



Interreg
Caribbean
CAMAC

European Regional Development Fund



EUROPEAN UNION



Capacity building workshops on marine mammal stranding response

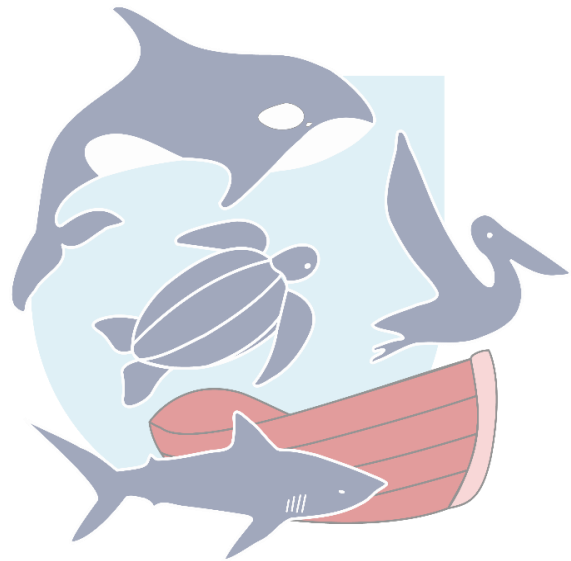
End-of-Project Report

November 2023

The CAMAC project is co-financed by the Interreg Caribbean programme under the European Regional Development Fund.

Capacity building workshops on marine mammal stranding response

End-of-Project Report



CAMAC project

This report was drafted in the framework of the [CAMAC project](#), workpackage 2. CAMAC stands for CARibbean marine Megafauna and anthropogenic Activities; it is a 4-year project (2023-2027) co-funded by the European Union and led by the Agoa Sanctuary and the SPAW RAC. It aims to enhance regional collaboration and better characterise interactions between marine megafauna and human activities, in order to provide Caribbean governing bodies and environmental stakeholders with recommendations and tools to reduce the negative anthropogenic impacts. The purpose of workpackage 2, “Stranding networks” is to strengthen marine mammal and sea turtle stranding networks to enhance knowledge and monitoring of human-origin impacts on these groups of species.

Capacity building workshops on marine mammal stranding response for the networks contributing to the stranding group of the CARI'MAM network.

End-of-Project Report

PROJECT OVERVIEW:

The project aimed to strengthen the capacity of marine mammal stranding monitoring networks in the Caribbean region. Its primary objectives were to enhance skills, organisation, cohesion, and equipment within these networks. Furthermore, it sought to validate the effectiveness of the standard protocol and training kit developed by the CARI'MAM network. These workshops were tailored for members (naturalists, scientists, managers) of marine mammal stranding networks actively contributing to the CARI'MAM network stranding group and based in specific areas: Jamaica, Dutch Islands, St Kitt and Nevis, Puerto Rico, Haiti, Dominican Republic, and Suriname.

Workshops were divided into six lots, designed to cater to specific regions and languages:

- Lot 1: Dutch island stranding networks (English/Dutch)
- Lot 2: Saint Kitt and Nevis and other English-speaking Lesser Antilles networks (English)
- Lot 3: Dominican Republic and Puerto Rico networks (Spanish)
- Lot 4: Haitian stranding network (Creole/French)
- Lot 5: Jamaica stranding network (English)
- Lot 6: Surinamese stranding network (Dutch/Surinamese)

The number of workshops delivered per lot varied based on territory size and the number of individuals requiring training. Each lot operated independently, but training was delivered during a concentrated 3-week period to improve travel efficiencies and minimise cost and carbon emissions.

These workshops were scheduled to occur between the release of the finalised training kit and the Interactions Between Human Activities and Marine Megafauna of the Caribbean: Progress Made Through the CAMAC Project and Potential for Future Actions workshop held at the Gulf and Caribbean Fisheries Institute Annual Meeting (GCFI76) on 4th November in Nassau, Bahamas. The goal was to implement the workshops within this timeframe to maximise their impact and align with project objectives.



Figure 1: In-person workshops held in Haiti, Dominican Republic, St Kitts, Aruba, Bonaire (top left to bottom right)

OVERVIEW OF TRAINING LOTS:

The training lots focused on various aspects of strandings response and had been preceded by an online survey in the weeks prior to the workshops. A Mentimeter survey was also completed on the day by participants run on the day to precisely identify the needs and expectations of attendees as well as highlight their experience of marine mammal strandings response.



Figure 2: Examples of the Mentimeter survey responses from the English-speaking Lots.

The workshops comprised lectures, discussions and practical formats in both classroom format and on the beach, designed to deliver essential, basic skills including first aid for live animals and optimal practices for data and sample collection from carcasses. Consideration was given to factors including accessibility, resources, and equipment availability. The modular design of each workshop facilitated tailored content, aligning with the unique circumstances of individual regions. Stranding response kits were provided to each location depending on needs to enhanced local preparedness. The aim was long-term capacity building, beyond just disseminating response techniques and towards cultivating a long-term relationship with the wider strandings community. The workshops were therefore seen as the first stage in fostering much-needed capacity, resilience and confidence, towards empowered and sustainable local response networks.

Key objectives included introducing trainees to the IWC Expert Panel on Strandings and establishing crucial links between response teams and affiliated entities such as local animal health labs, wildlife veterinary services and local emergency response teams. Held during October and November, these workshops formed part of the CAMAC (Caribbean Marine Megafauna and Anthropogenic Activities) cooperation project, conducted in collaboration with CARI'MAM. The culminating workshop in Nassau, Bahamas, furthered discussions on Human Activities and Marine Megafauna, where the IWC Strandings Team presented an appraisal of the training toolkit developed by CAMAC. Feedback from workshop participants and recommendations for Phase II of the project were also shared during this concluding session.

IWC TRAINER BIOGRAPHIES

Andrew Brownlow (PhD, BVM&S MRCVS)- Chair of the IWC Strandings Expert Panel, Andrew is a veterinarian and since 2009 has been director of the Scottish Marine Animal Stranding Scheme (SMASS). He graduated from the R(D)SVS (2000) and has a PhD in veterinary epidemiology from the University of Edinburgh (2007). Andrew is interested in developing techniques to improve the quality and value of data collected by strandings programmes, is a Winston Churchill Memorial Trust Fellow for 2020/21 for work on optimising marine stranding surveillance networks and recently undertook a review of the aims and objectives of the IWC Strandings Initiative. Andrew has been member of the Advisory Committee of ASCOBANS for several years and currently holds a senior lectureship position at the University of Glasgow.

Emma Neave-Webb – Emma joined the International Whaling Commission as Strandings Co-ordinator in March 2022. She has conducted cetacean and ornithology surveys in oceans all over the world for a variety of NGOs and commercial companies. As an experienced marine mammal medic and area coordinator for British Divers Marine Life Rescue since 2004, Emma has vast experience of live strandings responses throughout the UK. Based in Scotland, she is a senior volunteer with the Scottish Marine Animal Stranding Scheme (SMASS) trained in advanced sampling techniques and is also co-founder of the Orkney Marine Mammal Research Initiative where she is the Science & Data Officer.

Gabriela Hernández-Mora (PhD, DVM) – Gabriela is part of the the IWC Strandings Expert Panel and board member of the International Association of Aquatic Animal Medicine (IAAAM). She has been in charge of marine mammal strandings in Costa Rica since 2004 and since 2009, she is the head of the Veterinary Microbiology Unit of the National Services of Animal Health for the government of Costa Rica.

Rocío González Barrientos (DVM, ACVP) – Rocio is a diplomate of the American College of Veterinary Pathologists, has performed cetacean necropsies and study stranded cetaceans in Costa Rica since 2004, and currently works as a veterinary pathologist at the Texas A&M Vet Med Diagnostic Lab in Texas, United States.

Lonneke IJsseldijk (PhD) – Lonneke is a biologist who works as Assistant Professor at the Faculty of Veterinary Medicine of Utrecht University in the Netherlands since 2013, where she is the project manager of the Dutch Strandings Research program based at Utrecht University who are responsible for the investigation of stranded marine mammals in the Netherlands under contract to the Dutch government. Lonneke has been a member of the Advisory Commission of ASCOBANS for several years and jointly leading the work on standardisation of post-mortem protocols throughout Europe. She

holds an MSc in Environmental Biology and a PhD on porpoise health, with her research interests intersecting the fields of cetacean biology, ecology and pathology.

Mariel ten Doeschate - Mariel joined Scottish Marine Animal Strandings team in 2014, after finishing her MSc in Applied Marine and Fisheries Ecology from the University of Aberdeen. Before that she worked for the strandings networks in the Netherlands. Mariel manages the SMASS database and sample archives and provides administrative and coordination support as well as assistance with the post-mortem examinations. Mariel is currently working on her PhD project, which will focus on the development of new analytical approaches to the strandings dataset, to improve their use and value for marine mammal population level monitoring.

Sarah Wund (DVM) – Sarah is a veterinary epidemiologist, with a veterinary degree and a Master's in Epidemiology. Specialising in marine mammal pathology, she worked as a veterinarian in several countries in both terrestrial and marine spheres. At the Pelagis Observatory, Sarah leads the veterinary strandings investigation team and undertakes numerous necropsies and diagnostic analyses, interpreting the results at the individual and population level. She leads the French strandings health surveillance strategy which aims to better assess the state of health of populations of marine mammals, identify the main risk factors, and ensure early detection of emerging diseases and detecting risks to public health. This strategy is part of the “One Health” concept, considering a single health that brings together animal, public and environmental health.

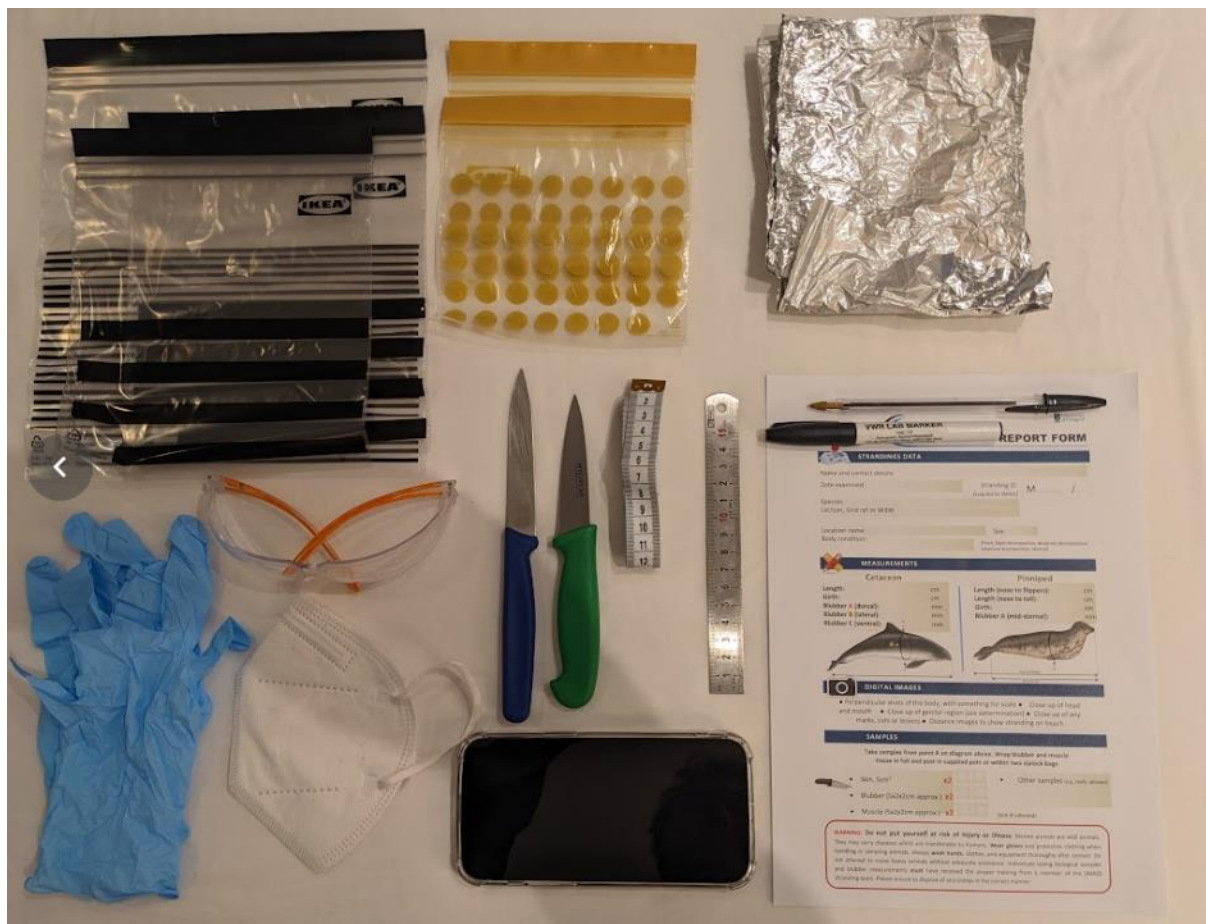


Figure 3: Basic strandings sampling kit as supplied to English-speaking lots.

LOT 1: DUTCH ISLAND STRANDING NETWORKS (ENGLISH/DUTCH)

Two-day workshops took place on 23rd and 24th October in Oranjestad, Aruba and 26th and 27th October in Kralendijk, Bonaire. Hurricane Tammy caused travel delays for the trainers between St Kitts and Nevis and Aruba. As a result, day one of the Aruba workshop was rearranged to start four hours later than originally planned and did not impact delivery of the programme.

Partners and Collaborators:

- Aruba Marine Mammal Foundation (AMMF)
- STINAPA Bonaire.

IWC Trainers

- Andrew Brownlow
- Emma Neave-Webb

Content of Training:

Topics covered

- Introduction to IWC and SPAW-RAC
- Introduction to strandings networks and the response framework.
- Setting up a stranding response framework.
- Introduction to the CAMAC stranding response field guide.
- Overview of stranding response and data sampling
- Introduction to the collection of basic external data from dead strandings, including measurements and photography.
- Practical session on basic external data collection from deceased strandings.
- In-depth training on measurements, photography, data collection, and sampling for deceased strandings.
- Basic physiology and biology of cetaceans.
- Live Stranding Animal Assessment and Handling: A session covering live stranding assessment techniques and safe handling practices.
- Basic First Aid and Intervention Techniques: An introduction to basic first aid and intervention strategies for stranded marine mammals.
- Introduction to Live dolphin handling: An overview of the principles and procedures involved in handling live dolphins.
- Practical Session on Live Dolphin Handling, Rescue, and Refloat Principles: A hands-on session demonstrating live dolphin handling techniques, rescue procedures, and refloat principles.
- Final Review, Questions, and Identification of Next Steps: A concluding session to review key takeaways, address participant questions, and plan future steps in marine mammal stranding response training.

Materials used:

- Power point presentations.
- Inflatables.
- Basic rescue equipment.
- Mock skin, blubber and muscle for sampling.
- Basic sampling equipment.

Key learning objectives

- Health and safety requirements and awareness of possible disease transmission.
- Reasons for having a strandings network and how to establish one.
- Reinforce care techniques for stranded animals.
- Reinforce techniques for collecting samples from stranded animals.
- Strengthen animal welfare concepts during the care of marine mammals.
- Involvement of official health authorities in the care and study of stranded cetaceans.

Participants:

Aruba:

A total of 13 participants attended all or one day of the workshop (dependant on work commitments). Of these, 5 were from the Government or Public Sector, 5 from NGO/environmental organisations, 1 was from veterinary medicine and 2 classified their background as miscellaneous/other.

Bonaire:

A total of 12 participants attended all or one day of the workshop (dependant on work commitments). Of these, 5 were from the Government or Public Sector, 4 from academia/research, 2 from NGO/environmental organisations and 1 classified their background as miscellaneous/other.



Figure 4: (top left to bottom right) Workshop participants in Aruba, live animal response practical session in Aruba, live animal response practical session in Bonaire.

LOT 2: SAINT KITT AND NEVIS AND OTHER ENGLISH-SPEAKING LESSER ANTILLES NETWORKS (ENGLISH)

A two-day workshop took place on 23rd and 24th October in Basseterre, St Kitts. A hurricane alert was put into force at mid-day on Friday 24th October which meant the theory session on live stranding response was merged into the practical training to allow for the workshop to finish at lunchtime.

Partners and Collaborators:

- Ross University School of Veterinary Medicine
- WIDECAST

IWC Trainers

- Andrew Brownlow
- Emma Neave-Webb

Content of Training:

Topics covered

- Introduction to IWC and SPAW-RAC
- Introduction to strandings networks and the response framework.
- Setting up a stranding response framework.
- Introduction to the CAMAC stranding response field guide.
- Overview of stranding response and data sampling
- Introduction to the collection of basic external data from dead strandings, including measurements and photography.
- Practical session on basic external data collection from deceased strandings.
- In-depth training on measurements, photography, data collection, and sampling for deceased strandings.
- Live Stranding Animal Assessment and Handling: A session covering live stranding assessment techniques and safe handling practices.
- Basic First Aid and Intervention Techniques: An introduction to basic first aid and intervention strategies for stranded marine mammals.
- Introduction to Live dolphin handling: An overview of the principles and procedures involved in handling live dolphins.
- Practical Session on Live Dolphin Handling, Rescue, and Refloat Principles: A hands-on session demonstrating live dolphin handling techniques, rescue procedures, and refloat principles.
- Final Review, Questions, and Identification of Next Steps: A concluding session to review key takeaways, address participant questions, and plan future steps in marine mammal stranding response training.

Materials used:

- Power point presentations.
- Inflatables.
- Basic rescue equipment.
- Mock skin, blubber and muscle for sampling.
- Basic sampling equipment.

Key learning objectives

- Health and safety requirements and awareness of possible disease transmission.
- Reasons for having a strandings network and how to establish one.
- Reinforce care techniques for stranded animals.
- Reinforce techniques for collecting samples from stranded animals.
- Strengthen animal welfare concepts during the care of marine mammals.
- Involvement of official health authorities in the care and study of stranded cetaceans.

Participants:

A total of 42 participants attended all or one day of the workshop (dependant on work commitments). Of these, 11 were from the Government or Public Sector, 9 from academia/research, 8 were from veterinary medicine including students, 6 from NGO/environmental organisations, 4 from the marine industry and 4 classified their background as miscellaneous/other.



Figure 5:(top left to bottom right) Basic physiology and introduction to basic sampling practical session, sampling blubber and muscle practical session, live animal response practical session.

LOT 3: DOMINICAN REPUBLIC AND PUERTO RICO NETWORKS (SPANISH)

A two-day workshop took place on 16th and 17th October was held at the Acuario Nacional, in Santo Domingo, Dominican Republic. Due to high venue and accommodation costs, participants from Puerto Rico attended the workshop virtually. After the workshop, a talk was held at Agronomic and Veterinary Faculty, CAV, UASD, Dominican Republic about marine brucellosis as a public health concern in stranded cetaceans. Additionally, the official veterinary diagnostic laboratories (LAVESSEN) were visited to present the need for the involvement of the authorities in professional care during the stranding events in Dominican Republic and future collaborations between the aquarium and the LAVESSEN for the diagnosis of various zoonotic diseases such as influenza and brucellosis, possibly present in the stranded cetaceans.

Partners and Collaborators:

- Acuario Nacional, Santo Domingo República Dominicana
- Departamento de Recursos Naturales y Ambientales, Gobierno de Puerto Rico

IWC Trainers

- Gabriela Hernández-Mora
- Rocío González Barrientos

Content of Training:

Topics covered

- Biology, behaviour and studies of Manatees.
- Practice of the attention of stranding with alive and dead cetaceans (Dominican Republic).
- Identification of marine mammals of the Caribbean.
- Rescue, threats and strategies of conservation of marine mammals of the Caribbean.
- Necropsies of manatees.
- Necropsies of cetaceans.
- Sampling stranded marine mammals.
- Marine brucellosis and public health topics of stranded cetaceans.

Materials used:

- Power point presentations
- Inflatables
- Stranding medical and biological equipment
- Reagents and consumables for brucellosis diagnosis

Key learning objectives

- Reinforce care techniques for stranded animals.
- Reinforce techniques for collecting samples from stranded animals.
- Strengthen animal welfare concepts during the care of marine mammals.
- Involvement of official health authorities in the care and study of stranded cetaceans.
- Awareness of possible diseases present in cetaceans that require attention from the personnel in charge of these procedures.

Participants:

Dominican Republic: 10 participants which include 5 veterinarians and biologist and personal of the aquarium and 1 ONG. Four veterinarians also attended from LAVESEN (National Laboratories of Veterinary Services), who are in charge of the veterinary diagnostic of animal diseases of the government of Dominica Republic.

Puerto Rico: the 10 participants included personnel from the Departamento de Recursos Naturales y Ambientales, Gobierno de Puerto Rico and ONGS.



Figure 6: (top to bottom, left to right) Participants of the workshop at the National Aquarium, Materials used for the practical activities of attention of alive and dead stranded cetaceans, Group of participants analysing the case on the best practices to attend a stranded cetacean, Practice on how to perform the diagnoses of marine brucellosis on the beach prior to the necropsy.

LOT 4: HAITIAN STRANDING NETWORK (CREOLE/FRENCH)

The workshops in Haiti were organised and delivered by Haiti Ocean Project. The final report from Haiti Ocean Project has been attached as Annex A. Two days of workshops were held on 14th and 15th October. The training was delivered in French, with translation in Haitian Creole by Haiti Ocean Project's local marine mammal coordinator, for those participants who did not understand French.

Partners and Collaborators:

- Haiti Ocean Project

IWC Trainers

- Sarah Wund

Content of Training:

Topics covered

- Introduction to strandings networks.
- Introduction of Haiti's proposed stranding network.
- Introduction to the CARI'MAM network and CAMAC project.
- Marine mammals of Haiti and the Caribbean.
- Introduction to field guide and data collection sheets.
- Practical session involving mock stranding and on the beach response.
- Discussion of collection of data and samples.
- Dolphin necropsy video live via Microsoft Teams with Sarah Wund (veterinary pathologist).
- Response to strandings and network organization/public outreach.

Materials used:

- Power point presentations.
- Inflatables.
- Basic rescue equipment.

Participants:

19 fishers from local communities attended alongside four of the youth involved in Haiti Ocean Project alongside the fishers. A full discussion on participant selection is given in the report from Haiti Ocean Project.



Figure 7: (left to right) live animal response practical training, participants during live animal response practical training.

LOT 5: JAMAICA STRANDING NETWORK (ENGLISH)

Two 2-hour online theory sessions were delivered on 7th and 8th October for participants. These were followed by a 1-day workshop held in Jamaica to cover the practical elements of the training. This practical session was repeated in two locations to maximise participation. The first practical session was held at Fort Clarence Beach, Kingston on 2nd November and a second session was run at the Discovery Bay Marine Lab, Discovery Bay on 3rd November. The practical workshops commenced with a Mentimeter questionnaire asking participants to highlight what the key learning objectives were for the training and what participants' experience of marine mammal strandings was. The workshops were then tailored to ensure that these aims and objectives were met.

Partners and Collaborators:

- University of Technology Jamaica,
- Jamaica Society for the Prevention of Cruelty to Animals (JSPCA)

IWC Trainers

- Andrew Brownlow
- Emma Neave-Webb

Content of Training:

Topics covered

- Introduction to IWC and SPAW-RAC
- Introduction to strandings networks and the response framework.
- Setting up a stranding response framework.
- Introduction to the CAMAC stranding response field guide.
- Overview of stranding response and data sampling
- Introduction to the collection of basic external data from dead strandings, including measurements and photography.
- Practical session on basic external data collection from deceased strandings.
- In-depth training on measurements, photography, data collection, and sampling for deceased strandings.
- Live Stranding Animal Assessment and Handling: A session covering live stranding assessment techniques and safe handling practices.
- Basic First Aid and Intervention Techniques: An introduction to basic first aid and intervention strategies for stranded marine mammals.
- Introduction to Live dolphin handling: An overview of the principles and procedures involved in handling live dolphins.
- Practical Session on Live Dolphin Handling, Rescue, and Refloat Principles: A hands-on session demonstrating live dolphin handling techniques, rescue procedures, and refloat principles.
- Final Review, Questions, and Identification of Next Steps: A concluding session to review key takeaways, address participant questions, and plan future steps in marine mammal stranding response training.

Materials used:

- Power point presentations.
- Inflatables.
- Basic rescue equipment.
- Mock skin, blubber and muscle for sampling.
- Basic sampling equipment.

Key learning objectives

- Health and safety requirements and awareness of possible disease transmission.
- Reasons for having a strandings network and how to establish one.
- Reinforce care techniques for stranded animals.
- Reinforce techniques for collecting samples from stranded animals.
- Strengthen animal welfare concepts during the care of marine mammals.
- Involvement of official health authorities in the care and study of stranded cetaceans.

Participants:

A total of 30 participants attended over the two days of workshops. Of those who completed the online registration, 6 were from the Government or Public Sector, 4 from academia/research, 3 from NGO/environmental organisations, 1 from the marine industry and 3 classified their background as miscellaneous/other. In addition, 4 members of the Jamaican Defence Force Coast Guard attended on 2nd November.



Figure 8: (Top to bottom, left to right) live animal response practical training, simulation skin, blubber and muscle for training in basic sampling techniques, basic physiology and introduction to sampling session.

LOT 6: SURINAMESE STRANDING NETWORK (DUTCH/SURINAMESE)

A virtual necropsy workshop took place on 24th October live streamed from the University of Utrecht, Netherlands. In-person sessions will take place in early 2024. An evaluation report was received from the project partner in Suriname and is annexed at the end of this report.

Partners and Collaborators:

- Green Heritage Fund, Suriname
- Faculty of Veterinary Medicine, Utrecht University

IWC Trainers:

- Lonneke IJsseldijk
- Mariel ten Doeschate

Content of Training:

Topics covered

Contextualisation in wider stranding surveillance setting.

Live stream of harbour porpoise necropsy including external examination, internal examination, sampling list

Q&A related to virtual necropsy.

Materials used:

- Harbour porpoise carcass.
- Equipment for completing a full necropsy.

Key learning objectives

- Reinforce techniques for collecting samples from stranded animals.
- How to complete a cetacean necropsy.
- Health & safety considerations.

Participants:

There were six participants for the virtual necropsy workshop. Three participants were veterinary surgeons, one participant was a student of veterinary medicine, two participants were biologists, of which one is the curator of the National Zoological Collection of Suriname, and the other a marine biologist working at the Ministry of Agriculture, Animal Husbandry and Fisheries. The sixth participant was the director of the GHFS.

WORKSHOP FEEDBACK

Feedback was gathered following the workshops for the English-speaking Lots using Mentimeter. Feedback from the Suriname virtual necropsy session and the Haiti workshop are provided in the appended reports. Overall, despite the challenges feedback was very positive with the majority of participants expressing satisfaction with the course. They felt it was pitched at the right level and an appropriate length. The course content was well-received, and participants felt that trainers did an excellent job of explaining the topics.

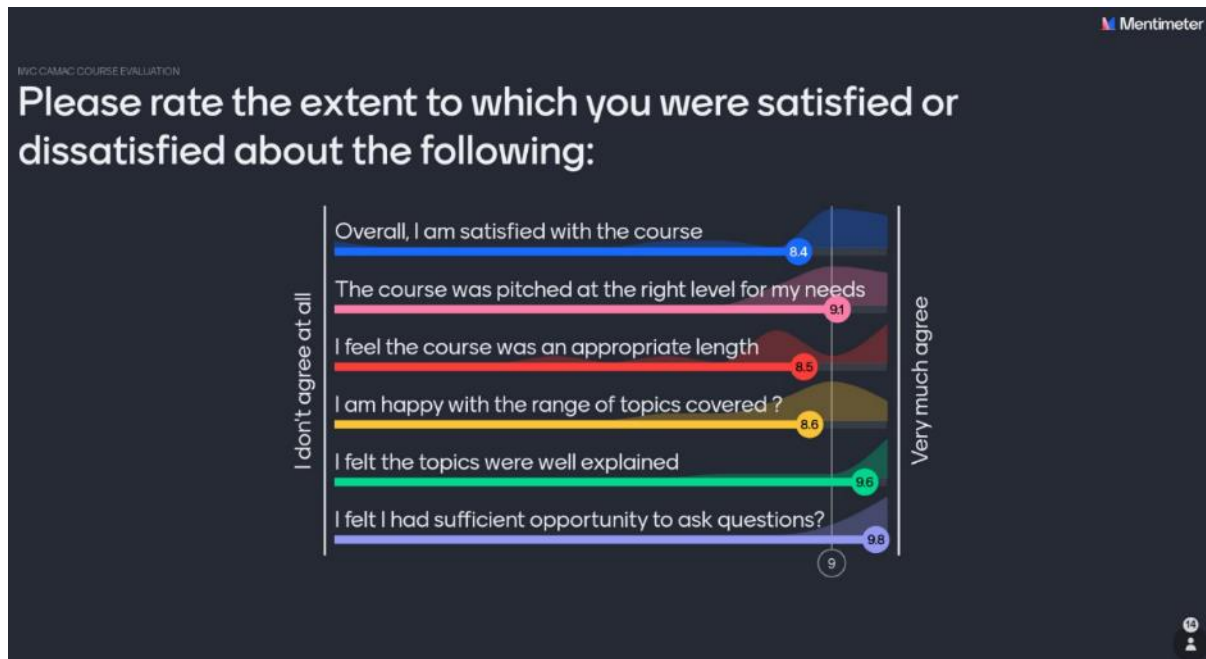


Figure 9: Course feedback, Aruba and Bonaire n=14



Figure 10: Course feedback, Jamaica n=14

KEY FINDINGS AND RECOMMENDATIONS

A review and debrief of the project revealed a wide spectrum of skills and experiences among participants, but with a uniform need across most networks for basic, adaptable strandings response. A significant driver for attendance was the appetite for comprehensive training in live animal response techniques and welfare assessment. However, the challenge of relatively low stranding incidence in each network, potentially raises challenges in skill acquisition and development in addition to recruitment and maintenance of a volunteer response team.

Participants identified specific complexities, for example in addressing marine mammal euthanasia, indicating a requirement for specialised protocols and training tailored to these circumstances. While most networks had established connections between NGOs, veterinarians, government entities, and diagnostic laboratories, there remains clear scope for the wider strandings community to assist in strengthening and developing these collaborations. A shared aspiration among participants was to elevate diagnostic capacity and sample processing capabilities throughout the region, emphasising a collective need for enhanced technical proficiency. Further capacity could be provided by building and strengthening links between other surveillance and monitoring programmes, including terrestrial wildlife responders, human diagnostic laboratories and livestock veterinarians.

There was a unanimous call from all networks for an online resource repository, reflecting a recognised potential to enhance efficiency, build community and improve outcomes if shared collaboratively among networks. The IWC SEP has a unique capacity to support this, and it is the recommendation that this is developed in future.

This phase of the CAMAC project produced a comprehensive resource for stranding response, with detailed content for a range of situations. Any subsequent programme of work could consolidate this into formats more accessible at the point of need to those on the beach. For example, extensive PowerPoint presentations could be reformatted into beach-accessible summaries and checklists, videos edited to 1–2-minute segments and lists of minimum strandings response kits provided tailored to items available in country.

To support this work, there was an identified need to have a long-term digital repository for these resources, well-curated to enable easy location of information. IWC or Global Strandings Network are possible conduits for hosting such data. Other digital resources suggested involved a Caribbean-wide strandings datahub, collating basic strandings data from across the region. This may be basic ‘what-where-when’ data with the potential to store other metadata, for example, any samples archived or clinicopathological observations. The IWC strandings initiative may be able to assist support data curation if required, however, there was a suggestion from several participants that this incorporated a collaboration/data sharing agreement to ensure ownership, use and credit for the data remains with the providers and individual response networks.

RECOMMENDATIONS FOR CAMAC PROJECT PHASE II:

1. Support establishing communication networks within and between marine mammal stranding response networks using platforms such as WhatsApp or Telegram to foster collaboration between responders and global expert networks (i.e. IWC, GSN, IFAW).
2. Develop a dedicated online data management portal tailored for both live and dead strandings, complemented by comprehensive digital resources, to bolster the utility of data collected during response efforts.
3. Create concise, adaptable and 'beach-accessible' training materials, including waterproof cards, short videos, and infographics, to accommodate varying skill levels among response personnel.
4. Explore opportunities for cross-learning and resource optimisation by integrating cetacean strandings response with other wildlife programs, such as marine turtle conservation efforts.
5. Establish a strandings response fund, or otherwise enable countries to access funding for ongoing training initiatives, particularly in practical necropsy training, to ensure sustained capacity building within stranding response teams.
6. Disseminate marine mammal euthanasia protocols to establish standardised approaches for handling challenging scenarios, contributing to uniformity in response strategies.
7. Actively engage with international strandings response groups, for example, the IWC SEP and the Global Strandings Network to facilitate global collaboration and knowledge exchange, thereby amplifying the capabilities of marine mammal stranding response.

These recommendations collectively aim to strengthen marine mammal stranding response strategies and foster enhanced collaboration within the network.

CHALLENGES FACED:

Whilst not making landfall in St Kitts and Nevis, Hurricane Tammy wreaked havoc on travel plans, resulting in significant delays for the team stranded in St. Kitts due to the airport's 48-hour closure. However, with built-in buffers to cover such eventualities, the team arrived in Aruba having lost half a day of workshop time and this was able to be recouped thanks to the flexibility of workshop participants.

The high accommodation costs in Puerto Rico coupled with the minimal budget, meant an urgent change in plans for the workshop venue. Consequently, the location shifted to the Dominican Republic, necessitating Puerto Rico's attendance through virtual means.

The limited consultation from the project organisers in Haiti meant that IWC did not have much oversight or control over the project spend in Haiti. This has led to a delay in finalising budgets for the project and the provision of strandings response equipment or resources whilst invoicing is agreed.

A delay to the tender process and subsequent knock-on effect on notification of successful award meant that the project had to be delivered on a very tight schedule and with a fairly limited budget. Training materials were also not received until very close to the workshops starting so this meant that preparation was limited.

FINANCIAL SUMMARY:

Budget Utilisation

Allocated funds were utilised as per the budget table below.

ITEM	AMOUNT	€ 89,950.00
Project Manager (0.4 FTE for three months)	€ 9,600.00	
IWC central administration costs	€ 4,000.00	
Lot 1 - Aruba/Bonaire	€ 9,101.68	
<i>General Costs</i>	€ 2,063.86	
<i>Accommodation</i>	€ 940.09	
<i>Transport</i>	€ 223.69	
<i>Venue Hire</i>	€ 4,197.73	
<i>Catering</i>	€ 593.83	
<i>Equipment</i>	€ 404.30	
<i>Trainer Costs</i>	€ 605.34	
<i>Misc</i>	€ 72.84	
Lot 2 - Saint Kitt and Nevis	€ 5,683.53	
<i>General Costs</i>	€ 2,063.86	
<i>Accommodation</i>	€ 1,152.11	
<i>Transport</i>	€ 338.14	
<i>Venue Hire</i>	€ -	
<i>Catering</i>	€ 1,483.43	
<i>Equipment</i>	€ 202.15	
<i>Trainer Costs</i>	€ 443.84	
<i>Misc</i>	€ -	
Lot 3 - Dominican Republic/Puerto Rico	€ 4,388.16	
<i>General Costs</i>	€ 2,063.86	
<i>Accommodation</i>	€ 1,229.32	
<i>Transport</i>	€ 110.31	
<i>Venue Hire</i>	€ -	
<i>Catering</i>	€ 784.35	
<i>Equipment</i>	€ 202.15	
<i>Trainer Costs</i>	€ 200.32	
<i>Misc</i>	€ -	
Lot 4 - Haiti	€ 7,642.65	
<i>General Costs</i>	€ 2,063.86	
<i>Accommodation</i>	€ 2,021.34	
<i>Transport</i>	€ 2,243.18	
<i>Venue Hire</i>	€ -	
<i>Catering</i>	€ 25.53	
<i>Equipment</i>	€ 271.00	
<i>Trainer Costs</i>	€ 439.23	
<i>Misc</i>	€ 578.51	
Lot 5 - Jamaica	€ 6,041.12	
<i>General Costs</i>	€ 2,063.86	
<i>Accommodation</i>	€ 2,281.80	
<i>Transport</i>	€ 31.87	
<i>Venue Hire</i>	€ -	
<i>Catering</i>	€ 1,237.64	
<i>Equipment</i>	€ 202.15	
<i>Trainer Costs</i>	€ 223.80	
<i>Misc</i>	€ -	

Lot 6 - Suriname	€ 2,280.57	
<i>General Costs</i>	€ 2,063.86	
<i>Accommodation</i>	€ 142.90	
<i>Transport</i>	€ 73.81	
<i>Venue Hire</i>	€ -	
<i>Catering</i>	€ -	
<i>Equipment</i>	€ -	
<i>Trainer Costs</i>	€ -	
<i>Misc</i>	€ -	
TOTAL SPENT ON WORKSHOP ORGANISATION	€ 48,737.71	
SPEND ON RESOURCES/EQUIPMENT		€ 41,212.29

CONCLUSION:

Despite facing significant time constraints and budget limitations, the project was a huge success. This accomplishment would not have been possible without the invaluable support and collaboration from our in-country partners. Their expertise and efforts were integral in overcoming obstacles. This collective effort turned challenges into opportunities, leading to the successful realisation of the project goals.

Annex 1

Haiti Marine Mammal Stranding Training Workshop Report



Haiti Marine Mammal Stranding Training Workshop Report

October 14-15, 2023

Petite Riviere de Nippes, Haiti

Introduction

I want to first thank SPAW-RAC and the CAMAC project as well as IWC (Emma and Andrew) for the opportunity to conduct the marine mammal stranding training workshop in Haiti. Despite all the challenges and difficulties in Haiti, I am pleased to share with you the success of this workshop, due to the assistance of the local Haitians from Haiti Ocean Project and our fishing community of Petite Riviere de Nippes, for helping organize every detail.

Logistics

With the short turnaround to conduct these workshops, it was necessary to find the appropriate dates to conduct the workshop, which worked with all involved in its preparation and attendance. This meant flights needed to be quickly scheduled, and all the logistics organized to ensure the safety of all those attending the workshop. We needed to secure on-the-ground transportation, boats for travel and the help of the Haitian government and police. This workshop was held shortly after a week of environmental celebrations in our Nippes Department, hosted by the Haitian ministry of the Environment. Jean Fanfan Jourdain, who is the director of the climate change program for the Haiti ministry of the Environment, was extremely supportive of these workshops. At the conclusion of the workshops and the night before we flew back to Florida, while staying at a hotel in Port au Prince, we had dinner with Mr. Jourdain, who shared his enthusiasm and interest in being involved in our future environmental endeavors, including additional marine mammal stranding workshops.

Participant Selection

In Haiti, the artisanal fishers who reside in the rural fishing communities are the only individuals who are at sea daily. They are also the biggest threat to any potential incident involving a marine mammal; therefore, their involvement is critical for the marine mammal stranding training. We have documented past incidents involving marine mammals in which they were caught and killed by fishers we either now work with or others we have not yet met. For example, a few years ago, one of the fishers who we invited to the workshop, speared a dwarf sperm whale who approached his boat while he was out fishing. A few other fishers we invited watched as a Cuvier's beaked whale was shot at sea by a man from a neighboring community. That whale eventually stranded on the beach, only to be killed by the locals who found it. These are just a few instances when a marine mammal could have been saved if

those fishers had prior training. We work primarily in four key fishing communities along the inner southern coastline, where there is a large presence of marine mammals. These communities are our home base of Petite Riviere de Nippes, Anse a Veau, Petit Trou de Nippes and Grand Boucan. We selected 19 fishers from each of these communities to participate, all of whom we know and have already established a relationship with. They all have a basic understanding of our marine conservation work, and some have been heavily involved in our shark and sea turtle rescue/relief efforts. However, we had not yet focused on the marine mammals, so this was our opportunity to educate and train them, so they can take the lead when it comes to marine mammal stranding training. We also included four of the youth involved in Haiti Ocean Project, to participate in the workshop, alongside the fishers. These youth have expressed an interest in learning more about marine mammals in Haiti waters and are willing to assist with the development of a stranding network for fishers and the local communities in which they reside.

Workshop Agenda

We designed our workshop agenda to include all the documents and PowerPoints in the CAMAC marine mammal toolkit. As agreed, upon with IWC, after a phone call in late September, the training took place at our marine facility in Petite Riviere de Nippes. We held two days of workshops, and the training was delivered in French, with translation in Haitian Creole by Haiti Ocean Project's local marine mammal coordinator, for those participants who did not understand French.

Day One: The sessions in the workshop for Day 1 included an introduction to stranding networks, presentation of Haiti's proposed stranding network, the CARI-MAM network and CAMAC project, discussion of marine mammals observed in Haiti and the Caribbean, presentation and identification of each species, CARIMAM training PowerPoints and introduction to field guides and field data collection sheets.

Day Two: The sessions in the workshop for Day 2 included a mock stranding and on the beach response, discussion of collection of data and samples, dolphin necropsy video live via Microsoft Teams with Sarah Wund, (veterinary pathologist), a response to strandings and network organization/public outreach, and review of equipment needed in case of a stranding (alive or dead animal) or mass stranding. At the end of the workshop, each fisher was given a certificate of participation and completion, and a book about cetaceans of the Antilles, authored by Caroline and Renato Rinaldi. Sarah and Caroline are both part of the French National Stranding Network.

Workshop Evaluation and Outcomes

How did we ensure success? We decided it would be beneficial to have the training workshop at our location in Petite Riviere de Nippes, as we have space, reliable internet, a projector and screen and kitchen where food could be cooked for the participants in the workshop. We are also located on the beach, an ideal location to organize the mock stranding. As 9 of the fishers had to travel over 20 miles to attend the workshop, we decided to accommodate those fishers by housing them at our location. This created a camaraderie amongst our team and the fishers, which strengthened the bond which had previously been formed. We held the workshops in an area with a cover, as it was possible it might rain. We set up a space with enough chairs for all

participants and provided water and other drinks throughout the day. We made sure there was more than enough food for the participants and our team, including dinner for those fishers who stayed overnight on Saturday. Some of the youth who are involved with Haiti Ocean Project volunteered to help, including taking photos of all aspects of the workshop. We knew that these fishers had a somewhat general knowledge of marine mammals in Haiti, so we made sure to keep a steady pace and allow for questions and answers throughout the workshop. We also gave the fishers multiple opportunities to offer their feedback and thoughts, as we knew the information they provided about marine mammals would be valuable.

A) Selection of the trainer

Since 2015, there has been communication with Caroline Rinaldi, and a possibility to bring her to Haiti to help us learn more about our marine mammal populations. Caroline is from Guadeloupe and speaks fluent French and Creole, and has extensive experience working with marine mammals, many of which are similar species found in Haiti. Caroline is the coordinator of both the Marine Mammal stranding network and Marine Turtle Stranding Network off the Guadeloupe archipelago. She is also part of the French Stranding network (RNE) since 1998 with trainings in 2004 2009 2011 2013. She participated in the NOAA Stranding and Distress Rescue training, Shepherdstown, West Virginia in 2016 and received disentanglements training with David Mattila. Caroline has been involved with several disentanglements of sperm whales and humpback whales in Caribbean waters. In January 2010, she organized a regional stranding workshop with Nathalie Ward (NOAA) for the French Caribbean speaking countries (including Haiti) in the initiative and support of the SPAW RAC, Diren and NOAA.

B) Follow up: What will come from this phase of the training!

Having seen the excitement and enthusiasm of these local artisanal fishers who participated in the marine mammal stranding training workshop, and the start of a network of fishers who are trained in how to handle a marine mammal stranding or marine mammal in distress, we see tremendous potential to expand this network to include more local fishers in these and other communities along the southern coastline of Haiti. While we did conduct a very successful mock stranding with these fishers, we would like to see a larger mock stranding involving the local population who reside near the beach, as they can be equally important in the event of a true marine mammal stranding. We would like to bring stranding materials to Haiti, including stretchers which we have none currently in our country.

Workshop Expenses

When we first arrived in Haiti, we needed transportation to get from the Port au Prince airport to Petite Riviere de Nippes. Due to the problems in Port au Prince involving gangs, it was imperative we travel the safety route, which was by sea. The distance from Port au Prince to Petite Riviere de Nippes is 67 miles each way, which requires a significant amount of fuel. On the return trip back to Port au Prince, we also needed to stay one night at a hotel near the airport, to ensure we don't encounter problems on the road the day we are flying back to Florida. We also needed to rent a car in Port au Prince to get from the airport to the port where our boat was waiting to pick us up. There were additional items we needed to bring such as gloves, tape reels, inflatable dolphins, white boards, certificates and books about marine mammals in French.

The workshop was held at our location in Petite Riviere de Nippes, which eliminated a venue fee. However, we did need to fix some of the rooms in which we housed 9 fishers on the night of Saturday, October 14th, 2023. When we arrived in Haiti the day before the workshop, our

generator was not working at full capacity, which meant we had no A/C in the rooms. Therefore, we had to put our trainer in a local nearby hotel each night, an additional unexpected expense. We did provide food/drinks for all participants, trainer and members of Haiti Ocean Project who coordinated the workshop.

Because this workshop is for the purpose of creating a marine mammal stranding network, there needs to be the ability for all participants to communicate with each other. Most of the fishers who participate, and Haitian fishers in general, do not have smart phones. It is imperative that each fisher involved in this network could connect to the internet. Our plan is to create a WhatsApp chat among the fishers, so they can be in constant communication with us and each other. This is necessary if we are to save a marine mammal or document one in our waters. We therefore feel it is necessary to provide smart phones (refurbished at a lower cost, with a waterproof case and solar phone charger) for the fisher participants from the workshop.

We also see a need to create awareness billboards with photos and text in Haitian Creole, which would provide the contact information of our local coordinators, in the case of a marine mammal stranding or marine mammal in distress. We had previously created these billboards for a manatee education/awareness project through SPAW-RAC, which was very successful and helped us form stronger relationships with the local communities. These billboards would be positioned near the location of the fisher association headquarters for each community, or for those communities who do not have formal fisher associations, at the beaches where the fishers congregate when they head out to sea on their small boats or canoes.

Summary and Conclusions

The Haiti marine mammal stranding training workshop was a big success in all aspects. The participants, local team and trainer were extremely happy with the outcome. The fishers felt a sense of purpose, being included in this workshop. They also realized they had important information and stories to share about marine mammals they encountered at sea. Caroline Rinaldi connected with the fishers and youth, in a way that made them feel comfortable and created a positive learning experience. The local Haiti Ocean Project coordinators were thrilled to see the engagement of the fishers and youth, especially during the mock stranding on the beach. The fishers and youth were each given a role (rescuer, veterinary, press, police, governmental official, overzealous helper) and they all played an active part in the entire demonstration.

After the second day of the workshop ended, Caroline met with a group of 29 youth involved with Haiti Ocean Project, giving them an introduction to marine mammal response. After the discussion, the youth released two juvenile hawksbill sea turtles, which were rescued the day before.

The day after the workshop ended, we went on our boat to search for marine mammals. Caroline, taught Haiti Ocean Project's local marine mammal coordinator Cleeford Joseph, how to document marine mammals at sea and how to identify their sounds and location, using a directional hydrophone. During this day, Caroline also taught the local Haiti Ocean Project coordinators how to get organized to be informed and able to respond to an event and how to adapt the response to the type of stranding.

While at sea that same day, we encountered three beaked whales swimming together. Two were Cuvier's beaked whales and the third was a Gervais beaked whale. A week after the workshop ended, one of the fishers from Grand Boucan who participated in the workshop, observed three beaked whales near his boat and filmed them. We confirmed they were also two Cuvier's beaked whales and one Gervais. While we couldn't confirm they were the same three whales, it is possible. Furthermore, because of the workshop, this fisher identified these whales and knew to film them. This happened to be one of the only fishers who participated in the workshop with a smart phone, showing the need to get these phones in the fishers' hands!

I would like to again thank SPAW-RAC and the CAMAC project along with IWC for the opportunity to conduct these marine mammal stranding training workshops in Haiti. Regardless of the difficult situation in the country, it is imperative that these local fishing communities be involved, become informed and learn about natural environment issues. Since 2007, Haiti Ocean Project has been working alongside these local communities, especially with the fishers and youth, focused on conservation of marine megafauna. We have identified 17 species of marine mammals in Haiti waters, some of which are endangered. In addition to our existing connection with SPAW-RAC, the CAMAC project and now IWC, we have also been supported by numerous organizations and educational institutions including The New England Aquarium, OceanX, Mote Marine Laboratory & Aquarium, Digicel Foundation, Florida International University, Loggerhead Marine Life Center, National Fish and Wildlife Association, BIOPAMA, The Nature Conservancy, among others, all for the purpose of supporting our work involving protection of Haiti's valuable marine megafauna. The marine mammal populations in Haiti are a priority, and we hope this workshop is just the beginning of establishing a strong marine mammal stranding network in Haiti.

Annex 2

**Evaluation of virtual Suriname necropsy training on 24 October 2023 by
the International Whaling Commission**

SUNDAY, NOVEMBER 5, 2023

EVALUATION OF VIRTUAL SURINAME NECROPSY TRAINING ON 24 OCTOBER 2023 BY THE INTERNATIONAL WHALING COMMITTEE



Le projet CAMAC est cofinancé par le programme Interreg Caraïbe



Cetacean Necro Step by Step Chec

Rocío González Barrientos

Gabriela Hernández Mora

Juan Abarca Alvarado

José David Palacios Alfaro

August 2023

The SPAW RAC, a technical center under the Cartagena Convention's Protocol for Specially Protected Areas and Wildlife, supports the United Nations Environment Program-Caribbean Environment Program (UNEP-CEP) and Caribbean nations in biodiversity protection efforts. It previously carried out the CARI'MAM project (2018-2022), aimed at strengthening marine mammal conservation in the region. The CARI'MAM initiative, co-funded by the EU, established a Caribbean network of over 270 participants from 78 organizations and 31 Caribbean territories. Building on CARI'MAM's success and SPAW country recommendations, the SPAW RAC has launched the 5-year Caribbean Marine Megafauna and Anthropogenic Activities (CAMAC, 2023-2028) project, focusing on regional cooperation and knowledge to reduce human impacts on marine megafauna. The project comprises four work packages, including socio-economic and environmental assessments, strengthening stranding networks, raising awareness, and improving knowledge through aerial surveys. In the first year of CAMAC, SPAW RAC produced a standardized regional protocol for stranding response, developed a training toolkit, and organized related workshops.

On the 24th of October, a Zoom meeting featuring a live stream of a necropsy on a harbor porpoise was scheduled from 05:00 to 10:00 AM, Suriname time (GMT -3), directly from the University of Utrecht. The IWC stranding committee's Lonneke Ijseldijk, associated with the University of Utrecht, facilitated this arrangement, ensuring access to the PM (post-mortem) room, which allowed the live stream of the necropsy training to proceed in Dutch, the preferred language for the Suriname training. The training was provided by Lonneke Ijseldijk and Mariel Tendoeschate from the IWC stranding committee.

The agenda of the training was as follows:

10:00 – 10:05 (GMT +2): Introduction by Monique Pool, Green Heritage Fund Suriname (GHFS)

10:05 – 11:00 (GMT +2): [Office] quick round of introductions and contextualization in wider stranding surveillance setting by Lonneke Ijseldijk and Mariel Tendoeschate (IWC)

11:00 – 14:00 (GMT +2): [PM room] live stream of harbor porpoise post mortem: external examination, internal examination, sampling list etc by Lonneke Ijseldijk and Mariel Tendoeschate (IWC) and Q&A related to what was seen

14:00 – 14:30: Break to tidy up/move to office

14:30 – 15:00: Continued discussion & questions on pm, and set up/discussion for November sessions.

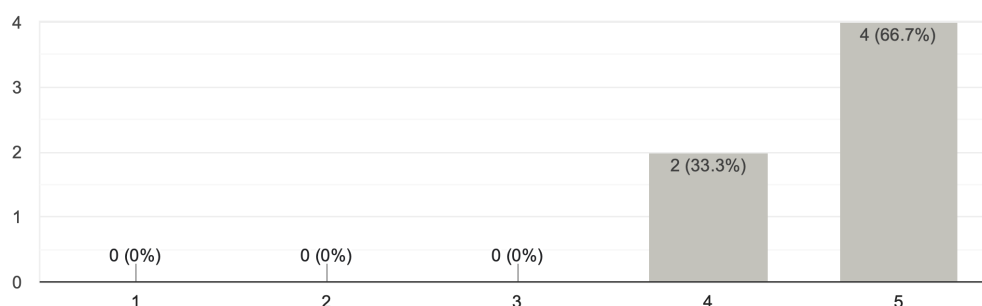
EVALUATION OF VIRTUAL SURINAME NECROPSY TRAINING

An evaluation form was created by GHFS to ask for feedback from the participants of the online necropsy training, see questionnaire in the attachment. All questions were answered by all six (6) participants. Three participants are veterinary doctors, one participant is a student of veterinary medicine, two participants are biologists, of which one is the curator of the National Zoological Collection of Suriname, and the other a marine biologist working at the Ministry of Agriculture, Animal Husbandry and Fisheries. The sixth participant is the director of the GHFS.

Below follow the answers to the questionnaire in diagrams.

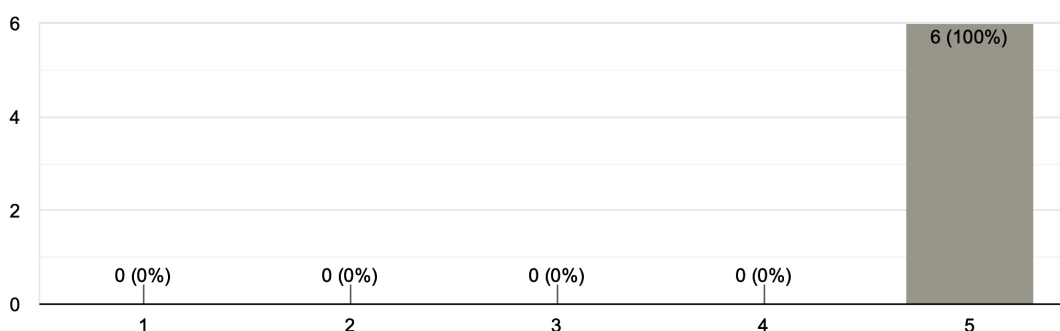
Workshop Content: The workshop content was relevant and informative.

6 responses



Instructor(s): The instructor(s) were knowledgeable and effectively communicated the material.

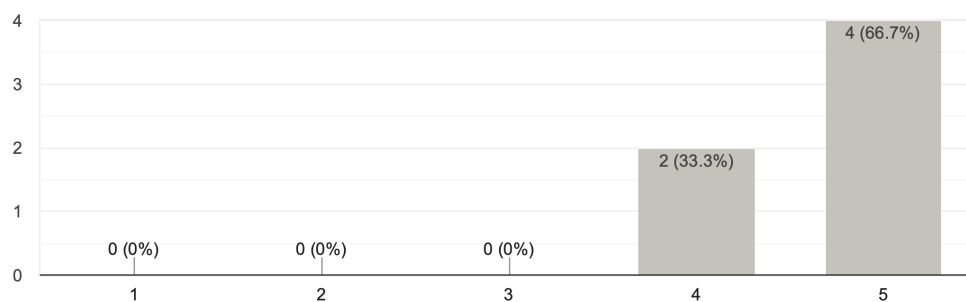
6 responses



EVALUATION OF VIRTUAL SURINAME NECROPSY TRAINING

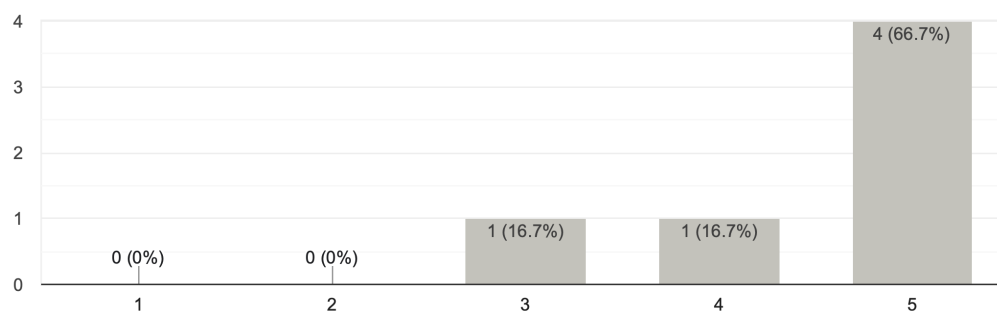
Hands-On Activities: The hands-on activities and practical demonstrations were valuable.

6 responses



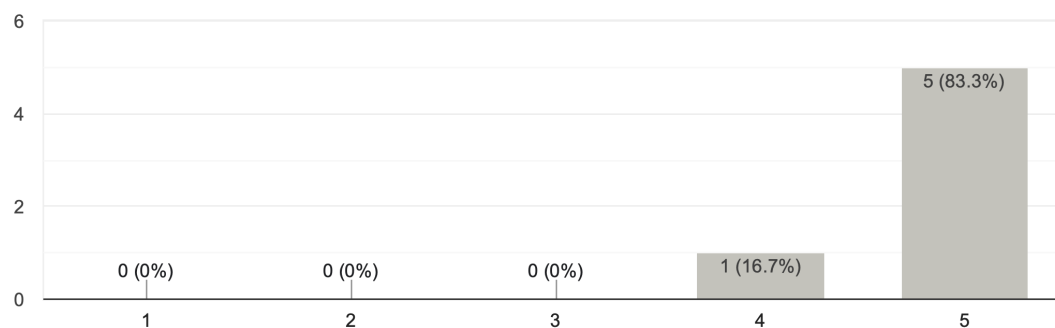
Materials and Resources: The provided materials and resources were useful.

6 responses



Overall Organization: The workshop was well-organized and structured.

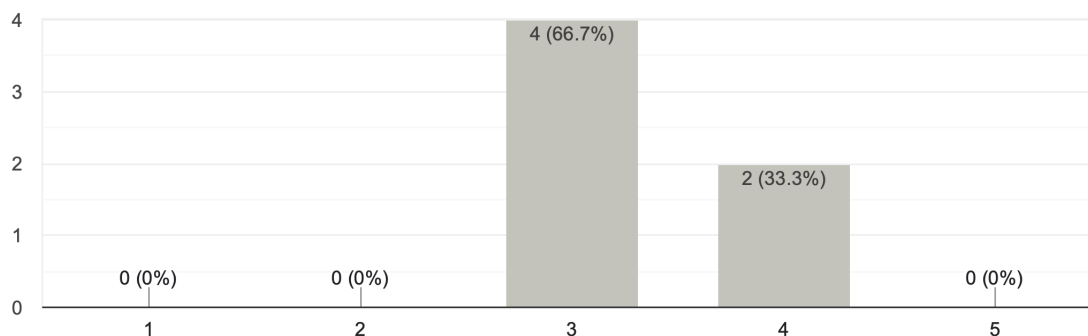
6 responses



EVALUATION OF VIRTUAL SURINAME NECROPSY TRAINING

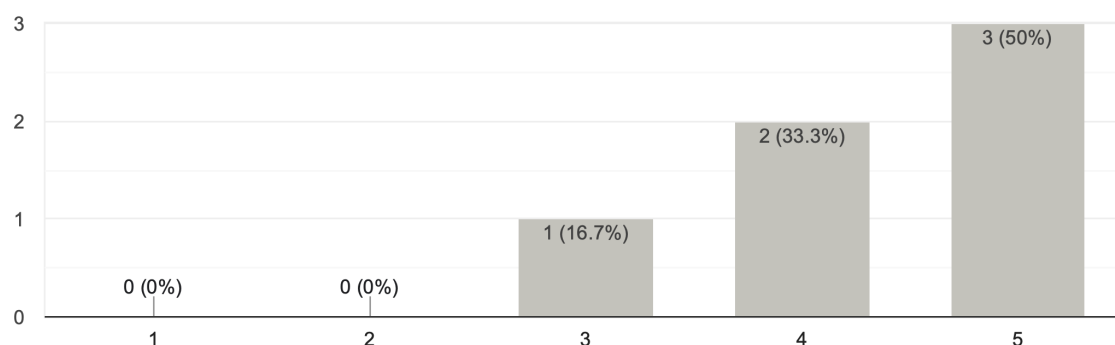
Duration of the Workshop: The length of the workshop was appropriate.

6 responses



Networking Opportunities: The workshop provided opportunities for networking and interaction with fellow participants.

6 responses



We also asked for additional comments from the participants, such as any specific feedback, suggestions, or comments on the workshop's content, format, or organization, which feedback is summarized below in one paragraph.

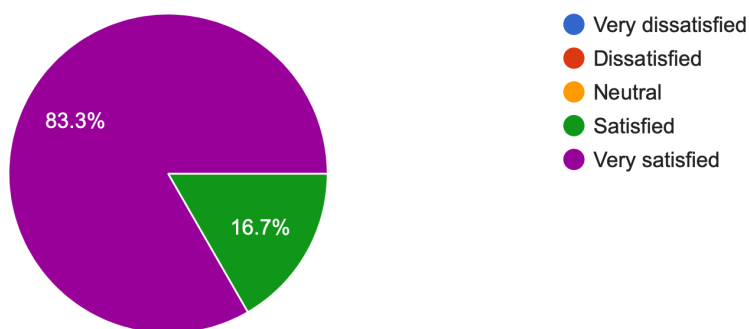
The participants appreciated the workshop's instructors and praised their remarkable expertise and clear, in-depth knowledge. They found the training's duration just right, with well-timed breaks that enhanced the overall experience. The opportunity to witness the necropsy procedures greatly facilitated their comprehension of theoretical concepts. Regrettably, one participant could only attend the latter part of the workshop, missing the necropsy and dissection portions. They also encountered intermittent sound issues, especially when the speaker was in motion, and expressed a

EVALUATION OF VIRTUAL SURINAME NECROPSY TRAINING

strong desire to access the recording for review before the subject matter fades from memory.

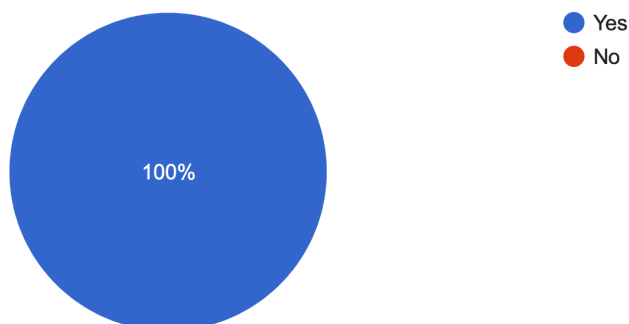
Overall Satisfaction: Please rate your overall satisfaction with the marine mammal necropsy workshop.

6 responses



Would you recommend this workshop to others?

6 responses



We also asked the participants if they had any suggestions for future workshops or topics they would like to see covered, which feedback is summarized below in one paragraph. The participants were interested in a future training session focused on sea turtles. They also expressed a desire to witness a necropsy on dolphins. Additionally, they raised questions about euthanizing animals, particularly when determining the appropriate time and method, especially for larger animals.

EVALUATION OF VIRTUAL SURINAME NECROPSY TRAINING

Several participants noted occasional difficulty hearing the speaker, particularly when she was in the PM room and moving, and suggested using a head microphone to improve sound quality and mitigate issues related to phone distance. The participants expressed their satisfaction with the opportunity offered by Lonneke for their veterinarians to visit the necropsy room during their visits to the Netherlands, enabling them to attend live necropsies.

In conclusion, the workshop was deemed well-organized by the participants, and they collectively voiced a desire to obtain the recording for use as an ongoing reference.

Suriname Marine Mammal Necropsy Workshop Evaluation 24 October 2023

Feedback and Suggestions regarding the IWC stranding training (necropsies and how to collect samples and why)

Trainers: Lonneke Ijsseldijk and Mariel Tendoeschate from the IWC stranding committee
Zoom meeting through the necropsy live stream for 05:00 – 10:00 AM Suriname time from the University of Utrecht

Thank you for participating in our event. We want to hear your feedback so we can keep improving our logistics and content. Please fill this quick survey and let us know your thoughts.

*** Indicates required question**

1. Email *

Please rate the following aspects of the workshop on a scale of 1 to 5, with 1 being "Strongly Disagree" and 5 being "Strongly Agree."

2. Workshop Content: *

The workshop content was relevant and informative.

Mark only one oval.

1 2 3 4 5

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

3. Instructor(s):

*

The instructor(s) were knowledgeable and effectively communicated the material.

Mark only one oval.

	1	2	3	4	5	
<hr/>						
Stro	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree
<hr/>						

4. Hands-On Activities:

The hands-on activities and practical demonstrations were valuable.

Mark only one oval.

	1	2	3	4	5	
<hr/>						
Stro	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree
<hr/>						

5. Materials and Resources:

The provided materials and resources were useful.

Mark only one oval.

	1	2	3	4	5	
<hr/>						
Stro	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree
<hr/>						

6. Overall Organization:

The workshop was well-organized and structured.

Mark only one oval.

	1	2	3	4	5	
<hr/>						
Stro	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree
<hr/>						

7. Duration of the Workshop:

The length of the workshop was appropriate.

Mark only one oval.

	1	2	3	4	5	
Too	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Too long

8. Networking Opportunities:

The workshop provided opportunities for networking and interaction with fellow participants.

Mark only one oval.

	1	2	3	4	5	
Stro	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

9. Additional Comments:

Please share any specific feedback, suggestions, or comments on the workshop's content, format, or organization. Your input is valuable in helping us improve future workshops.

10. Overall Satisfaction: *

Please rate your overall satisfaction with the marine mammal necropsy workshop.

Mark only one oval.

☐ Very dissatisfied

☐ Dissatisfied

☐ Neutral

☐ Satisfied

☐ Very satisfied

11. Would you recommend this workshop to others? *

Mark only one oval.

☐ Yes

☐ No

12. Do you have any suggestions for future workshops or topics you'd like to see covered?

13. Any additional comments regarding the session or overall agenda?

14. Name (optional)

Thank you for taking the time to complete this evaluation form. Your feedback is greatly appreciated and will assist us in enhancing future marine mammal necropsy workshops.

This content is neither created nor endorsed by Google.

Google Forms

Annex 3

GCFI76 workshop presentation given by Emma Neave-Webb and Andrew Brownlow:

**Strengthening Marine Mammal Stranding Networks in the Caribbean
Workshop Report and Recommendations**

Strengthening Marine Mammal Stranding Networks in the Caribbean

Workshop Report and Recommendations



INTERNATIONAL
WHALING COMMISSION



Objectives

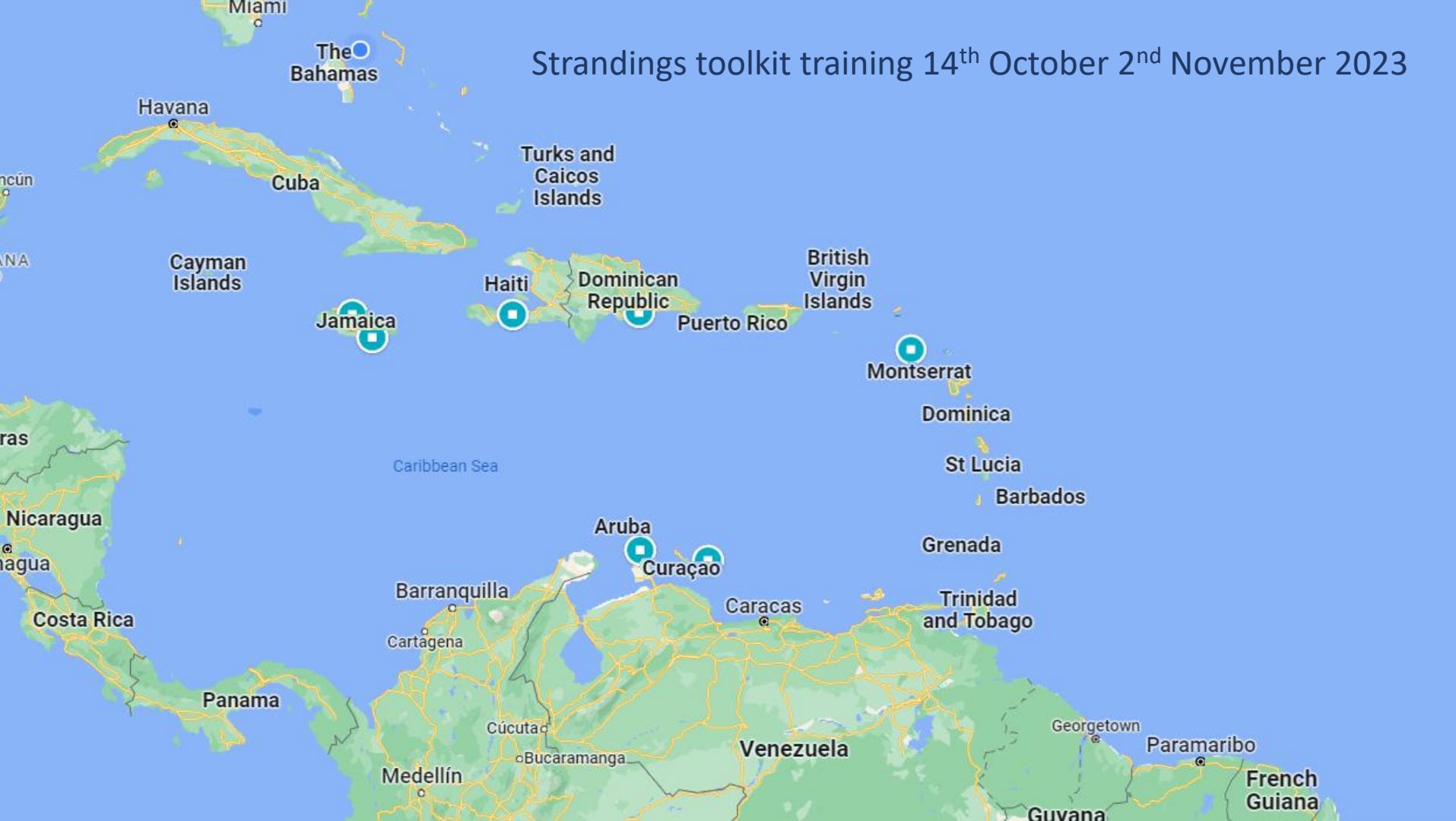
Assistance to SPAW-RAC in the organisation of capacity building workshops for the marine mammal stranding networks that contribute to the stranding group of the CARI'MAM network.

Action 3 of CAMAC work package 4: to organise capacity building workshops on marine mammal stranding response for the networks contributing to the stranding group of the CARI'MAM network.



Mass stranding event, Tobago, 31st October 2023

Strandings toolkit training 14th October 2nd November 2023



Needs and expectations Mentimeter survey

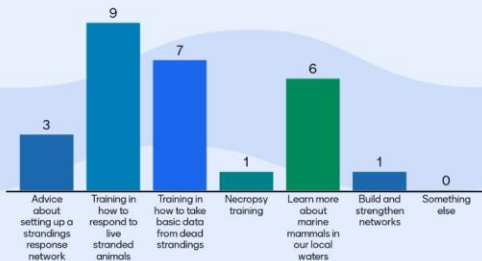
- Run at start of course
- Used to aid discussions and tailor training

What words best describe your experience of marine animal strandings?
15 responses

zero experience non-existent
smelly hard work
sad unexperienced
nasty sea turtles university pathology
ots dolphins support stinky interesting

COURSE EXPECTATION - ANONYMOUS SURVEY

What are the **THREE** main things you want from this training



breathtaking many people
unawareness tourist no experience
stressful helpless dolphin rewarding mammal
chaos very little helping sad emotional
whale occasionally through work lifecycle
conservation dolphin impact
lost of work clean up

We started a foundation on signalling Cetaceans in the Yarari Sanctuari. And I'm a wildlife photographer next to this.

Research

ManagerNGO

Animal caretaker

Fisheries officer



South coast, Jamaica 1st November 2023

Basic morphometrics and tissue sampling

- Basic 'what-where-when' data collection
- Species identification
- Location
- Key images to take
- Assessment of body condition
- Identification of external marks, including bycatch lesions
- Age/Sex ID
- Basic measurements (length, girth)
- Blubber thickness



Ross University School of Veterinary Medicine, St. Kitts, 19th October 2023

- Basic tissue sampling (skin, muscle, blubber)
- Explanation of principles of sample collection, curation and storage
- Data processing, shipping and collaboration





Live animal stranding response

- Basic marine mammal physiology
- Temperature regulation
- Muscles
- Respiration
- Incident management
- Roles of team members
- Health assessment
- First aid
- Use of tarpaulin for lifting/refloat
- Handling animal in sea

Te Amo, Bonaire 27th October 2023



Oranjestad, Aruba 24th October 2023

Live animal response kit:

Heavy duty tarpaulins

Gloves

Mask

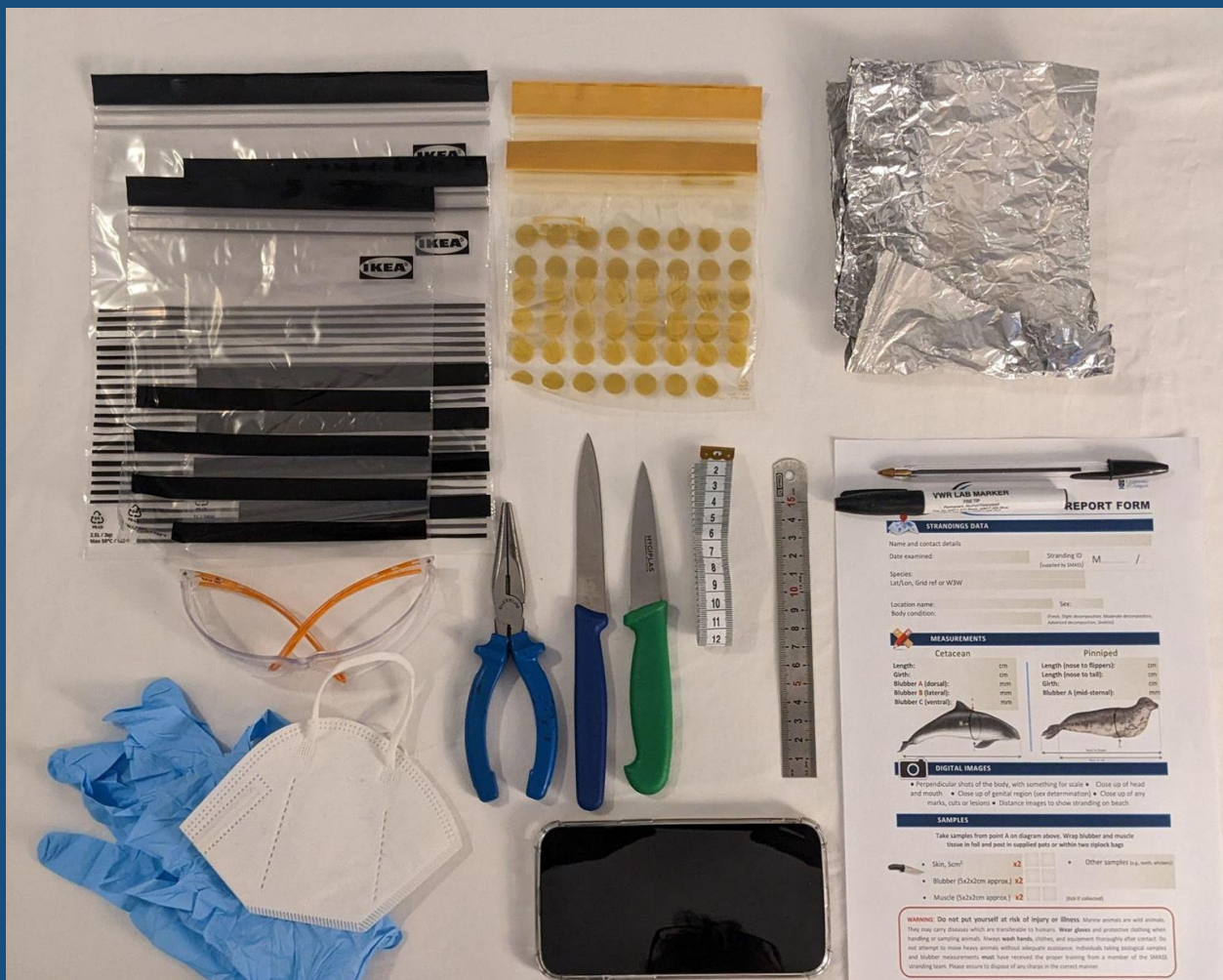
Recording form



Discovery Bay, Jamaica 2nd November 2023

Dead animal sampling kit

Knife
Foil
Ziplock bags
Permanent markers
Gloves
Mask
Goggles
Tape measure
Ruler
Report form



What was your favourite part of the course?

16 responses

Lifting up the 250lbs land 🐋🐙...My fav part is the techniques behind the refloating process

Participating in the refloating activity

Practical sessions

Whale biology and behavior ect

I enjoyed floating

What equipment or resources do you need to

14 responses

Forms

Identification cards

Informational brochures with step by step guide

Pontoon, ID and stranding guide

Tarps, pontoons, identification guides, tool kits, field sheets, posters

Laminated protocol

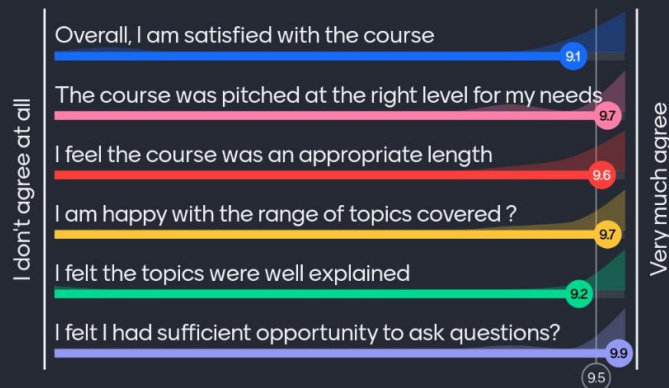
Online assessment form

Funds to facilitate better stranding response

Posters, documentation and technical support in the future

IWC CAMAC COURSE EVALUATION

Please rate the extent to which you were satisfied or dissatisfied about the following:



Key findings

1. There is a wide range of skills and experience, but the majority need was for basic strandings response.
2. Live animal response and welfare assessment training were major drivers for attendance.
3. Strandings incidence is relatively low in each network, and this presents challenges in developing and maintaining skills and experience.
4. As with many networks, marine mammal euthanasia presents particular challenges
5. Most networks had built good connections between NGO's, veterinarians, government/policy and diagnostic laboratories but these could be strengthened.
6. There was a aspiration to improve capacity for diagnostic and sample processing across the region.
7. An online resource repository is required and if shared between networks could improve efficiencies.

Recommendations

1. Facilitate network building through WhatsApp or Telegram networks.
2. Develop online digital resources and a data management portal for live and dead strandings.
3. Produce a set of accessible, concise, modular waterproof cards, videos and infographics to cater to varying needs and skill levels.
4. Explore ways to better integrate cetacean strandings response with other wildlife response programmes e.g. marine turtle.
5. Integrate with the Global Stranding Network to promote international collaboration and knowledge exchange.
6. Establish a mechanism for countries to access funding for provision of further training, e.g. practical necropsy training.
7. Disseminate information and protocols on marine mammal euthanasia when available



Questions?

Annex 4

Data from the Mentimeter surveys run before and after the workshops can be accessed [here](#).
