engine on idle or drop sails	X	X	X	X	4		
Operators must contribute to research programmes	X	X	X		8		
Fishing is forbidden during WW activity	X	X			1	2	
No touching marine mammals	X	X	X		5	1	
No feeding marine mammals	X	X	X		7		
Standards must be applied for swim-with activities			X		5		
Monitoring the effectiveness of management provisions			X		4		
Do not make any loud or noises under that are transmittable under water		X	X		5		
Any collisions or accidents with MM should be document and reported to relevant authorities		X	X		4		
If dolphins approach vessels maintain a steady speed and avoid changes in course	X	X	X		6		
Caution zone							
Define a caution zone	X	X	X	X	4		
Sonar systems that emit noise not be permitted	X	X	X	X	3	2	
Limit the number of vessel	X	X	X	X	3		
Caution zone 300 m	X	X	X	X			
Caution zone 150 m (dauphins)			X			3	
Caution zone 50 m (lamartins)			X		1	1	
Max speed of 5 knots	X	X	X	X	4		
Speed not exceeding the speed of the lowest animal	X		X		1	2	
Trajectory of the vessel going gradually parallel to the MM	X	X	X	X	4		
Do not make sudden or repeated changes in direction or speed	X	X	X	X	2	1	
When departing look around for avoid collisions and leave slowly	X	X	X	X	2		
Limit observation duration	X	X	X	X	6		
Observation duration of max 10 min if + than 1 boat outside of caution zone		X			3		
Observation duration of max 15 min if + than 1 boat outside of caution zone	X				1	3	
Observation duration of max 20 min if + than 1 boat outside of caution zone		X			1	2	
Observation duration of max 30 min if + than 1 boat outside of caution zone	X		X	X	1		
Max 1 vessel into the caution zone	X			X	1	2	
Max 2 vessels into the caution zone		X			1	2	
No more than 3 watercrafts			X		3	1	
Coordinate movements between vessel by radio contact	X	X	X	X	2	1	
No placing of vessels in a position where it will drift into MM			X	X		3	
Putting the vessel on the side of the coast to allow the MM to leave		X			2	1	
No WW activity during the night		X			3	3	
No approach zone							
No approach zone	X	X	X	X	3		
No approach 100 m	X	X		X	2	2	
No approach 50 m (small cetaceans)		X		X	1		
50 m for all MM and appropriate mother-calf pairs			X		2		
50-250 m for whale			X		1		Discuss the distance
30-100 m for dolphins			X		1		Discuss the distance
30 m for manatees			X				
No approach for aircraft 150 m				X			
Aircraft may not approach within 500 m of MM			X				
Particular measures					1		
Isolated mother, calves and resting animals must be left				X	3	1	
More restrictions on length of encounter and distances for groups with calves/mothers	X		X	X	3		
Do not going in the caution zone if a large cetacean jump, calves is alone and during breastfeeding		X				2	
Watching for more than 30 min or 3 dive sequences with sperm whales is discouraged			X	X	1		
Do not stay with sperm with a social group of sperm whale more than 15 min				X		4	
In known manatee habitat speed should not exceed 5 knots			X		3	1	
Within 50 m of manatee, engines should be shut off						4	
When sperms whale abruptly changes its orientation or starts to make short dives vessel should leave the watching zone				X	2	1	
Sanction and remedies							
Fines or loss of label for rules breaks					4		
Observer assessment every 2 years					2		
Regular evaluation of the respect of the rules and if necessary sanctions for non-compliance	X	X	X	X	7		
Awareness							
Providing information about MM biology and marine ecosystem functions to customers	X	X	X	X	5		
Raising awareness with customers to the probability of not seeing MM	X	X	X		4		
Providing information about human activities perturbation for MM	X				5		
Discovering the ecosystem is the first aim of the proposed commercial service	X	X		X	4		
Respect environment (no chemical, no plastic)					3		

## Realizing a strategic diagnosis of the creation of a label

The exercise of building a SWOT, proven tool of strategic analysis, allowed us to identify the internal and external factors favorable and detrimental to the achievement of the objective of creating a quality label for the MM commercial observation activity in the Caribbean region.

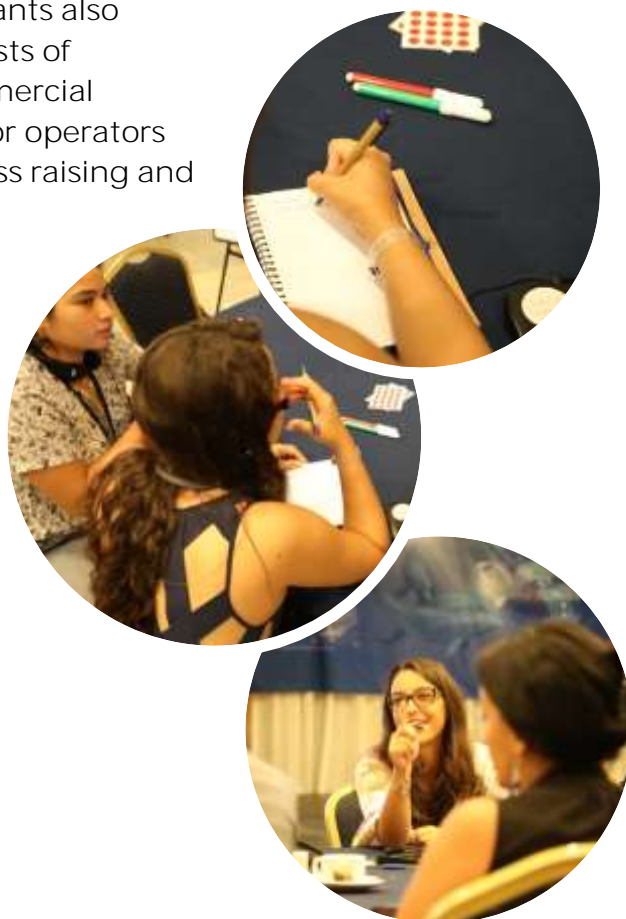
The name of this tool (SWOT) is an acronym for the four parameters examined by the technique:

- › *Strengths*: Project features that give it an edge in reaching the goal
- › *Weaknesses*: characteristics of the project that are detrimental to achieving the goal.
- › *Opportunities*: Elements of the environment that the project could exploit to its advantage.
- › *Threats*: Elements of the environment that could threaten the achievement of the objective.

		Positive	Negative
Internal origin	Strengths	<ul style="list-style-type: none"> <li>› Strong common will for the creation of the label X2</li> <li>› The good collaboration / network that exists in the CARI'MAM project group is a strength X3</li> <li>› Strong expertise in the field of whale watching in the network X2</li> <li>› CARIMAM political and economic support for the label</li> <li>› CARI'MAM allows actors to meet and discuss the subject</li> <li>› The regional scale is biologically very relevant</li> </ul>	<ul style="list-style-type: none"> <li>› Insufficient technical means (human / budget) to regulate the proper implementation of the recommendations of the label (control, regulation, ...) X2</li> <li>› No control over what is good or bad for animals</li> <li>› Whale watching operators are not direct beneficiaries of the CARIMAM project</li> <li>› There is little time left for the CARI'MAM project</li> <li>› The CARI'MAM project is limited in time X2</li> <li>› All Caribbean countries are not represented</li> <li>› The project has limited capacity to enforce the label / governance</li> <li>› Few Whale Watching operators present for consultation</li> </ul>
	Opportunités	<ul style="list-style-type: none"> <li>› Many guidelines exist and can serve as a basis</li> <li>› Wealth of Caribbean marine biodiversity</li> <li>› Strong demand from Whale Watching operators to value the activity</li> <li>› Existence of the HQWW label in the Mediterranean and Mayotte (successful and replicable experience) X2</li> <li>› Necessary data on MM =&gt; collaboration with scientists to obtain information on the biology of marine mammal species X2</li> <li>› IUCN World Congress</li> </ul>	<ul style="list-style-type: none"> <li>› Awareness of the impact of the WW activity by the population still lacking</li> <li>› Need to take into account specificities of different species X2</li> <li>› Specificity / importance of whale watching in small island states X3</li> <li>› Lack of consensus</li> <li>› Lack of standardization of practices</li> <li>› Lack of self-regulation</li> <li>› What governance (legitimacy) X2</li> <li>› Cultures and regulations</li> <li>› Different (to be taken into account) X4</li> <li>› Complexity of the procedure</li> <li>› Lack of financial subsidies to carry out the project</li> <li>› Bad communication</li> <li>› Competition with other labels</li> <li>› Resistance to change (especially whale watchers) X2</li> </ul>
External origin			



In the framework of this workshop, the participants also underlined by their comments the many interests of developing a regional quality label for the commercial observation activity of MM: economic support for operators who have an eco-conscious approach, awareness raising and education of the population for the preservation of marine mammals and marine biodiversity, commitment of visitors, training of whale watching operators and promotion of an ethical activity, standardization of activity, offers potential competition to attractions that keep animals captive. Several operators indicate that it would be important to also take into account cruise navigation.



# Workshop Marine Mammals Bycatch

Samuel Henry – SPAW-RAC

Identified as a priority area of action of the Marine Mammal Action Plan of the Wider Caribbean Region, under section 2.1. on « Fisheries Interaction », bycatch is also an important component of the CARIMAM Project. Highlighted in Work Package 1, this was emphasized during the Second CARIMAM Meeting held in Guadeloupe, May 2019, when participants put forward the objective « Reduce the mortality and morbidity of marine mammals linked to fisheries » among the key actions to implement. A preliminary bibliographical study enabled us to observe a lack of data and knowledge as well as the magnitude of marine mammal bycatch, may it be at the global or regional scale. The objective of this first workshop was to obtain an improved understanding of the extent and impact of marine mammal bycatch in the Wider Caribbean Region.

With the aim of livening up the discussions, participants were distributed in several categories\* (differentiated using colored stickers on the badges) and actors from each category were invited to mix. Then, they were tasked to introduce themselves (Name, Role, Territory, etc.) to their group (6 to 8 people). Each member of each table was then presented by the designated rapporteurs to the rest of the workshop..

*\*Categories of stakeholders :*

- › MPA Managers
- › Government
- › Academia
- › NGO
- › Whale Watching Operator

## WWWHWW : Identifying the problem

To begin with, the definition of bycatch was provided as follows: “Bycatch” designates the unintended capture or death of any animal, following interactions with fishing gear.



Using this definition, participants were asked to reflect individually following a «WWWHWW» Methodology ( Who ? What ? Where ? How ? When ? Why ?) to provide a first assessment of the knowledge and awareness among marine mammal-savvy stakeholders within the WCR. This method enables participants to delve into a constructive analysis of the situation. It is based on the systematic questioning enabling accurate and exhaustive knowledge collection to measure the level of knowledge on said topic.

In this session, the key insights were the following :

#### 🔍 WHO ?

##### 🔍 Passive

- Politicians
- Fisheries Ministry
- Restoration practitioners
- Consumers of fisheries involved in marine mammal bycatch
- Whale watching operators

##### 🔍 Active

- Fishermen
- Illegal, Recreational, Commercial and Sport fishers
- Fishermen (local and international)
- NGOs ⇒ Conservation / protection
- Government (control by Coast Guards)
- In Dominican Republic, the National Aquarium has a team trained to intervene on entangled marine mammals. However, the team lacks means and workforce.
- In addition, fishermen should be trained to provide a quick response in some cases where the marine mammal can be disentangled with small logistical means.

#### 🔍 Sighting and stranding networks

- Need to consolidate those networks to cover more efficiently the country's coasts

#### 🔍 WHEN ?

- No period
- Not well documented in the French Caribbean
- The Centre for Coastal studies has an entanglement network that could provide more databases
- Hurricane season creates more floating waste in which MM could get entangled

#### 🔍 WHERE ?

- Everywhere
- Lack of reporting
- Saba : offshore
- Lack of data ⇒ Centre for Coastal Studies
- Near FADs/DCP
- Dominican Republic : few cases in Samana Bay
- Fishing spots



#### 🔍 WHAT ?

- Increase costs
- Damaged gears
- Population reduction
- Ecosystem services are affected
- Unsustainable practices
- Lack of information and basic knowledge
- Intentional harming/killing of species (especially on protected species)
- Nets (not selective)
- In Dominican Republic, this is not a major problem although there are some reported cases on manatees (released by menfishermen), whales because of drifting fishing gear from the North/abroad, as well as seldomly on dolphins.
- Fishing gear with long-lasting materials end up at sea
- Ghost gear
- Floating waste
- Materials coming from other islands, including FADs/DCP
- Lack of expertise to disentangle ⇒ Instructions are unclear
- Lack of Data and harmonized databases
- Lack of open-seas regulations and control
- Lack of gear regulations in some countries
- Problems for navigation
- Problems for the species' movements
- Lack of onboard observer programs to (i) estimate bycaught species and levels and (ii) understand how fishing gears and animal interact

#### 🔍 HOW ?

- Ghost Fishing
- Illegal gear
- Nets
- Rope entanglements / Buoys
- Accidents
- Bad Weather
- Costly alternatives
- Acoustic disturbance
- Social Structure / Group reinforcement
- Attracted to focal fish

#### 🔍 WHY ?

- Increased fishing pressures and competition
- Business cupidity/ subsistence
- Fish Aggregating Devices (FAD/DCP) functions increase the risks
- Desire for low-cost fish
- Inadapted materials
- Low public Awareness

## World Café: What can be done to reduce bycatch?

The following sequence aimed at identifying in groups the mitigation measures, gaps and opportunities in data collection as well as socio-economic impacts and monitoring methods. The key elements on which participants put the emphasis include :



### Mitigation strategies

- 🔍 Capacity building
  - Disentanglement training to fishers
  - Programme for reporting and recovering lost gear
  - Labels for good technical fishing
  - Fishing methods modification fishers propose and are ready to test
- 🔍 Awareness
  - Awareness raising among menfishermen
  - Communication with the fishing industry based on scientific reports to assess ecological impacts
- 🔍 Legislation
  - Some countries need more regulations
  - More enforcement
  - Develop season-based fisheries with closed seasons
  - Quotas on fishing
- 🔍 Fishing gears
  - Acoustic Deterrent Devices to be tested in the region
  - Gear modifications
  - Alternative gear
  - Sonar reflective devices
  - Incentives to change old fishing gears
  - GPS systems on fishing gear

### Socio-economic impacts and monitoring

- 🔍 Costly consequences
  - Lowering incomes due to long term ecological impacts
  - Impacts on job security and livelihoods
  - Economic valuation of species (ecosystemic services?)
  - Impacts negatively whale watching tourism
- 🔍 Costly solutions
  - Mitigations measures and fishing gears are often too costly for regular fishermen
- 🔍 Global warming
  - Whales' carbon capture is indispensable
- 🔍 Sustainable fishing
  - Develop traditional and artisanal fishing methods with mitigation devices/measures
- 🔍 Capacity building
  - Additional training is required
  - Bycatch monitoring protocols
  - Alternative livelihood monitoring to gauge improvements (quantify)



## Gaps And opportunities in data collection and awareness

- 🔍 Training fishermen and record information
  - fishermen licensing to provide data
  - IWC Training on Bycatch required (David Matila)
- 🔍 Legislation
  - Increase capacity for fisheries offices and departments
- 🔍 Awareness raising using social networks and celebrities
  - In Dominican Republic, a famous Baseball player « Big Papy » (Boston) and a female volleyball player « Queens of the Caribbean » are strong advocates of whale watching activities (showcased in social networks in Samana Bay, Silver Bank and Stellwagen Bank in DR and the USA)
  - In Dominican Republic, a Whale festival promotes the protection of marine mammals
  - More workshops with a broad audience to promote environment conservation, especially on marine mammals (for example SEBSE)
- 🔍 Develop regular scientific missions for better solutions
  - Observer programmes with scientists on board fishing vessels to study marine mammal bycatch and find mitigation measures
- 🔍 Find and test different fishing methods
  - Regional Centre to record databases
  - Regional Database and data-sharing
  - In Dominican Republic, lack of a Centre or organization to collect and gather data on bycatch at the national scale
- 🔍 Need for an independent organization in charge of assessing bycatch and including menfishermen, scientists, NGOs, representatives of the Government
  - Commission ? Council ? How to fund it?



# Workshop Data management

Léa Henry –Agoa Sanctuary (French Biodiversity Agency)



Since the CARI'MAM project kicked off, some "key" tools have been identified and are being developed. These tools foster networking and standardized data collection and storage protocols.

These two tools are Flukebook and Obsenmer.

For this workshop in the Dominican Republic, the use of these tools was presented to enable everyone to get to grips with them more easily.

Some partners also expressed their interest in adopting them.

The workshop began with a review of the CARI'MAM objective in terms of data: harmonise and facilitate data collection, storage and comparison, and provide innovative tools to meet a maximum of needs in the Caribbean.



## Photo Identification

At the start of the workshop, the advantages of Photo Identification were recalled, since one of the two tools to be presented is used in this population monitoring method. Lindsey Jones, head of Photo ID at North Atlantic College gave a technical introductory presentation of Photo ID and her work using it, particularly through the North Atlantic Humpback Whale Catalog.



Training session in Flukebook use

Drew Blount, Flukebook project leader, presented Flukebook and its privacy policy, features and use of the application. He also answered technical questions from the participants.

🔍 A user guide will be developed.

Flukebook is an online database that enables automated photo-identification matching using artificial intelligence. Three species found in the Caribbean are available on the site: humpback whale, sperm whale and bottlenose dolphin.

Each individual who uses the application remains the sole owner of their data. When a match is made, collaboration can be organised by means of a manual request/acceptance between the two parties involved.

Promoting use of a photo ID matching tool in the CARI'MAM network facilitates collaborative work among partners in the Caribbean who use photo ID for their projects. The tool also serves for data banking and back-up.

During the CARI'MAM project, the Agoa Sanctuary can help you to create new accounts on Flukebook. Assistance can also be sought to help in the import of catalogues for the partners who wishes to do so.

### Observation database

Training session in using the OBSenMER expert mode  
At the end of the workshop, we presented three types of use of the OBSenMER application: close watch, single sightings (very useful for opportunistic sightings), and the expert mode which is only available with a cellular service iPad.

A user guide will also be created for this tool. New developments have been made and it is now possible to create specific programs, accessible only to certain organizations for example. Other new features are on their way and you will be informed of them.

The participants did a "dummy transect" outside to test the application and its procedures during sightings. The back office was also presented, with its administration options, data retrieval via various types of exports and simple verification of transects and sightings reported.





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## REPORT of the **THIRD** **CARI'MAM** network MEETING

The CARI'MAM project is cofinanced by the Interreg  
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