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Tenth Meeting of the Scientific and Technical
Advisory Committee (STAC) of the Protocol
Concerning Specially Protected Areas and Wildlife
(SPA)W) in the Wider Caribbean Region

Virtual, 30 January – 1 February 2023

CARI'MAM: FINAL REPORT

This meeting is being convened virtually. Delegates are kindly requested to access all meeting documents electronically for download as necessary.

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ACRONYMS

CARI'MAM	Caribbean Marine Mammals Preservation Network
GCFI	Gulf and Caribbean Fisheries Institute
IWC	International Whaling Commission
MMAP	Marine Mammal Action Plan
MPA	Marin Protected Area
RAC	Regional Activity Center of the SPAW protocl
SPAW	Specially Protected Areas and Wildlife protocol
STAC	Scientific and Technical Advisory Committee of the SPAW protocol
UNEP	United Nations Environment Programme
WCR	Wider Caribbean Region

CARI'MAM: FINAL REPORT

The present document is the final report of the parts of the “Caribbean Marine Mammals Preservation Network” (CARI'MAM) project that were led by the SPAW RAC.

1. INTRODUCTION

1. The four years project “Caribbean Marine Mammals Preservation Network” (CARI'MAM) (2017-2021) was presented during the 2018 Scientific and Technical Advisory Committee (Panama, December 2018) and the 2019 Conference of the Parties of the Specially Protected Areas and Wildlife Protocol (SPAW, Roatan, June 2019). This project was funded by the EU (€2,903,178.24).
2. As the project only started at the end of 2018, the European Union has accepted an extension until the end of 2021. Due to Coronavirus creases some actions have been postponed or changed (e.g., meeting, workshop and training).



Figure 1. The CARI'MAM network from all the Caribbean region

3. CARI'MAM project was led by Agoa sanctuary and divided into 7 work packages:
 - WP 0. Project management and coordination (led by Agoa/ SPAW-RAC)
 - WP 1. Review of current regulations related to marine mammals (SPAW RAC)
 - WP 2. Project -scale knowledge acquisition (Agoa)
 - WP 3. Capacity-building for managers (Agoa/SPAW RAC)
 - WP 4. Development of joint acoustic monitoring strategies (Agoa)
 - WP 5. Support for developing sustainable and wildlife-friendly commercial whale watching activities (SPAW RAC)
 - WP 6. Management plan for MPA with “marine mammal” responsibility (SPAW RAC)
 - WP 7. Communication and awareness (Agoa)
4. The SPAW RAC had the lead in the implementation of three out of the seven project components (WP 1, 5 and 6) and was involved in work packages 0 and 3.

2. MAJOR ACHIEVEMENTS

<p>WP 0 – Project management and coordination</p>	<ul style="list-style-type: none"> - Recruitment of a project coordinator (Conruyt G, 2019), - Recruitment of an Intern for MPAs management plans analysis (WP6) (Bonnin N., 2020), - Recruitment of a Project officer for CARIMAM project (Paranthoen N. and then Pusineri C. 2020). - 7 financial and technical reports prepared for the funder - A CARIMAM group was created in the SPAW RAC Teamwork Platform, to facilitate dissemination/ exchanges of information between regional stakeholders. Curently, 273 participants from 78 organizations and 31 Caribbean territories contribute to the forum. A WhatsApp group was also created.
<p>WP 1 – Review of current regulations related to marine mammals</p>	<ul style="list-style-type: none"> - SPAW focal point legal consultation «Current Status of Legislation on marine mammals protection in the WCR». <i>Report submitted to STAC 9 members for information (UNEP(DEPI)/CAR WG.42/INF.29, Addendum 2)</i> - A scientific and technical analysis of the current state of implementation of the Regional Marine Mammal Action Plan (MMAP) under SPAW was prepared by Courtney Vail and Monica Borobia, as contractors. <i>Report submitted to STAC 9 members for information (UNEP(DEPI)/CAR WG.42/INF.29, Addendum 1)</i> - Organisation and moderation of a Bycatch workshop during the 3rd CARI'MAM meeting in Dominican Republic. Aim: improved knowledge on the magnitude and impact of bycatch in the WCR. <i>http://www.car-spaw-rac.org/IMG/pdf/cr_global_cari_mam_v3_en.pdf</i> - Organisation and moderation of a Threats workshop during the 4th virtual CARI'MAM meeting (the month of CARI'MAM, November 2020 with IWC participation). Aims: share information and identify gaps and potential mitigation actions. <i>Report available soon on the SPAW RAC website</i> - Translation of the OBSenMER application (French and English available) <i>Annex 1</i> -A Caribbean marine mammals dedicated website (part of SPAW RAC website). This website aims to become the reference website for marine mammal conservation in the Caribbean region: general and specific informations, link to major programs, stranding metada. <i>https://www.car-spaw-rac.org/?The-CARI-MAM-project-and-network Annex 2</i>

<p>WP 3 - Capacity-building for managers</p>	<p>-A mailing list dedicated to strandings was created on the project's collaborative platform, and a table with the focal points' contacts is now available on the CARIMAM website. In addition, a dedicated strandings webpage has been created, on which have been compiled: an introduction to strandings; downloadable guides that present best practices for responding to strandings; some links to other useful websites. https://www.car-spaw-rac.org/?Good-practice-guides</p> <p>-Development of an online training course to support actors who wish to strengthen the marine mammal stranding monitoring network on their territory or to develop one. (in free access on the RAC SPAW website). https://www.car-spaw-rac.org/?Training</p> <p>- A stranding workshop was organized in November 17, 2021 to present the CARIMAM training tools for stranding and discuss regional collaboration projects.</p> <p>- 14 packages of basic materials and equipment to respond to strandings were purchased for networks that requested them in the Wider Caribbean Region (Barbados, Belize, Dominican Republic, Haiti, St Eustatius, Nicaragua, Guadeloupe, St Martin, Mexico, Martinique and St Lucia).(Annex 4)</p> <p>- Online trainings (MOOCs) have been developed on Photo-identification and CMR method, acoustic identification of cetaceans, managing marine mammals in case of oil spill, project building and financing. They are available for free and to anyone on the elearning of the French Biodiversity Office (OFB): go to elearning.ofb.fr, create an account, and subscribe to CARI'MAM courses.</p> <p>- A field training was organized just before COVID for data collection (distance sampling with ObsEnMer application, and photoID).</p>
<p>WP 5 - Support for developing sustainable and wildlife-friendly commercial whale watching activities</p>	<p>- Survey «Status of whale watching activity in the wider Caribbean region». Report posted on the project teamwork platform on January 15, 2020 https://car-spaw-rac.org/IMG/pdf/marine_mamals_watching_survey_en-3.pdf</p> <p>- Organisation and moderation of a marine mammal legislation workshop during the CARI'MAM meeting 2 in Guadeloupe. Aim: synthesize whale-watching activity management needs and expectations per territory. http://www.car-spaw-rac.org/IMG/pdf/meeting_cari_mam_2_-_en_s.pdf</p> <p>- Organisation and moderation of a Whale Watching workshop during the 3rd CARI'MAM meeting in Dominican Republic » Aim: define the ideal contents for a potential Whale Watching regional label. http://www.car-spaw-rac.org/IMG/pdf/cr_global_cari_mam_v3_en.pdf</p> <p>- Organisation and moderation of a Whale Watching workshop during the 4th CARI'MAM virtual meeting (the month of CARI'MAM, November 2020 with IWC participation).</p>

	<p>Aims: identify the partners to test and support a regional certification. <i>Report available soon</i></p> <p>- Recommendations for a regional certification for a sustainable commercial marine mammal observation activity in the Wider Caribbean Region. <i>Report submitted to STAC members for information (UNEP(DEPI)/CAR WG.42/INF.31, Addendum 1)</i></p> <p>- Public purchase: legal study, prior to the implementation of a regulatory instrument for marine mammal touristic activities in the wider Caribbean region. <i>Summary submitted to to STAC members for information (UNEP(DEPI)/CAR WG.42/INF.31, Addendum 2).</i> <i>full report on the SPAW RAC website : https://car-spaw-rac.org/IMG/pdf/report_car_spaw_livable_1_v2.pdf</i></p> <p>- Exchanges with the SPAW species working group task marine mammal and production of a document by the working group experts: “Toolkit for implementing marine mammals watching guidelines in the Wider Caribbean Region. <i>Report submitted to STAC members for information (UNEP(DEPI)/CAR WG.42/INF.32)</i></p> <p>-Initially planned as a workshop, the SPAW-RAC has produced a dematerialized educational kit for whale watching professionals, to adapt to the health context. The objective of this kit is to train and support commercial marine mammal watching operators to develop a sustainable and responsible whale watching activity and to promote a quality tourism offer. The dematerialized educational kit is composed of three videos, an educational booklet and a small communication kit for clients. .This educational kit is free and available for download in English, Spanish and French on the SPAW RAC website (annex 5).</p> <p>The videos cover the following topics :</p> <ul style="list-style-type: none"> - discovery of the marine biodiversity of the Caribbean, impact of human activities on the marine environment and marine mammals in particular (plastic, noise and chemical pollution, accidental catches, etc.) and reminder of eco-citizen gestures (use recyclable materials, do not throw your garbage into the sea, etc.), discovery of marine mammals in the Caribbean, - guidelines and behaviors to follow in order to practice a respectful and sustainable commercial marine mammal watching activity1. <p>The pedagogical booklet, which complements the training videos, is a training aid that repeats the information contained in the videos and ends with a short quiz that allows the learner to evaluate himself.</p> <p>A short (1-2 minutes) promotional video of the training kit, intended to be broadcasted on social networks, is also available. https://www.car-spaw-rac.org/?Whale-watcher-Toolkit</p>
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	<p>-The dematerialized educational kit for whale watching professionals was presented during the final conference CARIMAM Monday 15th November.</p>
<p>WP 6 – management plans</p>	<p>- Contribution to the development of a tool dedicated to all Protected Areas with a marine mammals responsibility: the marine mammals management tracking tool. This tool was initially developed by MPA managers in the framework of the European project: “Towards a transatlantic partnership of Marine Protected Areas” available on their website. https://marine-mammals.info/self-assessment-tool/</p> <p>- Improve consideration of marine mammals in MPA management plans: regional study and tracking tool proposal. <i>Report summary submitted to STAC members for information (UNEP(DEPI)/CAR WG.42/INF.30)</i> <i>full report in French is on the SPAW RAC website : https://car-spaw-rac.org/IMG/pdf/rapport-stagem2-bonnin.pdf</i></p> <p>- Organisation and moderation of a meeting dedicated to managements plans during the 4th CARI’MAM virtual CARI’MAM meeting (the month of CARI’MAM, November 2020). Aims: Share the outputs of the regional study and create links between MPAs at the regional, national, and local scales.</p>
<p>WP 7 – communication and awareness</p>	<p>- Participation to the GCFI 2019 participation. Presentation of a poster on the SPAW RAC activities in the framework of the CARI’MAM project.</p> <p>- Participation to SMM 2022. Presentation of a poster on the CARI’MAM project major outputs. <i>Annex 3</i></p> <p>- Articles in the SPAW RAC newsletter <i>http://www.car-SPAW RAC.org/?SPAW-RAC-Newsletters</i></p> <p>- CARI’MAM workshops organisation and participation</p> <p>- Development of a marine mammal website (<i>under the SPAW RAC website</i>) <i>https://www.car-spaw-rac.org/?The-CARI-MAM-project-and-network</i></p> <p>- CARIMAM interim report presentation to SPAW STAC 9</p>

HIGHLIGHTS

- 3 years project 2019-2021 funded by EU
- 5 regional meetings with several workshop sessions organized in 2019, 2020 and 2021
- A dynamic network of highly involved stakeholders around the Caribbean region dedicated to the marine mammal preservation
- Majors CAR SPAW outputs:
 - Review of the national regulations dedicated to Marine mammals in the Caribbean
 - A regional study and a tracking tool to strengthen the consideration of marine mammals in the MPA management plans
 - Development of MPA manager tools: OBSenMER, tracking tool, dedicated part of website
 - Drafting of a proposal for the development of a regional label/certification to support a sustainable marine mammal watching in the Wider Caribbean Region
 - A report on the Implementation of the Action Plan for the Conservation of Marine Mammals: a scientific and technical analysis (MMAAP) with recommendations
 - A stranding workshop, a virtual stranding training and the creation of a region-wide stranding network
 - A dematerialized educational kit for whale watching professionals
- Need to secure the network and the actions undertaken by CARI'MAM members in the long-term



Annex 1: Translation of the OBSenMER application (French and English available)

OBSenMER is a participatory science tool dedicated to the reporting of megafauna observations made at sea. It is a digital platform on which observers can collaborate according to different modalities, and/or manage the data associated with their observations.

OBSenMER is an open application dedicated to observers at sea: organizations specialized in data collection or simple boaters wishing to contribute to partners programs.

OBSenMER is totally in accordance with a participative and collective approach. A user charter has been set out so that each user is identified, valued, and can manage his own data. The commitments and attributions of each type of user are clearly defined, as well as the rights to share the collected data.

In short, OBSenMER is:

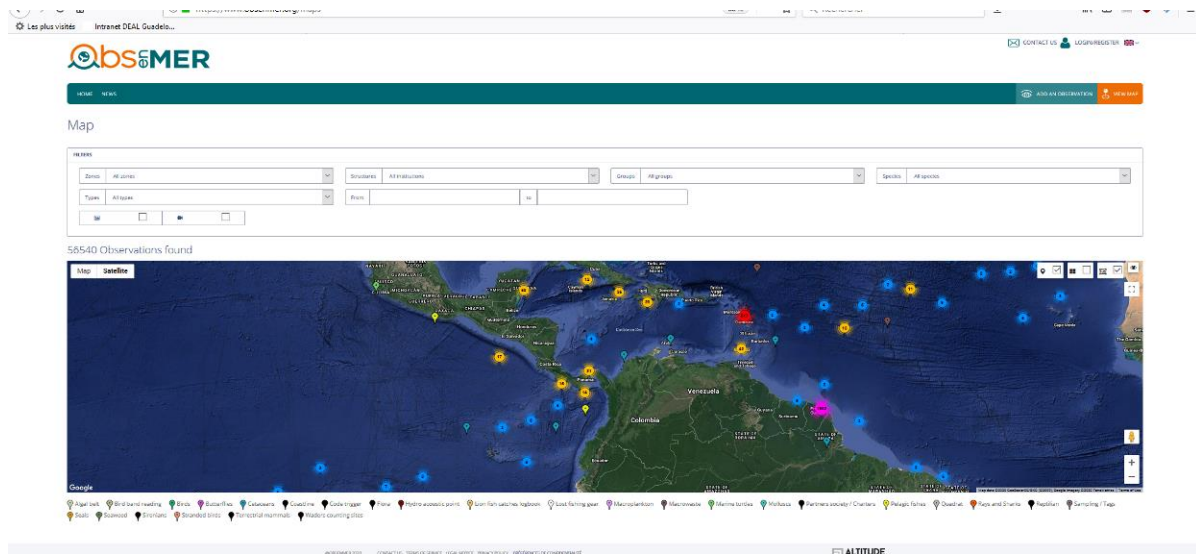
- An open access tools
- A mobile application, to facilitate the collection of information at sea on marine Megafauna, from beginner to expert level.
- A facilitator of exchanges and sharing between the collecting structures and data users (scientists, managers...),
- A common, homogeneous and freely shared database.

How does it work?

Registration is free and without obligation, each user has his own private access on the www.obsenmer.org website. He can thus consult, enter and download the data collected by the network of contributors.

Depending on the user's profile, access to the different functionalities differs. Users can be: an organization (association, marine park, research laboratory...) that collects data at sea and/or collects information from its affiliated collectors; or an observer (yachtsman, sea user) who reports his observations at sea.

For more information on OBSenMER: <https://www.obsenmer.org/pages/home>.



Annex 2: A Caribbean marine mammal dedicated website (part of SPAW RAC website)

UNEP SPAW CAR

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MARINE MAMMALS OF THE CARIBBEAN

All the versions of this article: [English] [Español] [français]

The **Wider Caribbean** Region has over 35 species of **marine mammals**, making it one of the areas on the planet where this group is the most diverse. These are mainly very mobile species, which can move between different territories. This is why several projects have been carried out to better understand these animals and bring together the actors working to protect them in this space.

The latest project is the **CARI'MAM project**, which aims to network partners from the Greater Caribbean Region working to improve the knowledge and preservation of marine mammals.

Discover them

The numerous species of marine mammals present in the Caribbean are protected by several legislation. This chapter present more information about these animals and how to observe them in the wild.

CARI'MAM project

The CARI'MAM project is a cooperation project financed by the European program Interreg (ERDF) that aims to reinforce the network of stakeholders working on marine mammals in the Great Caribbean Region.

Study and conservation

Scientist work for several years to better understand marine mammals in the Caribbean. With other organizations, they allow a better protection of these species. Discover these methods, databases used and become actor of their protection.

Digital library

The SPAW-RAC works for several years for the conservation of marine mammals in the Caribbean. This section groups all the bibliographic references and educational resources on this subject. It contains also the link to the professional platform for partners Teamwork.

A part of CAR SPAW website is dedicated to marine mammals

It is composed of 4 major chapters:

- “Discover them”: this chapter presents information on marine mammals and how to observe them in the wild.
- “Study and conservation”: it presents scientist study methods and how to contribute to marine mammal conservation.
- “CARI’MAM project”: A page to present the project
- “Digital library”: Bibliographic reference and educational resources on marine mammals.

For more information, see: <http://www.car-spaw-rac.org/?Marine-Mammals-999>

Annex 3: Presentation of a poster on CARIMAM major outputs during 2022 conference of the Society for Marine Mammalogy

From CARI'MAM project to a sustainable Caribbean network for marine mammal conservation

Mannaerts G.¹, Conruyt G.², Pusineri C.², Combes M.¹, Couvat J.¹ & Pivard, S.²

¹ Agoa Sanctuary, French Agency of Biodiversity, Les Trois-Ilets, Martinique, French West Indies. maggali.combes@afb.gov.fr

² Regional Activity Centre for the Protocol Concerning Specially Protected Areas and Wildlife for the Wider Caribbean Region (SPAW-RAC), DEAL, Guadeloupe, Saint-Phy, French West Indies. claire.pusineri@developpement-durable.gouv.fr

Why develop a Caribbean Network?

A marine mammal community diversified but threatened:

- more than 35 species currently identified;
- 7 classified as Critically Endangered, Endangered or Vulnerable in the IUCN red list;
- 2 classified as Nearly Threatened;
- and at least 8 considered Data Deficient.

A shared natural heritage for the Caribbean Territories:

- Unique place in the collective psyche and economies;
- High species mobility.

All marine mammal species are protected under the SPAW Protocol.

Abstract

CARI'MAM "Caribbean Marine Mammals Preservation Network" was a regional cooperation project funded by the EU and covering the period 2018-2022. It was led by the Agoa sanctuary (French Antilles) and supported by the SPAW protocol of the Cartagena convention.

Its aim was to strengthen marine mammal conservation in the Wider Caribbean Region through an enhanced cooperation. The project is now concluded but the network is still active, with 273 participants from 78 organizations and 31 Caribbean territories.

We are now aiming to integrate these first steps in a lasting Regional Activity Network (RAN) to be endorsed by the Caribbean countries through the SPAW protocol governance. Besides, the SPAW Species Working Group is currently drawing the new version of the SPAW Marine Mammal Action Plan and raising funding to work on areas identified as a management priority.

The SPAW Protocol

In 1983, the Caribbean nations adopted the Cartagena Convention, the only regional and legally binding agreement on environment. Among the three protocols stemming from the Convention, the Specially Protected Areas and Wildlife (SPAW) Protocol supplies a unique legal framework for the conservation of the region's biodiversity. This Protocol has been ratified by 18 countries. The CARI'MAM project that was endorsed by SPAW in 2019.

CARI'MAM major outputs

1. **Networking development**
 - Networking platform, called Teamwork, which facilitates email and document exchanges as well as task planning.
 - Online website and hub dedicated to the study and conservation of marine mammals in the Caribbean.
 - Workshops to share ideas and practices.
2. **Review of the 2008 SPAW marine mammal action plan, and identify priority objectives for the coming years:**
 - Enhance quantitative knowledge on marine mammal populations and anthropogenic impacts.
 - Elaborate an up-to-date SPAW marine mammal action plan, in the framework of SPAW protocol.
 - Establish a sustainable and coordinated regional mechanism, build upon CARI'MAM, such as a Regional Activity Network.
3. **Knowledge enhancement**
 - Deployment of a hydrophone network (20 hydrophones in 15 Caribbean territories, deployed for 12 months, >1M humpback whale and >1 600 odontocetes detections; under analysis).
 - Boat based campaigns (4,232 km of effort; 5 territories surveyed; 78 marine mammal groups sightings and 11 positive hydroacoustic points).

Scan to discover



CARI'MAM website and hub



The assessment of 2008 SPAW marine mammal action plan

Support the development of sustainable whale watching

- Best practices workshop: sharing of experience and assessment of the various regulations deployed in the Caribbean territories.
- Assess and propose a regional whale-watching regulatory instrument.
- Develop a toolkit for a sustainable and responsible whale-watching activity.

Scan to discover



The toolkit for a sustainable and responsible whale-watching

Capacity building

- Development of the MPA self-assessment tool (SAT) to enhance the inclusion of marine mammals in management plans.
- Development of MOOCs (Photo-identification and CMR method, acoustic identification of cetaceans, managing marine mammals in case of oil spill, project building and financing): go to elearning.ofb.fr, create an account, and subscribe to CARI'MAM courses.
- Field trainings for data collection (distance sampling with ObsEnMer application, and photoid).



The SAT tool



Annex 4 Stranding network, virtual training and material

Caribbean stranding expert contacts <https://www.car-spaw-rac.org/?Caribbean-stranding-expert-contacts>

Regional contacts:

- Contacts for the Caribbean Stranding Network : Antonio MIGNUCCI GIANNONI and Carla RIVERA PEREZ, from the Caribbean Manatee Conservation Center in Puerto Rico, mignucci@manatipr.org and carly@manatipr.org
- Regional contact for the International Whaling Commission Stranding group: Michel VELY from MEGAPTERA association, megapteraone@hotmail.com; Gabriela Hernández Mora, SENASA, gabbytica@gmail.com

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Caribbean stranding expert contacts

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Regional contacts:

- Contacts for the Caribbean Stranding Network : Antonio MIGNUCCI GIANNONI and Carla RIVERA PEREZ, from the Caribbean Manatee Conservation Center in Puerto Rico, mignucci@manatipr.org and carly@manatipr.org
- Regional contact for the International Whaling Commission Stranding group: Michel VELY from MEGAPTERA association, megapteraone@hotmail.com; Gabriela Hernández Mora, SENASA, gabbytica@gmail.com

Country/territory contacts:

Country and/or Territory	Name of the stranding network	Name	Affiliation	Email
Aruba	Aruba Stranding Network	Angiolina HENRIQUEZ	Aruba Marine Mammal Foundation	Angiolinah@gmail.com
Bahamas	Bahamas Marine Mammal Stranding Network	Charlotte DUNN	Bahamas Marine Mammal Research Organisation	cdunn@bahamaswhales.org
Barbados	Barbados Marine Mammal Stranding Network	Julia HORROCKS	University of the West Indies Cave Hill Campus	julia.horrocks@cavehill.uwi.edu
Barbados	Barbados Marine Mammal Stranding Network	Nicole SIMPSON	Sustainable Caribbean	sustainablecaribbean17@gmail.com
Belize	Belize Marine Mammal Stranding Network	Jamel GALVES	Clearwater Marine Aquarium Research Institute	jgalves@cmarequarium.org
Bonaire	STINAPA Bonaire	Caren ECKRICH	STINAPA Bonaire	nature@stinapa.org
Costa Rica	Red de Varamientos de Costa Rica	Gabriela Hernández Mora	Servicio Nacional de Salud Animal, SENASA	gabbytica@gmail.com
Dominica	None yet	Shane GERO	The Dominica Sperm Whale Project	shane@thespermwhaleproject.org
Dominican Republic	Red de Varamientos de República Dominicana	Patricia LAHELAS	Centro para la Conservación y Ecodesarrollo de la Bahía de Samaná y su Entorno (CEBSE)	cebse@claro.net.do
France, Martinique	Réseau National d'Echouages (RNE)	Jean-Claude NICOLAS	SEPMANAR	jcnicolas972@yahoo.fr
France, Guadeloupe archipelago	Réseau National d'Echouages (RNE)	RINALDI	Association Evasion tropicale (AET)	evastropic@wanadoo.fr
France, St Martin/St Barthélemy	Réseau National d'Echouages (RNE)	Michel VELY	MEGAPTERA association	megapteraone@hotmail.com
France, St Martin/St Barthélemy	Réseau National d'Echouages (RNE)	Claire SALADIN	Vet. Widecast OC Saint Martin St Barthélemy IUCN expert	clairesaladin@hotmail.com
Grenada	Ocean Spirits attends stranding call outs	Kate CHARLES	Ocean Spirits Inc/ WIDECAST OC Grenada	kate@oceanspirits.org
Haiti	None yet	Jamie AQUINO	Haiti Ocean Project	jamieaquino@yahoo.com
Jamaica	None yet	Christine O'SULLIVAN	University of Technology, Jamaica	osullivan.christine@gmail.com
Mexico	Red para la atención de varamientos de mamíferos marinos en el estado de Quintana Roo	Nataly CASTELBLANCO	Conacy/Universidad de Quintana Roo	castelblanco.nataly@gmail.com
Mexico	Red de Varamientos de Mamíferos Marinos del Estado de Veracruz	Eduardo Morteo	Universidad Veracruzana	eduardo.morteo@gmail.com
Nicaragua	None yet	Johlie DE WEEBROT	Association ELKS	elkscientific@gmail.com
Puerto Rico	National Marine Fisheries Service, Southeast Region Stranding Network (USA)	Grisel RODRIGUEZ-FERRER	Departamento Recursos Naturales y Ambientales	griselquest@dma.pr.gov
St Eustatius, Dutch Caribbean	Dutch Caribbean Cetacean Network DCCN	Jessica BERKEL	St Eustatius National Parks Foundation	research@stetiepark.org

CARIMAM training tools

The SPAW-RAC, within the framework of the CARIMAM project, and in collaboration with Gabriela Hernández-Mora (National Service of Animal Health of the government of Costa Rica) and Caroline Rinaldi (Association Evasion Tropiclae, Guadeloupe), has developed an online training course composed of videos, to support stakeholders who wish to strengthen the marine mammal stranding monitoring network in their territory or develop one.

The first 4 videos cover the following topics : 1) introduction to stranding networks, 2) recommendations for developing a stranding network in a territory, 3) recommendations for intervening on a stranding, 4) recommendations for collecting data and samples on a stranded animal. Each video is about 30 minutes long ; they are in English but Spanish and French subtitles are available. They can be viewed online, in free access, on the Youtube channel of CARIMAM (Click on the image) :



The last video presents a complete internal examination of a dolphin carcass and how to collect samples. It lasts about 50 minutes, and is available in English, Spanish and French, on request to the following address : contact@car-spaw-rac.org

<https://www.youtube.com/playlist?list=PLnW4iL1kyJzgSc6SBoCgzRJmn1CIPcuau>

Good practices guides <https://www.car-spaw-rac.org/?Good-practice-guides>

Annex 5 Toolkit for whale watcher

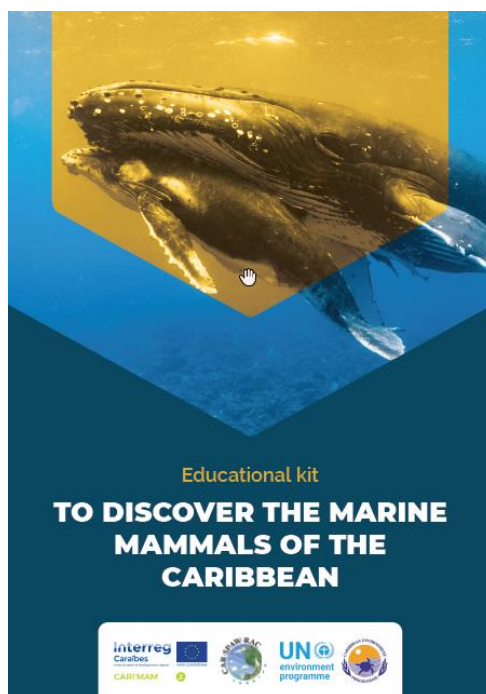
In order to support commercial marine mammal watching operators to develop a sustainable and responsible whale watching activity and promote a quality tourism offer, the dematerialized educational kit is composed of three videos, an educational booklet and a small communication kit.

The videos will allow you to discover or review :

- ▶ Video 1 : Discovering the marine biodiversity of the Caribbean, eco-actions
- ▶ Video 2 : The marine mammals of the caribbean region
- ▶ Video 3 : Guidelines and behaviors to follow for a respectful and sustainable commercial marine mammal watching activity (Guidelines for marine mammal watching in the wider caribbean region, UNEP, 2011).

It is strongly recommended to watch all the videos before reading the educational booklet and to answer the small quizzes to evaluate yourself.

In order to support you in your activity, we propose a poster and a leaflet to guide and illustrate the information that can be delivered to clients by operators during a cetacean watching trip.



Warning : These recommendations regulations. We therefore advise authorities to find out the country.

do not replace the national you to contact the competent regulations in force in your

The leaflet

Conservation actions

- An offshoot of the Cartagena Convention, the SPAW Protocol is dedicated to the protection of biodiversity in the Caribbean. Specifically, it represents:
 - 18 signatory countries
 - More than 200 protected species, including all marine mammals
 - 35 sites listed with heightened protection
 - A regional action plan for the conservation of all marine mammals in the Region.
- In addition, several countries have created large sanctuary areas dedicated to marine mammals.

For more information, visit : www.car-spaw-rac.org

Good news !
Thanks to the moratorium on whaling established in 1986, the humpback whale is making a comeback. The species have reportedly recovered 93% of their original Southwest Atlantic population (Zerbini et al., 2019).

You too can help to preserve this incredible ecosystem with these simple gestures :

- In order to preserve the corals, use UV protective clothing and (or) an ocean-friendly mineral sunscreen.
- While underwater, do not touch anything to protect yourself from injury and to protect the oceans and their creatures from damage or contamination
- Do not take any souvenirs from a wild site (sand, shells, starfish). They are also part of the ecosystem: they provide shelter and food for small animals and protect the coast from erosion.
- Choose reusable rather than disposable (water bottles, cups, bags), sort your waste and say no to plastic.
- Just like anywhere else, don't leave any trash behind at the beach. No matter how minor the gesture, the damage can be considerable.
- Choose no-motorized activities and eco-labelled accommodation or tours.

Little Extra :

While on vacation, why not contribute to the conservation of marine mammals by using OBSenMER, the participatory science application that makes it easy to record observations at sea ?

www.obsenmer.org

The poster

Observe marine mammals without disturbing them

In order to ensure a quality visit respectful of the animals, the SPAW Protocol offers a good practices guide to approach marine mammals.

Here are some of its recommendations :

- Do not feed the animals
- Don't throw anything in the water
- Do not chase the animal
- Stay calm (don't yell, don't bang on the hull of the boat)
- If you see their offspring, keep your distance
- Swimming with animals is not recommended
- Do not separate, disperse, surround animals or get in the middle of a group
- Do not pass over the animal

Eco-citizen actions to protect biodiversity

- In order to preserve the corals, use UV protective clothing and (or) an ocean-friendly mineral sunscreen.
- While underwater, do not touch anything to protect yourself from injury and to protect the oceans and their creatures from damage or contamination.
- Do not take any souvenirs from a wild site (sand, shells, starfish). They are also part of the ecosystem : they provide shelter and food for small animals and protect the coast from erosion.
- Choose reusable rather than disposable (water bottles, cups, bags.), sort your waste and say no to plastic.
- Just like anywhere else, don't leave any trash behind at the beach. No matter how minor the gesture, the damage can be considerable.
- Choose no-motorized activities and eco-labelled accommodation or tour.

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UN environment programme
Ministère de la Mer

The educational booklet

Educational Kit - To discover the marine mammals of the Caribbean



Seabirds

Over 65 seabird species live and 20 nest in the Caribbean region. Among the most observed families, we find:

- ◆ Pelicans, which frequent coastal waters. They are gregarious birds, feeding and travelling in flocks. They feed on small fish, catching them near the water surface.
- ◆ Magnificent frigatebirds, they never plunge into the surface waters, instead they catch flying fish as they jump out of the water. They are often seen feeding on discarded fish from fishing boats or stealing other birds' captured food.
- ◆ A great variety of terns are present in the area but only about ten species nest there. They spot their prey (fish, cephalopods, crustaceans, frog) by flying or hovering above the waters, then dive to pick them off just below the surface.

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Educational Kit - To discover the marine mammals of the Caribbean

Read and learn more about the biology of these species on our website : <https://www.car-spaw-rac.org>.

Browse through each species fact sheet and identify your closest marine sanctuary or protected area managers on your territory. They are the key partners for biodiversity education, knowledge, and conservation.



Quiz

1. How many species of marine mammals thrive in the Caribbean ?
2. True/ False: Boat collisions are the most common threat to marine mammals.
3. True /False: The short-finned pilot whale is a solitary species.
4. How big can a bottlenose dolphin get ?
5. True /False: The pantropical spotted dolphin has a more streamlined body than the Atlantic spotted dolphin.
6. What is the sperm whale's blow's angle ? 90°, 60° or 45° ?
7. True /False: The humpback's calf stays with its mother for 2 years.



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Educational Kit - To discover the marine mammals of the Caribbean



To watch safely and respectfully, here are the general principles to follow:



Do not feed or touch marine mammals.

Do not throw litter into the water.
Do not make any loud or sudden noise.

Do not chase an animal trying to get away from you or resting (stationary at the surface).
Do not block the travel direction of the animals.

Do not suddenly change direction or speed.
Do not separate, disperse, encircle animals, do not position yourself in the middle of a group.

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Educational Kit - To discover the marine mammals of the Caribbean

Here are the most emblematic marine mammals of the Caribbean :

The West Indian manatee :
The adult individual is about 3 to 4 meter-long. Generally found in coastal habitats or in estuaries, alone or in small groups, it is a discreet and quiet animal, only showing the tip of its snout at the surface. This herbivore's diet is quite diverse, including seagrass, mangrove leaves, algae, and a variety of aquatic plants such as the common water hyacinth.



The short-finned pilot whale :
As an adult, it measures up to 7 m for males and 5 m for females. Highly gregarious, it is often observed in pods of about 15 individuals, and sometimes in clusters resting at the surface. It is a common species throughout the Greater Caribbean, but often sighted near the steep slopes along the continental shelf breaks. Known for spy-hopping, it can get close to boats.



Melon-headed whale :
It is a dolphin with no discernible beak. Its charcoal-gray to dark-gray body grows up to 2-3 m.



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