



# SiGHTiNGS!

### Wildlife Conservation Network welcomes MareCet

as a Conservation Partner

### Whales On-The-Wheels

Mobile Marine Education Nationwide Tour Launched

### The Ohana Grows

Meet MareCet's New Members of Staff

## MareCet turned

Reflections of the Decade That Was





Hello everyone once again to MareCet's annual report of the year that was - 2022!

In all honesty, 2022 came and went like a roller coaster ride. It was fun, exhilarating, heart-stopping, and challenging all at once! Yet 2022 was a year to be incredibly grateful for, because it was the year that MareCet turned TEN, the year we grew our staff team significantly, and the year we made Conservation Partner at the Wildlife Conservation Network. Not to forget it was the year our team member Saliza Bono graduated with her Ph.D., and the year that MareCet's efforts were recognised in an inaugural award across the Johor-Singapore Causeway!

In a never-been-done-before feat, we toured half of Peninsular Malaysia in our "whale truck", as we "brought the sea" to people in Perlis, Kedah, Penang, Perak, Negeri Sembilan, Melaka and west Johor via our MareCet Whales On-The-Wheels Mobile Marine Education Nationwide Tour. We also launched the Marine Mammal Bycatch Mitigation Project, which will see us working closely with the commercial and artisanal fishing communities in Perlis and Perak to find ways to reduce (and hopefully remove) the threat of dolphins and porpoises getting entangled in fishing gear.

We continued to make new observations and discoveries with our research projects across the country, and even participated in a scientific expedition in Sabah. Our Lil' MareCet Shop expanded its range of merchandise, when we partnered up with a local foundation that supports vocational training and livelihood for disabled Malaysian youth to produce a new plush toy and passport holders (perfect for those resuming their international travels post-pandemic!).

On behalf of the entire team at MareCet, we want to express our utmost gratitude to each and everyone of you for the continued support and faith in our cause. Thank you for propelling us through the water and lifting us up over the crests of waves. We never imagined how far we could come when we first registered as an NGO back in 2012 - it was impossible to visualise what 10 years into the future would look like. Yet, here we are, standing taller than ever, because you believe in us.

So, thank you, *terima kasih*, and please enjoy reading this report!

Louisa and Fairul Co-Founders

# Table of Contents

- 9 Words from the Helm
- A MareCet's Best of 2022
- 6 Langkawi Dolphin Research
- 14 The WHALE Project
- 23 IKI Seagrass Ecosystem Services Project
- 32 Cetacean Bycatch Mitigation Project
- $2 \hspace{-0.04cm} arDelta$  The Year That Was
  - 35 06.01.2022 MareCet's 10th year anniversary!
  - 50 Marine mammal stranding response training workshops
  - 52 Whales On-The-Wheels (WoW) Mobile Marine Education National Tour 2022
  - 59 Wildlife Conservation Network visits MareCet
  - 60 MareCet becomes Conservation Partner at the Wildlife Conservation Network
  - 61 Knowledge sharing webinar with the Department of Fisheries Malaysia
  - 62 Darvel Bay Scientific Expedition 2022
  - 64 International Coastal Cleanup 2022 MareCet and The Datai Pledge team up to clean up
  - 65 MareCet Featured in Astro 双星 (Shuang Xing) Television Channel
  - 66 Public presentations at symposiums and public events
  - 70 Scientific publications and media coverage
  - 72 Spotlight shines on MareCet's Head of Organization
  - 74 MareCet Member earns her PhD the new Dr. Saliza Bono
  - 76 Incoming and outgoing tides changes in staff membership
  - 80 Fundraisers for MareCet and the return to charity bazaars
  - 81 New merchandise collaboration with DAYBREAK Society
  - 82 New items from the Lil' MareCet Shop launched
- 84 Thank you to all supporters
- 90 Coming in 2023
- 92 Lil' MareCet Shop

# Best of MareCet's 2022



72 days at sea, totalling 245 hours of effort and covering 3381 km of distance for cetacean surveys



49 days in the field and 18 days in the lab, with 87 hours of underwater video footages and 12 blue carbon sediment cores collected for seagrass sampling and analysis



5 workshops conducted, involving 131 participants including governmental officials, international researchers and local communities



649.5 kg of trash removed during 1 planned and 3 ad hoc coastal clean-ups, including the removal of > 4000 plastic beverage bottles and ghost nets weighing 20 kg



Whales On-The-Wheels
Mobile Marine Education
Exhibition traveled 3980 km to
30 locations, covering 18 cities
and towns across 7 states in
Peninsular Malaysia, running
for a total of 300 hours across
32 days of exhibition, and
received up to 4714 visitors



Participation in 1 local and 1 international scientific expedition



5 dolphin edu-tours and 1 dolphin virtual tour conducted, with a total of 88 participants



3 international and 8 local talks/webinars delivered



Participated in 1 international and 2 local booth exhibition events



4 scientific paper publications



Featured in **9 local** and **4 international** media posts/articles



**92 volunteers** participated in field surveys, outreach events, and fundraising campaigns



1 marine mammal stranding response video produced in
2 languages (English and Bahasa Melayu) and translated into
1 international/foreign language (Burmese)

### Langkawi Dolphin Research

In 2022, our team successfully conducted three field surveys around the Langkawi Archipelago and adjacent Kedah and Perlis mainland coastal areas, providing our team with the opportunity to gather greater insights on the marine mammals that we study in the northwestern coastal region of Peninsular Malaysia.

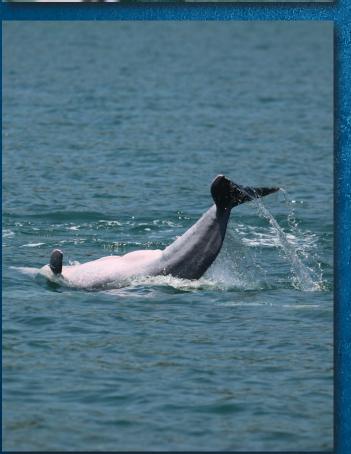
This year we expanded our mainland search efforts further south to Kuala Muda, which is located to the south of Kuala Kedah, almost to the border with Penang state, in hopes of gathering more data on the coastal cetacean species in the region and to investigate how widely they range along the coast. In total, we expended 235 hours of search effort over 3381 km spanning 68 days in three different months. Our surveys provided 27 volunteers the opportunity to experience marine mammal research firsthand. There were many exciting moments during the surveys, and it was reassuring to see that some of our regularly sighted Indo-Pacific humpback dolphins (Sousa chinensis) such as Flop, Grace, Pacman, Split and Keyhole are still doing well. One of the most memorable albeit "stinging" sightings was when our team witnessed the very first epimeletic behaviour exhibited by an Indo-Pacific humpback dolphin mother towards her deceased newborn calf, in all the years of this project's 12-year history.

Epimeletic behaviour is the behaviour of one or more adult individuals persistently assisting or staying close to an injured, stressed, or dead individual. Watching the epimeletic behaviour was a bittersweet experience for the team. While we were heartbroken to see the presumed mother constantly nudging her dead calf, bringing it to the surface in what appeared to be attempts to revive it, it was also an exciting moment of scientific discovery. It was truly an unforgettable encounter for our team, experiencing the depth of emotions of these magnificent creatures and the profound bond between mother and calf. From that sighting alone, we managed to acquire intense acoustic data along with accompanying drone footage to better view the animal's behaviour. We're looking forward to analysing the data, to try and comprehend what happened.













Ongoing analyses on our data for the study of the dolphins' social ecology are beginning to reveal some very interesting results. We now have confirmation that the animals move across from the Langkawi Archipelago over to the mainland coast, but with distinctive patterns. Some dolphins appear to be more resident within our study area than others. For some of those resident dolphins, our photo-identification data have enabled us to visualise their movement patterns over the decade, further cementing the importance of considering protected corridors of travel for the animals. It is with such data that MareCet will use to push further the lobby for getting core habitat areas better protected locally in the coming year.



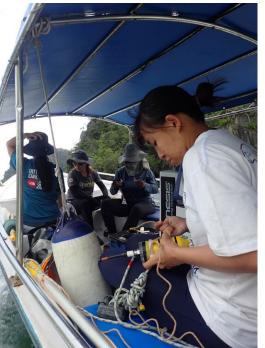














In 2022, we also continued our passive acoustic monitoring work, deploying the HydroMoth devices to record the marine soundscape at different locations over the span of several days per deployment. Our team was hopeful of uncovering valuable data from the acoustic devices, but we unfortunately faced a setback with the loss of three devices from two deployments in two different locations. Nevertheless, this serves as a reminder that in scientific pursuits, acquiring meaningful data often come with a heavy price tag and carries certain risks. Despite the loss of devices, we were still able to collect significant acoustic data from our surveys. Our towed hydrophones picked up whistles and clicks of Indo-Pacific humpback dolphins and Irrawaddy dolphins (Orcaella brevirostris) during sightings, while the SoundTrap device recorded similar sounds, including ultrasonic sounds produced by these dolphins and Indo-Pacific finless porpoises (Neophocaena phocaenoides) whose click frequencies are beyond the human hearing range. We have a pile of acoustic data to analyse, and intend to uncover how human activities influence the behaviours of those animals.





















This project's operations in 2022 were made possible with funding support from Yayasan Sime Darby, Morris Animal Foundation, Telaga Harbour Terminal, generous donors via the Wildlife Conservation Network and the cooperation from local community members, our boat skippers, and volunteers. Thank you!









After wrapping up our dolphin surveys, we moved on to our whale surveys in the offshore waters of Langkawi, and successfully completed three surveys in 2022. One of the highlights from the WHALE Project was witnessing the thread-water feeding technique of Bryde's whales (Balaenoptera edeni), which was a first-time observation for the MareCet team! The animals would first corral shoaling anchovies underwater up to the water's surface by creating a bubble net, and once at the surface, the whales held a vertical posture and had their mouths agape to the sky for 7 - 57 seconds while the "panicked" anchovies jumped into their mouths. These usually speedy whales did not mind our presence while they were thread-water feeding, allowing us to have a better look at them. Our understanding of the ecology and behaviour of Bryde's whale in this region is still limited, thus we aim to fill this gap by gaining a deeper understanding of these animals through our research project and assessing their conservation needs in the area.

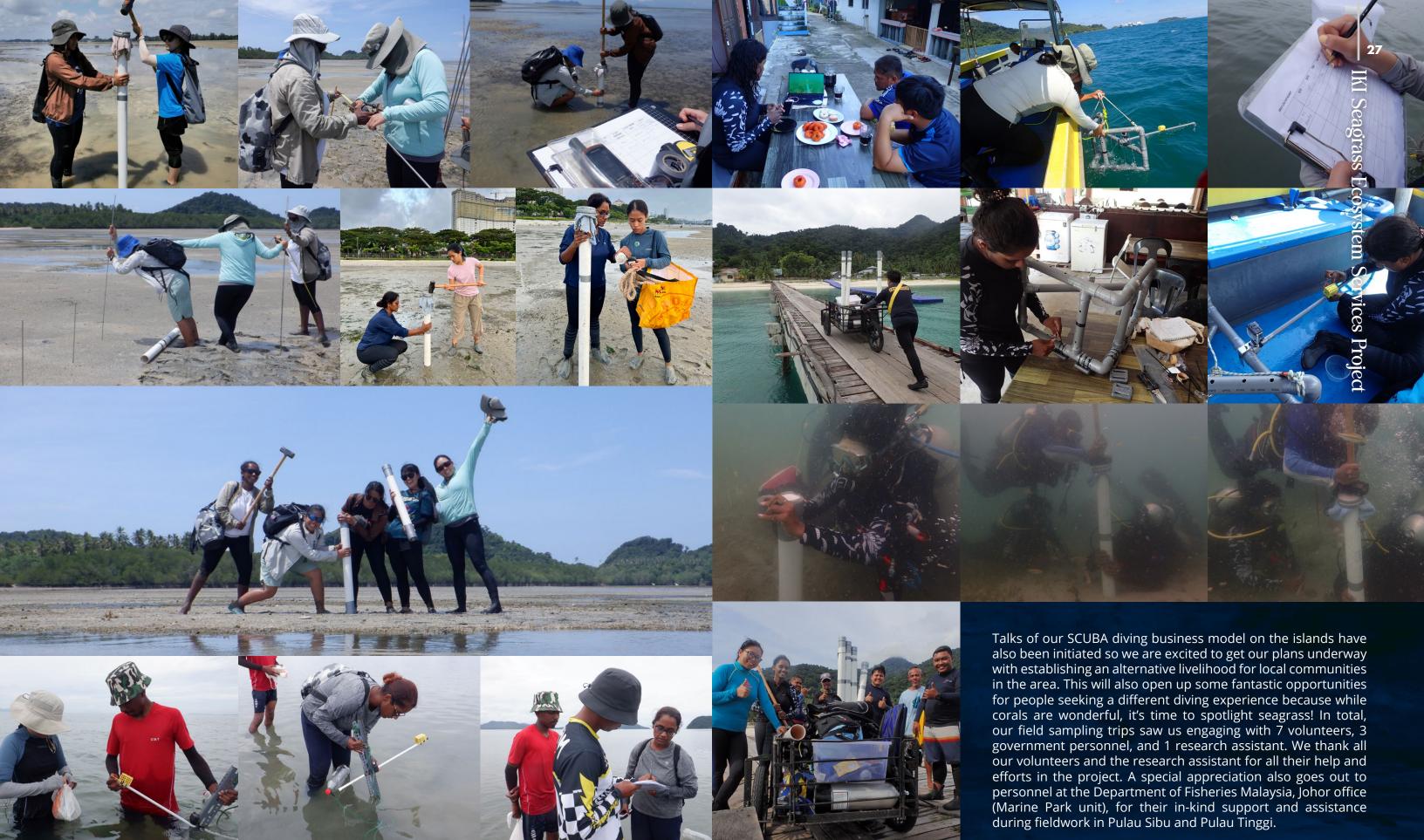


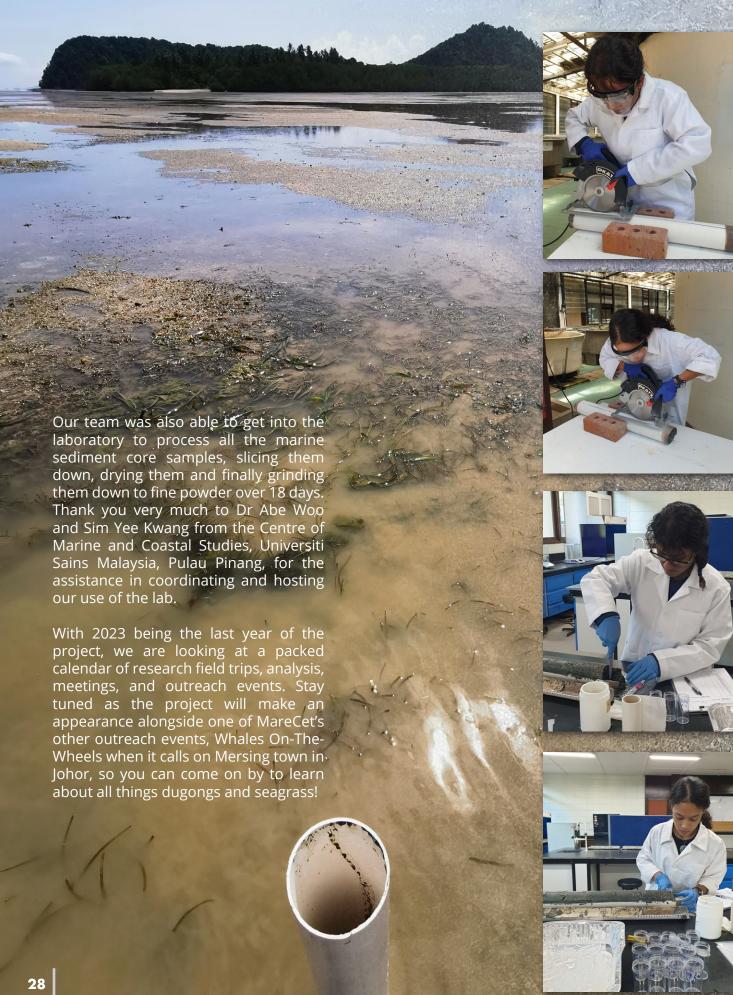


















### MareCet participated in the Thailand Dugong and Seagrass 2022 event, Trang, Thailand





MareCet had the exciting opportunity to attend the Thailand Dugong and Seagrass 2022 event in Trang, Thailand in August 2022. Hosted by the Save Andaman Network (SAN), the IKI SES Projects's Thai national partner, the four-day event held at Thumrin Thana Hotel in Trang was jam packed with activities from research poster presentations, photography exhibitions highlighting seagrass meadows around the world and the iconic dugong calf named Mariam, policy-focused meetings, and so much more! MareCet tended to a booth at the event where team members Dhivya and Jol Ern were able to showcase some of the research work we have done on seagrass and dugongs here in Malaysia over the past several years. It was amazing to finally meet some of our national and technical partners from other countries, and inspiring to see the extensive amount of dugong research that has been done in Thailand. The entire event was well curated, and we are looking forward to future events where we can come together again with our fellow national partners.



### Cetacean Bycatch Mitigation Project



### MareCet embarks on finding solutions for cetacean bycatch

Bycatch, or accidental entanglement in fishing gears, is one of the main threats to marine mammals worldwide. Based on bycatch risk assessments and interviews with local fishers in Matang, Perak, during Matang Dolphin Research surveys, Indo-Pacific humpback dolphins (Sousa chinensis) and Irrawaddy dolphins (Orcaella brevirostris) are known to be entangled in gillnets, whereas Indo-Pacific finless porpoises (Neophocaena phocaenoides) are mostly caught by accident in trawl nets. In view of the conservation priority and urgency of the matter, MareCet embarked on a bycatch mitigation trial project since mid-2022, with the initial support from The Rufford Foundation Small Grant. The Cetacean Bycatch Mitigation Project aims to work with local fishers, especially gillnetters and trawl fishers, to test the use of acoustic pingers and Bycatch Reduction Devices (BRDs), with partnership support from the Department of Fisheries Malaysia. The two pilot study sites are Kuala Sepetang, Perak, and Kuala Perlis, Perlis, where the effectiveness of acoustic pingers will be monitored through boat-based behavioural observations, acoustic studies, and catch composition study to determine if habituation by cetaceans occur, and if fishers' target catches are affected. To date, two fishermen are engaged in this study, and several attempts already made to affix pingers to their gill nets that are targeted at catching fourfinger threadfin (Eleutheronema tetradactylum), a commercially important and popular food fish species locally known as ikan senangin or ma yao yu. Identification of bycatch mitigation methods that are effective for the three small cetacean species in Matang and Kuala Perlis may be scaled up for nationwide adoption in Malaysia and where possible and relevant, further expanded to neighbouring countries in Southeast Asia with similar cetacean species and fisheries. In 2023, with additional support from Yayasan Hasanah and Dolphin Quest, we will be increasing our efforts for this project to cover several more coastal localities within the state of Perak. A new addition to the project is the production and installation of solar-powered cameras at the back of fishing trawlers to monitor the occurrence of cetacean bycatch.













# The Year That Was

### 06.01.2022 MareCet's 10th year anniversary!

When MareCet first started out, we were just trying to find a way to allow us to use the knowledge and skills we had obtained through our individual journeys to contribute positively to marine conservation efforts in the country. Our Co-Founders had a shared vision where MareCet can develop into a platform for advancing marine mammal science and conservation in the country, and even in the region; but at the time, it was but a distant dream. It felt like a monumental task to even get MareCet afloat, figuratively speaking, much less to have it be the ship where great minds can come together for the pursuit of applied science towards a more sustainable future.

# MareCet turned 1100

The journey started with a pipedream. Our small team worked tirelessly to get MareCet off the ground. Those first few years, MareCet was a volunteer-run operation. As with almost anyone starting out, everyone in MareCet at the time had a 'day job' and MareCet was our 'side gig'. Only difference being that none of us were making any money from this 'side gig' of ours. We were a team with a mission, and we were hell-bent on achieving it. A modest grant helped to kickstart a research initiative in Langkawi, Kedah, swiftly followed by us hosting the Third International Southeast Asian Marine Mammal Symposium (SEAMAM III) in 2013, barely a year into our existence.











Another grant followed, and another project was born in Matang, Perak. As our efforts started to bear fruits, both academically and in their 'real-world' applications, more financial support started to flow our way enabling us to grow ourselves as an organization. In 2014, our Co-Founder, Dr. Louisa Ponnampalam, won the prestigious Pew Fellowship in Marine Conservation, which led to the establishment of a conservation-based research project on dugongs and their ecology in the Mersing Archipelago, Johor.





















Our team was growing and we started to employ full-time staff to oversee the various activities within our portfolio of work including policy advocacy, outreach and awareness, and, of course, the three research and conservation projects on marine mammal populations in Langkawi, Matang, and the Mersing Archipelago. In fact, those projects have since evolved significantly and branched out to cover more area and more complex topics, including finding solutions for cetacean bycatch, studying the blue carbon value of seagrass meadows, and pushing our search efforts offshore to discover large whales and understand those giants' conservation needs. In 2012, barely anyone knew about MareCet. When asked, we'd often have to explain ourselves from A to Z. Within five years of our establishment, MareCet had grown to be the go-to organization for marine mammal conservation in the country. Our team members were involved in policy development at both national and international levels, collaborating on research efforts at regional and global scales, and being invited to serve on international scientific and conservationrelated committees. Through the years, various groups of people and corporate organizations from within Malaysia and abroad have sought us out for collaborations, partnerships or who just simply wanted to provide a donation; we believe those are all testament to MareCet having created a positive presence in the public arena.



Throughout it all, we've continued to be blessed with support from our colleagues from around the world, and most importantly, our volunteers, who we believe are the real driving force for our growth and success. Some of these volunteers have since joined MareCet in various capacities, and journeyed with the organization over the last decade. Some of them have pursued a career in their own chosen scientific field. Some have decided to develop a career outside the sciences, but still directly contributing to environmental conservation in their own right. Whichever direction they ultimately went, most have said MareCet helped to provide them a platform to gain the research and conservation experience they were seeking, and all have since become close friends to MareCet to this day.

### 2018











While considerable planning has gone into shaping MareCet into the organization that we are today, a lot of our growth has been quite organic in the last decade of our existence. Through all the ups and downs, and everything in between, one thing has not changed in that our goal remains to improve our understanding of marine mammals so as to conserve the marine mammals so as to conserve the marine environment through undertaking research, education, empowerment for marine stewardship, promoting ocean advocacy and training future leaders.

### 2019

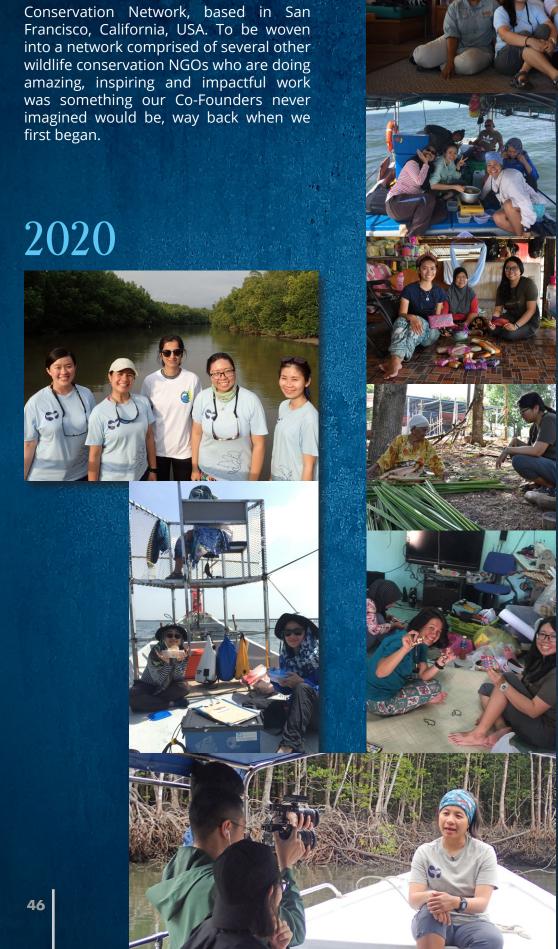








One of our biggest and proudest achievements yet has been to get chosen as a Conservation Partner of the Wildlife Conservation Network, based in San Francisco, California, USA. To be woven into a network comprised of several other wildlife conservation NGOs who are doing amazing, inspiring and impactful work was something our Co-Founders never imagined would be, way back when we first began.









The last 10 years have been quite a memorable journey and we are excited to see what the future holds. We believe our team has grown a lot over those last 10 years and are well equipped to face the current and future challenges in the field of marine mammal science and marine conservation in general. We also believe we are in a good position to train and help future leaders with the specific skills and knowledge to address conservation issues in an ever-changing world.

What will the next 10 years bring? Nobody can predict the future, but we sure hope that the conservation impacts we've always strived for can go deeper, and that the tide will turn for the better for marine mammals in Malaysia. Thank you EVERYONE for the decade of love and support; for being the shoulders we could stand on and stand taller. We look forward to the next decade of collaborations and partnerships!









### Marine mammal stranding response training workshops

Over the last decade, MareCet has encouraged and promoted the proper handling of marine mammals during a stranding event. In 2022, the Department of Fisheries Malaysia (DOFM) invited MareCet to be instructors for two separate training workshops on stranding response for marine mammals in Kuala Terengganu, Terengganu, and Sandakan, Sabah, in June and October 2022 respectively. On 7 June 2022, MareCet facilitated a theory and practical session on marine mammal stranding response at Tanjong Vista Hotel, Kuala Terengganu. The session was conducted as part of the "Course for Knowledge Transfer on the Conservation Management of Protected and Endangered Marine Species" hosted by the DOFM. The workshop saw 57 participants in attendance, and comprised DOFM personnel, local fishers, and colleagues from local marine conservation NGOs.

In line with MareCet's mission to be a platform provider for capacity building marine mammal science and conservation leadership for youth, we also conducted a virtual stranding response training session with 10 brilliant and talented up-andcoming conservationists of the Myanmar Coastal Conservation Lab (MCCL) on 4 October 2022. It was our first time conducting such a workshop, which included the practical component of stranding response training, virtually! Nonetheless, the workshop was a success, and provided the MCCL team with the knowledge and skills to conduct similar workshops in several villages in the coastal areas of Myanmar where they work. We are very proud and pleased that our marine mammal stranding response video (created in 2021 with students from Taylor's University) was translated into the Burmese language by the MCCL team, and was "premiered" during the virtual workshop.

Later in the year, from 25 - 28 October 2022, MareCet were once again invited to be instructors/facilitators in the knowledge transfer workshop hosted by DOFM in Sabah Hotel, Sandakan, Sabah. The MareCet team especially enjoyed the great energy and upbeat humour brought by the 20 fisher participants to the training sessions, both indoors and during the practical session on the beach. We would like to express our appreciation to the DOFM and Department of Fisheries Sabah for the invitation to participate as facilitators, and we look forward to more future opportunities for working together for the common good.































### Virtual Workshop











# The wheels on the truck go round and round – Whales On-The-Wheels (WoW) Mobile Marine Education National Tour 2022

In 2014, when Dr P had the opportunity to visit the Marine Mammal Center (MMC) in Sausalito, California, she was completely blown away by the 'Whale Bus' programme that the MMC had. She was so inspired by the concept of it, that she hoped it could be the kind of outreach programme that MareCet does. Fast forward to late 2021, with gratitude to a grant from Yayasan Sime Darby and later on The Habitat Foundation, that dream could happen. MareCet is thrilled to finally have our large-scale outreach initiative, Whales On-The-Wheels (WoW) mobile marine education nationwide tour up and running in 2022! The main goal of WoW is to make learning and knowledge sharing about marine mammals, the ocean and marine conservation accessible to everyone in Malaysia through an interactive, engaging and non-conventional manner. As such, the MareCet team, along with volunteers, had been traveling with our 'Whale Truck' to different locations across Peninsular Malaysia, "bringing the ocean" to the public and national school students.

Different learning stations comprising various marine topics were set up inside and outside of the 'Whale Truck' including a marine mammal and marine wildlife photo gallery, a mini marine laboratory, 'Be A Dolphin Researcher' experience corner, cetacean skull display, marine mammal sound kiosk, hands-on activities and upcycled installations made from marine debris, and a green living showcase corner. WoW visitors had a great time diving into the world of marine mammals and exploring the beauty of the ocean and the dark side of human activities on our Blue Planet. It is our hope that WoW will not only raise the profile and public awareness of Malaysia's marine mammals and marine ecosystems, but also inspire people to appreciate and care for our ocean and its precious yet diminishing resources.







MareCet successfully made waves with three WoW tours in 2022 – Tour 1 in the southern region of Peninsular Malaysia covering Negeri Sembilan, Melaka, Johor west coast and Johor Bahru in February; Tour 2 in the north-western region including Perak, Kedah, Perlis and Pulau Pinang in July-August; and Tour 3 on Langkawi Island in October. Tour 1 and 2 of WoW 2022 was made possible with the support from Yayasan Sime Darby and Tour 3 was possible through the support from The Habitat Foundation.

We would also like to express our utmost gratitude to all our partners for their in-kind support towards WoW – Langkawi Development Authority (LADA), Legoland Malaysia, DIY Playground Batu Pahat, Langur Project Penang, ADA Biotech, Pusat Khidmat Masyarakat ADUN Machang Bubuk YB Lee Khai Loon, Mr Francis Chia Mong Tet, AEON MALL Bukit Mertajam, Amanjaya Mall Sungai Petani, Laman Karya Lumut (LAKAR), Putra Brasmana Hotel Kuala Perlis, Universiti Teknologi MARA (UiTM) Perlis Kampus Arau, Langkawi Scuba, and Langkawi SkyCab.

### WoW's flukeprint for 2022:

- Port Dickson, Negeri Sembilan
- Bandar Melaka, Melaka
- Klebang, Melaka
- Nusajaya, Johor
- Pontian, Johor
- Batu Pahat, Johor
- Muar, Johor
- Teluk Intan, Perak
- Lumut, Perak
- Ipoh, Perak
- Taiping, Perak
- Bukit Mertajam, Pulau Pinang
- Kuala Perlis, Perlis
- Arau, Perlis
- Alor Setar, Kedah
- Sungai Petani, Kedah
- George Town, Pulau Pinang
- Langkawi, Kedah
- SK Kuala Teriang (Padang Matsirat, Langkawi)
- SK Temonyong (Kedawang, Langkawi)
- SMKA Maktab Mahmud (Ulu Melaka, Langkawi)
- SK Seri Negeri (Kuah, Langkawi)
- SK Seri Lagenda (Ayer Hangat, Langkawi)



### Wildlife Conservation Network visits MareCet

It was a trip that was a long time in the making, but finally, after 2 years since it was first mooted, the Wildlife Conservation Network (WCN), represented by Tommy Sheridan and Zoe Nhleko, finally made it to our tropical shores. Tommy and Zoe spent 1 week with our team in the field in June 2022. They participated in our surveys for dolphins and whales around Langkawi Island and adjacent offshore waters, and were incredibly fortunate to have had the opportunity to see Bryde's whales engaged in thread water open mouth feeding! Our team also ensured that they got to experience other aspects of our work, and informal discussions were arranged for Tommy and Zoe to meet with some of our collaborators such as the Langkawi Development Authority and The Datai Pledge, and also meet with the local artisan with whom MareCet engages for the production of Langkawi-made merchandise, and the kids from Geng Bersih Kampung (Clean Village Gang). In true Malaysian hospitality style, we also ensured that Tommy and Zoe got to experience our wide range of local foods, and experienced kayaking in the mangrove backwaters of Tanjung Rhu where the long tape seagrass (Enhalus acoroides) could be seen during low tide. Little did we know at the time of planning that Tommy and Zoe's visit formed one of the last steps in WCN's due diligence process when selecting a new Conservation Partner. However, we believe that they both had an incredibly positive on-site experience with our team, and we are so grateful that the visit was a success. In August 2022, we were informed that MareCet was approved to become one of WCN's latest Conservation Partners, a feat we are so excited and proud about!























### MareCet becomes Conservation Partner at the Wildlife Conservation Network





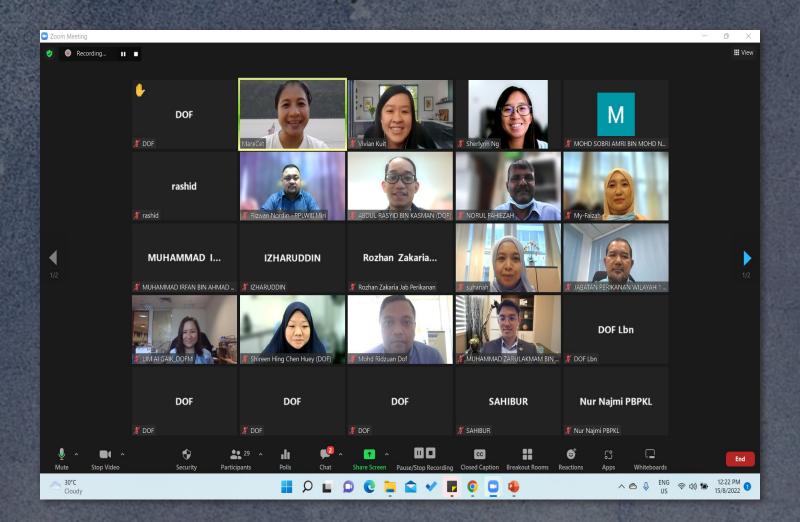


When Dr P and Fairul first co-founded MareCet in 2012, there was not much of an expectation of what will be in the decade ahead. In fact, in 2019 when Tommy Sheridan and Joyce Wang from the Wildlife Conservation Network (WCN) in San Francisco reached out to us, there was not an inkling of what would be. MareCet's first foray into the WCN ecosystem was as Guest Speaker and Exhibitor at WCN's 2019 Fall Expo in San Francisco, California, USA; a life-changing experience for Dr P and Sandra, who represented the organization at the event. Through the pandemic in 2020-2021, WCN kept engaging us for virtual talks at Spring and Fall Expos, and even for niche donor engagement sessions such as "WCN Inside Look". In June 2022, Tommy and Zoe Nhleko came to Malaysia and spent a week in the field with our team, and by August 2022, a phone call request to Dr P led to some very good news - that after very careful consideration after all the due diligence checks, MareCet was approved by WCN's Board of Trustees to be a Conservation Partner of WCN! This was the 10th year anniversary gift that we never expected, but what a proud milestone it is for us, and we humbly take it as a good testament of MareCet's committed efforts for marine conservation through the past decade. Both Dr P and Dr Saliza traveled to San Francisco in October 2022 for the WCN Fall Expo, where Dr P gave a talk to an audience of passionate wildlife supporters, and participated in a panel discussion on the topic, "Strengthening the Ecosystem of Conservation Practitioners". Thank you WCN for believing in MareCet, and for giving us this wonderful opportunity to be part of an incredibly diverse and inspiring community of wildlife conservationists and supporters!



### Knowledge sharing webinar with Department of Fisheries Malaysia

At MareCet, one of our main goals is to share and transfer the knowledge we acquire from our field research to others, be it the general public or administrative personnel. In August 2022, as part of a webinar series we'd planned under our current project funded by Yayasan Sime Darby, we conducted the first session on basic marine mammal biology and ecology for the Department of Fisheries Malaysia staff. Most of the attendees were staff in "frontline" positions, meaning, they would be the first ones who are most likely to respond to a case involving marine mammals in Malaysia. A total of 33 personnel of the Department from all over Malaysia attended the half-day webinar, which was presented by Sher Lynn, Dr Vivian and Dr P. The audience was quite interactive and engaged, and provided comments and asked questions during the discussion session at the end. In 2023, two more webinars are planned - one on marine mammal stranding response, and the other on marine mammal veterinary care.





MareCet's team members, Dr Vivian and Dr Saliza had the opportunity to participate in the Darvel Bay Scientific Expedition 2022 in Sabah, coorganised by Sabah Parks and WWF Malaysia between 19 - 30 October 2022. The aim of the expedition was to collect data on the marine biodiversity and ecosystem status of Darvel Bay, Lahad Datu, which will assist in supporting the future gazettement of the Darvel Bay as a Marine Park. The marine mammal research group comprised the MareCet team and researchers from Universiti Malaysia Sabah, Dr Hairul Masrini, and two of her students, Jason Chong and Sarah Hani. With Dr Vivian leading the team, the research group headed out to sea during daylight hours to systematically search for marine mammals using a combination of visual and acoustic methods during boat-based surveys. Everyone took turns in becoming the visual observers. Dr Hairul towed an acoustic device called an A-tag, which enables recording of sounds in the ultrasonic frequency (>20 kHz), in hopes to record any Indo-Pacific finless porpoise vocalizations. The team sighted various marine megafauna species such as sea turtles, sailfish, sea snakes and frigatebirds, but unfortunately did not see any marine mammals during the 8-day boat survey, despite the intensive and systematic search effort expended in the large bay. The reason for the paucity of sightings is undetermined, however, it is likely due to Darvel Bay having significant areas of degraded marine habitat.

The team also managed to interview a few local fishers and also the village chief regarding any past marine mammal sightings. It was interesting to listen to the stories they had, but even they have not sighted marine mammals in the past year. There were also stories of cetacean strandings in the area that the team recorded. The marine mammal research group was one of the last groups to remain at the Lahad Datu basecamp until the end of the expedition, so the team took the opportunity to count flying foxes that flew by the accommodation site at sunset. It was truly spectacular to see thousands of the world's largest bat species in the sky! On the last day of the expedition, both Dr Vivian and Dr Saliza presented to Sabah Parks and WWF Malaysia on the work that was conducted during the expedition. We would like to sincerely thank Sabah Parks and WWF Malaysia for inviting MareCet to participate in the expedition and contribute to this important scientific and conservation endeavour. We are also extremely grateful to our boat skippers Man, Aljohn and Dominic for their assistance throughout the survey. We are hopeful that the gazettement of the bay as a marine protected area will provide the opportunity for habitat restoration and allow for more marine mammals to utilize the bay as their feeding and nursing grounds.



# International Coastal Cleanup 2022

# - MareCet and The Datai Pledge team up to clean up

In conjunction with the International Coastal Cleanup 2022 (ICC 2022), a global movement for coastal and beach clean-ups, MareCet teamed up with The Datai Pledge for a beach cleanup on uninhabited Pulau Langgun in Langkawi on 19 September. With 14 pairs of hands from the MareCet team and The Datai Langkawi staff membership, we filled up 58 trash bags weighing up to 294.1 kg of marine debris across a 200 m stretch of beach in the span of 3.5 hours! Among the collected debris, plastic beverage bottles and styrofoam pieces contributed the most in the collection amount, with 2307 plastic beverage bottles and 1364 styrofoam pieces collected. We would like to thank The Datai Pledge for supporting the cleanup and a special thanks to Miracle Spectrum for their generosity in providing us with d2w oxobiodegradable plastics bags for the cleanup.















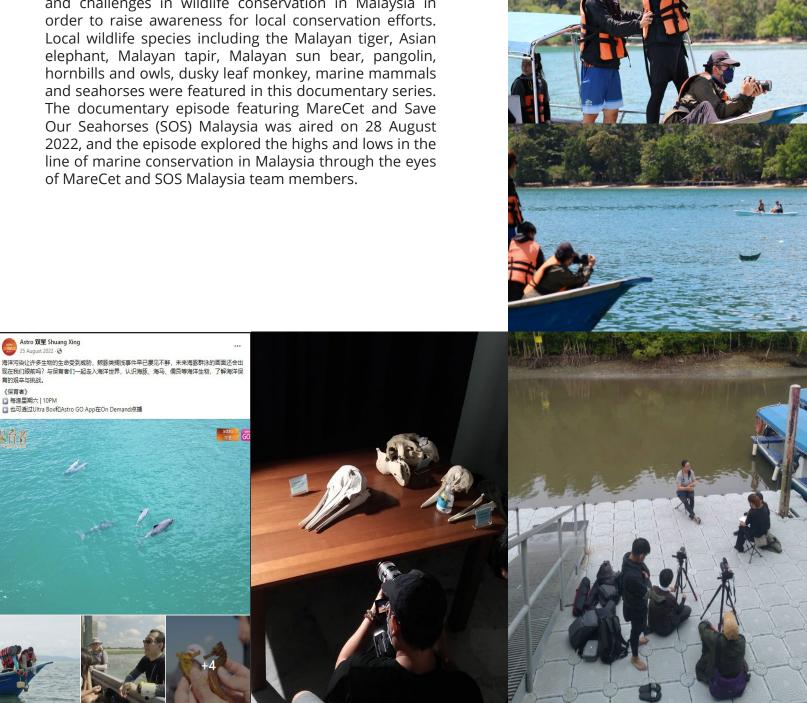






# MareCet Featured in Astro 双星 (Shuang Xing) Television Channel

MareCet was invited by a local Mandarin television channel, Astro 双星 (Shuang Xing) to be a part of their documentary series, 《保育者 The Conservationist》. This documentary aimed to showcase Malaysia's rich biodiversity and shared the stories of local conservationists and challenges in wildlife conservation in Malaysia in order to raise awareness for local conservation efforts. Local wildlife species including the Malayan tiger, Asian elephant, Malayan tapir, Malayan sun bear, pangolin, hornbills and owls, dusky leaf monkey, marine mammals and seahorses were featured in this documentary series. The documentary episode featuring MareCet and Save Our Seahorses (SOS) Malaysia was aired on 28 August 2022, and the episode explored the highs and lows in the line of marine conservation in Malaysia through the eyes of MareCet and SOS Malaysia team members.



# April

# TedxMileHigh X Morris Talk

How does humanmade noise impact ocean wildlife?





The Morris Animal Foundation reached out to MareCet and invited us to present at the TEDxMileHigh. Through several zoom calls and practices, our team member, Dr Saliza finally presented her talk virtually in April 2022. Her talk was titled 'How does human-made noise impact ocean wildlife?' where she talked about different types of sounds underwater and what boat noises can do to reduce survival rates of marine mammals. Her talk was recorded and is available to watch on YouTube (<a href="https://www.youtube.com/watch?v=HMJLPrYYSo0">https://www.youtube.com/watch?v=HMJLPrYYSo0</a>). She received several praises for her talk which made her more enthusiastic for future public talks.

# WCN Spring Expo





The Wildlife Conservation Network (WCN) spring expo was held in April 2022 and we were thrilled to be invited yet again to present virtually. As always, the event was exciting with talks from other passionate conservationists. At the spring expo, Dr P started the talk with a brief introduction of MareCet and the research that we carry out and then went on to introduce MareCet's team member, Dr Saliza, then a budding bioacoustician. She took the e-stage and shared about their interest in bioacoustics and all about marine mammal sounds. She even played her piano to show the audience the different frequency ranges of marine mammal sounds!

We are extremely grateful to WCN for the continued support and the opportunities to share to the world about the work that we do here in Malaysia. We look forward to connecting with more wildlife supporters in the future! Our spring expo presentation can be watched here: <a href="https://bit.ly/marecetspringexpo">https://bit.ly/marecetspringexpo</a>

## **UMS** Webinar

MareCet's VP & Co-Founder, Fairul was invited by the University of Malaysia Sabah (UMS) to conduct a webinar to approximately 30 students and faculty members of the university's school of science. The talk was held on 26 May where Fairul delivered his talk entitled 'Conserving Marine Mammals in Malaysia: the Laws and Regulations Involved' which introduced the audience to the relevant legislative provisions relating to marine mammal conservation in the country, and the overall processes involved in their administration.

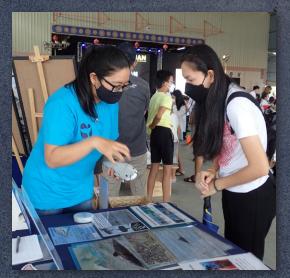
#### June

May

# MIMA-MOFA MTCP Programme

On 16 June, MareCet once again supported the Malaysian Technical Cooperation Programme (MTCP) on Effected Marine Protected Areas (MPAs) Management co-organized by the Malaysian Institute of Maritime Affairs (MIMA) and Ministry of Foreign Affairs. This is MareCet's second involvement in the programme where we were invited to provide knowledge exchange in topic of MPA development and management with 10 other representatives of nations from ASEAN, Africa, Middle East and South America regions.

#### Pesta Laut Sedunia, Sabak Bernam



On 26 June, Persatuan Benih Hijau organized Pesta Laut Sedunia in Bagan Sungai Besar, Sabak Bernam, Selangor in celebration of the World Environment Day and World Ocean Day 2022, and MareCet was delighted to be invited to participate as one of the exhibitors at the festival. Together with several local environmental organizations, MareCet was there to spread the love and awareness about our ocean and marine mammals. Apart from environmental booth exhibitions, there were also photo gallery exhibition, Fun Walk around the fishing village, forum on life and challenges faced by local fishing communities, and a series of craftmaking workshops on the day, creating the opportunity for the general public to learn and appreciate our natural environment in a fun and engaging way.







## August

## SMM Conference



In August 2022, our team member, Dr Saliza had the opportunity to attend the Society of Marine Mammalogy's 24th Biennial Conference on the Biology of Marine Mammals. It is the first fully hybrid conference organised by the society. She attended the conference virtually along with researchers from all over the world, while some attended the conference physically in West Palm Beach, Florida, USA. There were a total of 1885 attendees at the conference with majority being virtual attendees. Dr Saliza presented a speed talk (of only four minutes!) titled, 'Hearing them out: Acoustic behaviour of Indo-Pacific humpback dolphins in north-western Peninsular Malaysia in relation to visually observed behaviour and anthropogenic activities'. In the talk, she explained the impacts caused by boat noise to the dolphin's acoustic behaviour whereby before a boat passes by, the whistle rate was higher compared to during boat presence and after the boat has passed by. The analysis included data from all the Langkawi Dolphin Research boat surveys since June 2019 to October 2021. She also managed to attend the 'Acoustic citizen' science and tourism vessels – best practices and possibilities for the future' workshop where she learned about the different acoustic work that is being done by other researcher and also managed to receive advice about acoustic device funding. It was Dr Saliza's first virtual conference experience and she found that the conference platform was surprisingly easy to use and navigate around. She also still managed to network with other researchers through the platform chat tools.

#### UnikL MIMET

MareCet's VP & Co-Founder, Fairul, was invited as a guest speaker at the Coastal and Marine Sustainability Enacted (COME!) event organized by the International, Industrial & Institutional Partnership (IIIP) of UniKL MIMET held in Lumut, Perak, on 25<sup>th</sup> August. The event was catered to approximately 100 local and international participants. In his session, Fairul talked about MareCet's journey as a non-profit organization thus far, particularly in fulfilling our role in the conservation of marine mammals and their ocean environments.

#### December

# KK Water's Edge Symposium

On 6-7 December 2022, the City Council of Kota Kinabalu, Sabah, organized the International Symposium on Developing and Managing Water's Edge City 2022 to discuss ways to manage sustainability challenges relating to cities located within coastal regions. The Symposium was attended by approximately 100 specialists of various fields relating to urban development and management from around the world. MareCet's VP & Co-Founder, Fairul, was invited to share insights on biodiversity management in coastal cities through his talk entitled 'Embracing human-wildlife co-existence in coastal cities'.

# Talk @ Association of Heng Ann Malacca



Just before the year ends, MareCet's Outreach Coordinator, Jol Ern was invited by the Association of Heng Ann Malacca to share about marine mammals and marine conservation to their members and locals of Malacca. The talk was held at the association's community center on 4 December where Jol Ern delivered her talk, titled '潜入马来西亚大海: 探索海面下的"鲸"喜,which introduced the Mandarinspeaking audience to marine mammals in Malaysia and highlighted the threats and conservation issues facing these megafauna and their marine habitat.





Public presentations at symposiums and public events

# Scientific publications and media coverage

We are pleased to share that some of the MareCet team, along with their local and international collaborators published a few scientific papers and a book chapter in 2022. These were:

Ponnampalam, L.S., Keith-Diagne, L., Marmontel, M., Marshall, C. D., Reep, R. L., Powell, J. and Marsh, H. 2022. Historical and Current Interactions with Humans. In: Marsh, H. (eds) Ethology and Behavioral Ecology of Sirenia. Ethology and Behavioral Ecology of Marine Mammals. Springer, Cham. <a href="https://doi.org/10.1007/978-3-030-90742-6\_7">https://doi.org/10.1007/978-3-030-90742-6\_7</a>

## MareCet in the media

MareCet's efforts and achievements were highlighted in the media throughout 2022, and here's how we fared.

#### **Blue Water Heroes Award**

In conjunction with the inaugural of the Blue Water Edu Fest, The Blue Water Heroes Award ceremony was held in Singapore. Our very own Dr P won the 3<sup>rd</sup> place award whilst Melati Wijsen of YOUTHTOPIA and Thanda Ko Gyi of Myanmar Ocean won the 1<sup>st</sup> and 2<sup>nd</sup> place. Congratulations to all winners! The official write-up about the Blue Water Heroes Award was published by Tatler Asia.

#### **WoW Tour 2022**

MareCet's Whales On-The-Wheels Mobile Marine Education Nationwide Tour was featured in The Star Online and The Star Metro. Read about it <a href="HERE">HERE</a>! Additionally, coverage of the tour also made it into the evening news of <a href="Buletin TV3">Buletin TV3</a> and into local Chinese news media outlets <a href="Guang Ming Daily">Guang Ming Daily</a>, <a href="Sin Chew Daily">Sin Chew Daily</a> and <a href="Nan Yang Siang Pau">Nan Yang Siang Pau</a>! The truck is a travelling exhibition decked out with various educational materials and many other topics exploring marine mammals and their habitat. This tour was sponsored by Yayasan Sime Darby and The Habitat Foundation. There are future plans to head to other states of Peninsular Malaysia in 2023, so stay tuned on our social media for updates!

#### **Protect This Place - The Langkawi Archipelago**

Our team members, Sandra Teoh and Saliza Bono share their views about the need to protect Langkawi, in an article published by The Revelator, as part of its "Protect This Place" initiative. Langkawi is recognised as a UNESCO Global Geopark and is also IUCN Important Marine Mammal Area (IMMA), a national natural heritage worth protecting for all generations to come. Have a read <u>HERE</u> about the wild beauty that the archipelago encapsulates.

#### **MareCet Blog Article Adapted in Conservation Careers**

Conservation Careers picked up one of our blog articles and adapted it for publication on their website about conservation careers. So, if you are someone who is considering a career in marine conservation, have a <u>read!</u> Our team members, Jol Ern, Sandra and Dhivya share their experiences on their differing stages in this conservation career, which will hopefully be valuable in providing insight to those interested in this field.

Bono, S., Kimura, S.S., Teoh, Z.Y., Ng, J.E., Ichikawa, K., Ponnampalam, L.S. 2022. Whistle variation in Indo-Pacific humpback dolphins (*Sousa chinensis*) in relation to behavioural and environmental parameters in northwestern Peninsular Malaysia. Acoustics Australia: <a href="https://doi.org/10.1007/s40857-022-00273-6">https://doi.org/10.1007/s40857-022-00273-6</a>

Kimura, S.S., Sagara, T., Yoda, K., Ponnampalam, L.S. 2022. Habitat preference of two sympatric coastal cetaceans in Langkawi, Malaysia, as determined by passive acoustic monitoring. Endangered Species Research 48: 199-209. https://doi.org/10.3354/esr01194

Heng, H.W.K., Ooi, J.L.S., Affendi, Y.A., Kee Alfian, A.A. and Ponnampalam, L.S. 2022. Dugong feeding grounds and spatial feeding patterns in subtidal seagrass: A case study at Sibu Archipelago, Malaysia. Estuarine, Coastal and Shelf Science 264: 107670. https://doi.org/10.1016/j.ecss.2021.107670

#### **Zafigo Travel Checks In with MareCet**

Dr P was featured on Zafigo Travel's <u>article</u> series, "The World With...". Dr P shared about her love for travel, all the amazing places she has been both locally and abroad for work and also talks about MareCet's Whales On-The-Wheels Nationwide Tour. Separately, in conjunction with World Wildlife Day, Zafigo Travel featured MareCet's marine excursions in an <u>article</u> about experiencing Malaysia's wildlife. In the article, MareCet's curated trips to Pulau Sibu, Johor, and Kuala Sepetang, Perak, were featured. There will be more marine-themed adventures planned out for 2023, so keep a lookout for them on our social media pages!

#### MareCet "travels" in Spain

Any Spanish language speakers out there? Here is a beautifully written article by Maria Marcos, a volunteer during MareCet's March 2022 whale survey in the offshore waters of Kedah, written for Spanish travel website Con Mochila. The article is titled, "En busca de ballenas en mar abierto en Malasia" (Looking for whales in the open sea in Malaysia), where she detailed her time and experience with our team scouring the open waters for Bryde's whales and other species of cetaceans.

#### MareCet in Free Malaysia Today

MareCet's research and conservation work was featured in this article titled, "Local NGO MareCet makes waves in marine-mammal conservation", published online by local news media outlet Free Malaysia Today.

#### Featured by the Funder

The Morris Animal Foundation in the USA is currently funding MareCet's research on the impacts of underwater noise pollution on dolphins in northwestern Peninsular Malaysia. The Foundation recently featured our work in an article on their website titled, "New Study Will Assess Boat Noise Impacts to Dolphins".

#### MareCet On Air

It is 2022, which means MareCet is now 10! To celebrate and appreciate this significant milestone, and also to share about MareCet's Whales On-The-Wheels Mobile Marine Education Nationwide Tour that kicked off in February 2022, Dr P spoke to Juliet Jacobs on BFM - The Business Station 89.9 FM in the following 'Earth Matters' podcast titled, "MARECET AT 10: SAVING MARINE LIFE WITH PASSION AND 'PORPOISE".

# Spotlight shines on MareCet's Head of Organization

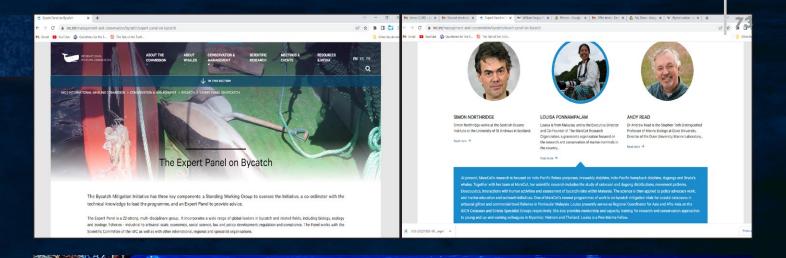




Heartiest congratulations to Dr Louisa Ponnampalam, MareCet's Chairperson, Co-Founder and current Executive Director for being in the spotlight and putting MareCet in that spotlight in 2022!

In July 2022, Dr P was appointed to the International Whaling Commission's (IWC) Expert Panel on Bycatch, comprised of a line-up of 22 internationally renowned scientists with vast experiences on the topic of bycatch (i.e., the accidental entanglement/capture of marine mammals in fisheries activities) and its related topics such as economics, regulation and compliance, fisheries, ecology and law, to name a few. This panel provides guidance and advice to the IWC on matters relating to its Bycatch Mitigation Initiative, which was endorsed in 2016. The Panel works with the Scientific Committee of the IWC and other international, regional and specialist organisations to further the BMI's mission. With this appointment, Dr P is just 1 of 3 Asian scientists who sit on this panel, and we're very proud of her representation!

In September 2022, Dr P received a nomination for the inaugural Blue Water Heroes Award, created by ONE°15 Events Management and powered by Gen.T and Tatler Singapore, as part of their Blue Water Edufest event. This award recognises and lauds the efforts of marine conservationists from around Southeast Asia, and Dr P was 1 of 10 individuals who were shortlisted for it. The winners of the award were announced at a glitzy cocktailstyle dinner event in November 2022 at the ONE°15 Marina Sentosa Cove in Singapore, and Dr P emerged as the second runner-up! The first runner-up was Thanda Ko Gyi of the Myanmar Ocean Project and first place was awarded to Melati Wijsen of YOUTHTOPIA/Bye Bye Plastic Bags. In her mini acceptance speech on stage, Dr P dedicated the award to the MareCet team, whose dedication and commitment to MareCet's cause is what's brought all our efforts for conservation to greater heights in the past decade. Congratulations to all the winners and finalists, and in Dr P's opinion, everyone was a winner, and so many more amazing individuals out there who are also blue water heroes! To read more about the Blue Water Heroes award and the night of the award ceremony, click HERE.



**BLUE WATER** 

EMUFEST



# MareCet Member earns her PhD - the new Dr. Saliza Bono

Wow what a journey it has been! After four years, words cannot explain how relieved I am to finish my PhD degree from Kyoto University, Japan. Completing a PhD was a challenge in itself, but completing a PhD in a country where not only language was the barrier but so many other things too, was definitely an accomplishment I couldn't be prouder of. My PhD thesis is titled 'Acoustic behaviour of small cetaceans in northwest Peninsular Malaysia in relation to behavioural, environmental and anthropogenic factors' and I was supervised by Dr Louisa Ponnampalam along with Dr Kotaro Ichikawa and Dr Satoko Kimura, the latter two of whom are researchers from Kyoto University. I set out on my journey in Kyoto back in October 2018, with a fresh mindset of starting a PhD and to learn from the bioacousticians in the university but little did I know that there were many obstacles along the way. The four years spent as a student in Japan was a true adventure but I am so grateful to have done it because I met so many amazing people throughout the way, from researchers to volunteers and some of those experiences led to life-long friendships. My fieldwork was in Langkawi, Malaysia, and so travelling back and forth between Malaysia and Japan was quite tiring. Nonetheless, those trips enabled me to come home from time to time to visit family and of course, eat the Malaysian food I always crave for. So, it was all worth it!

I have truly learned so much, especially working with the MareCet team members. There never was a dull moment when we were out at sea and I always learned something new every day. I am extremely grateful to Dr Louisa, for taking a chance on me and guiding me throughout the way. I don't think I would have survived without her encouragement and support both in research and also emotionally. To Vivian, Jol Ern and Sandra, my role models, thank you for all the knowledge passed down and also all the memories we had together out at sea.







I would also like to thank the boat skippers and all volunteers who assisted me on this journey. They were an integral part in me completing this PhD. Thank you to all the funding support I have received, as it helped lessen the burden of living costs in Kyoto. Specifically, my PhD was made possible through scholarships from the Mitsubishi International Student Scholarship and the Plum Foundation Scholarship for Wildlife Conservation, and fieldwork funding from the National Geographic Early Career Grant (EC-KOR-57162R-19), Morris Animal Foundation grant (D20ZO-840), Yayasan Sime Darby, SPIRITS 2020 of Kyoto University, JSPS KAKENHI (JP19K20460) and JST FOREST (JPMJFR2171).

To all the marine mammal researchers I met along the way, thank you for always inspiring me with your passion. To my labmates in Kyoto University, thank you for being kind and patient with my lack of Japanese language skills. Last but not least, I am also thankful to both Dr Kotaro and Dr Satoko, my Japanese supervisors for teaching me the acoustic ways and supporting me in Kyoto.

What an honour it's been, to have had the best of both worlds, researching the dolphins in Malaysia and also getting to meet life-long friends in Japan. It has been a memorable four years and I can't wait for the next chapter in my life. I look forward to continuing working with the MareCet team as their Bioacoustics Officer and to learn more about marine mammals not only in Malaysia but also in the wider Southeast Asia region. There is still a knowledge gap in the acoustic realm in the region, and I can't wait to explore more with colleagues from the area.

- Dr Saliza Bono

# Incoming and outgoing tides

# - changes in staff membership

Dr Saliza Bono Bioacoustics Officer



Hello everyone! I'm Saliza and although I've been volunteering on and off with MareCet since 2014, then becoming a member in 2018, now that I have completed my PhD, I've been given the opportunity to work full time in the organization! My goal has always been to work with MareCet because I've always wanted to be part of the conservation efforts for marine mammals in Malaysia. In this new role as the Bioacoustics Officer, I will be in charge of further developing MareCet's Marine Mammal Bioacoustics Programme (MAMABAC). I will continue its existing acoustic research whilst expanding the outreach activities related to acoustics. I will also be assisting Dr P in executing projects in relation to its bioacoustics components.

Istarted working full time with MareCet in November 2022, and although it's only been a couple of months, I am enjoying being in the office with amazing teammates. It's such a vast difference from working alone in the lab compared to working with a group of passionate ladies. I've always known it, but I always appreciate how everyone in the team helps each other out in various projects. There is so much more to do in terms of marine mammal bioacoustics in Malaysia and I am beyond excited to begin new projects in 2023 and discover new acoustic findings in the country!

Dr Vivian Kuit
Scientific Officer
and Program Manager



Hi, I'm Vivian. Although I have just joined MareCet as the Project Manager for the Cetacean Bycatch Mitigation Project in 2022, those who have been following MareCet's development may already know me, as I have been MareCet's Council Member for almost a decade now. I also went on to pursue my PhD on the ecology of humpback dolphins and Irrawaddy dolphins in Matang, Perak, under the tutelage of Dr Louisa and Dr Amy Then, and led MareCet's Matang Dolphin Research project. It was during that time that I got to meet and create memories in the field with many amazing volunteers.

Going from a volunteer for Langkawi Dolphin Research in 2010 to Council Member in 2013 to becoming a staff member in 2022, I feel privileged to be able to be involved in research activities on marine mammals and work towards understanding their ecology better and improving their conservation. I have always enjoyed spending time at sea with marine mammals, but more importantly, I enjoy working with people who share the same interests and passion for marine wildlife both in and outside of MareCet. My work at MareCet has also enabled me to travel to other countries to visit colleagues in Southeast Asia such as Vietnam and Thailand for various aspects of marine mammal research. Thus far, it has been rewarding to have the opportunity to continuously learn from each other, and I hope to continue expanding my skill set and experience, and putting them to good use.

At the end of my PhD studies, I developed an interest in working on bycatch mitigation for marine mammals in Malaysia after realizing the severity of the cetacean by catch issue especially in coastal cetaceans with distributions that often coincide with fishing activities. MareCet has embarked on this cetacean bycatch mitigation project, specifically, to test the use of Fishtek acoustic pingers in gillnets and develop bycatch reduction devices (BRD) for trawl nets. MareCet is working with local fishers, with partnership support from the Department of Fisheries Malaysia to co-develop these bycatch mitigation trials to identify the specifications that would work best to reduce the bycatch rate of marine mammals, in order to create win-win situations for fishers and the animals. While the project is still fairly new, I am excited to be working closely with Dr Saliza Bono, MareCet's bioacoustician, and other team members, future interns and volunteers to resume comprehensive surveys in Perak again in 2023. Stay tuned for future updates on this bycatch mitigation project!

#### Nor Aleesya Fareena

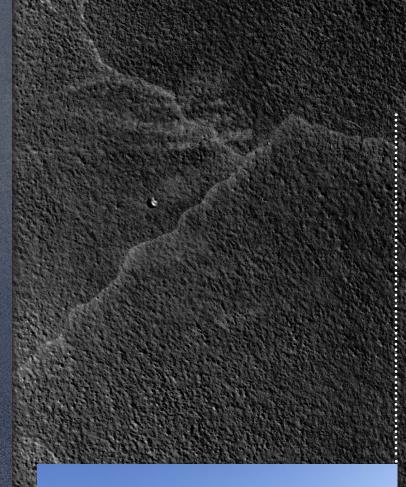
#### Outreach and Education Coordinator



Greetings! My name is Aleesya and I am the new Outreach and Education Coordinator. Unlike most MareCet's members whose interests are inclined towards marine mammals, sustainability and plastic pollution are my drivers for working in the conservation field. My first eye-opener to science and wildlife began when my parents gifted fiveyear old me with different sets of encyclopaedias to fill the mini library we had in my room. Out of all the encyclopaedias, the ones on wildlife and ocean have always been my favourite. Due to this, I grew up as the science-loving nerd among my siblings. Seeing how intrigued I was towards nature, my parents brought us to an island one day. It was my first time experiencing the beauty of the ocean. All the colourful corals and fishes I saw during my time there increased my curiosity towards nature.

As I grew older, my father introduced me to the reality of environmental pollution. He encouraged us to get involved in many river and beach cleanup activities. I became aware of the effects of pollution that the human population has caused towards the environment. Once, I came across an injured turtle trapped by a ghost net while I was playing by the beach. This was the fuel that drove me to study marine biology and ocean sustainability at university. I joined a research and development competition in high school and invented a biodegradable container made up of cogon grass (rumput lalang) as a plastic container alternative. The compliments and praises I received from the researchers there made me believe in my ability to help conserve the environment.

Even though I love nature, I prefer to stay indoors more than being outdoors. Being indoors made me rely heavily on the usage of the internet. Additionally, being born as a Gen Z individual, I am exposed to the usage of technology from a young age. Hence, I believe that technology is the best way to spread marine conservation awareness in this era. I would like to use this opportunity given to me as my kickstarter in spreading marine awareness to our community. Although it has only been a few months with MareCet, I already gained a lot of knowledge and experience on program management and marine mammal conservation with the help of MareCet team members. I look forward to my future adventures with MareCet while paving my career path.



# Parting words from outgoing Outreach & Education Coordinator Ng Jol Ern

It has been an incredible journey sailing with MareCet through the highs and lows since I joined as a member of staff in 2013. I have learned so much and had lots of fun at the same time in the past 10 years, growing from a person who was merely passionate about whales and dolphins, to someone who now knows so much more about marine mammals and their conservation issues in the country. I treasure all the moments I had and experiences I gained working with MareCet, and I am thankful to everyone who has guided, supported, trusted, encouraged, and inspired me along the way. I am proud, and always will be, to be a part of MareCet, and to have played a role in growing the organization and contributing towards marine mammal research and marine conservation in Malaysia. I am now bidding farewhale from my full-time position with MareCet, but I will continue to support MareCet's efforts as a council member in my role as the Honorary Secretary.



# Fundraisers for MareCet and the return to charity bazaars



The pandemic caused a halt in many charity bazaar events within Malaysia, which saw MareCet unable to participate in any such events in 2020 and 2021. In May 2022, the Project emergenSEA team from Sunway College, Sunway City, conducted a marine awareness and fundraising campaign under their Social Issues & Community Engagement (SICE) Project. Aside from raising public awareness about ocean conservation, they also raised a total of RM417 for MareCet. In August, another group of students from the English Society of SEGi University, Kuala Lumpur, hosted a fundraiser event for MareCet and raised a total of RM1,200 in support of marine conservation through the sales of merchandise and baked goods.

In addition, MareCet were invited to participate in the Association of British Women in Malaysia's (ABWM) Charity Fair and Christmas Charity Bazaar in October and November 2022 respectively. MareCet also had the opportunity to run a booth at the Christmas Bazaar organized by the Parent Teacher Association of the Alice Smith International School in December 2022. Funds were raised through the sales of our unique merchandise, as shoppers were supportive in giving back to local charities while doing their holiday-season shopping.

It was lovely to be back at charity bazaars, to get to mingle with a variety of shoppers, many of whom showed keen interest in MareCet's efforts as well as that of other charity participants.

# New merchandise collaboration with DAYBREAK Society



In 2022, MareCet engaged with Daybreak Society for a merchandise-making collaboration. DAYBREAK Society or *Persatuan DAYBREAK* is a charitable non governmental organisation based in Ipoh, Perak. DAYBREAK is an acronym for Disabled Adults and Youths, Being Rewarded, Encouraged and Accepted. DAYBREAK Society provides employment opportunities for people with disabilities, may it be physically, learning or mentally.

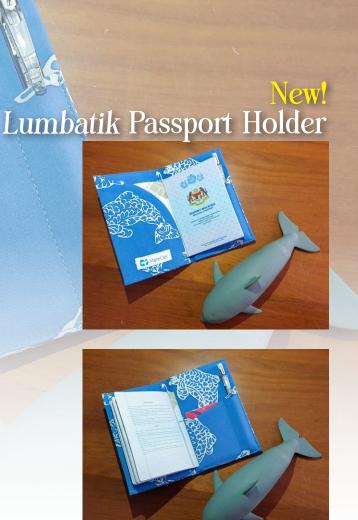
MareCet always aims to create a 'double goodness' merchandise, where, apart from supporting our marine research and conservation efforts, the purchases of MareCet's merchandise will also go towards supporting the livelihood of people with disabilities. As of now, DAYBREAK Society has collaborated with MareCet in creating our gorgeous new fluffy Indo-Pacific humpback dolphin plush and our exclusive Lumbatik passport holder.

# New items from the Lil' MareCet Shop launched

With the incredibly positive reception of MareCet's dugong plush amongst our peers and the public, MareCet decided to release a new plush collection which was inspired by one of our research's focal dolphin species, that is the Indo-Pacific humpback dolphin (*Sousa chinensis*), also casually known as the pink dolphin. For this plush, we specifically used pink *batik* fabrics to emphasise the pink colouration of the adult Indo-Pacific humpback dolphin. This plush is great for children and adults alike, as a gift to others and even to oneself! The dolphin plushies are handmade by <u>DAYBREAK Society</u>, a local NGO based in Perak that provides vocational skills training to youth with disabilities so as to empower them to have a chance at earning an income. The purchase of this plush goes towards supporting MareCet's conservation efforts and the livelihood of those youth at DAYBREAK Society.



Hey batik and travel lovers! Got somewhere to go and need a nice and functional cover to protect your passport? Introducing the latest product in our Lumbatik Collection the Lumbatik Passport Holder. This passport holder is made using batik fabric to enhance the locality in our Lumbatik Collection and for starters, it comes in three different colours; the passport holder also includes a slot for card and pen to make it easier for travellers during their trips. This new item was created with collaboration from DAYBREAK Society, a local NGO based in Perak that provides vocational skills training to youth with disabilities so as to empower them to have a chance at earning an income. The purchase of this passport holder goes towards supporting MareCet's conservation efforts and the livelihood of those youth at DAYBREAK Society.





# Thank You to all supporters







THE DATAI







































PUTRA BRASMANA









**MORRIS** 

**ANIMAL** 

**FOUNDATION** 















## Thank You to all our 2022 Donors!

Yayasan Haji Zainuddin **Francis Chia Mong Tet Melissa Ramlan Chong Ming Li Teong Gar Yan Tan Su Ching Low Hian Yow Kang Bee Hong Kee Alfian Lim Pey Chen Bernadette Chin Denise Sharon Tan** Ma Siwen **Eric Bartlett** Seokjin Kim

#### WCN Donors

**Madeleine Delman Cohen and Jerry Cohen Perlman Lee Family Fund David Berger and Margaret Dixon Glenda and Henry Corning Howe Ng and Aaron Hyland Kirsten Caufield Meryt and Peter Harding Stephan Meyer-Ewald and Andrea Ewald Glen Apseloff** Cocofloss **Caroline Ten Have** Marge and Thom Limbert **Michael DiLeo** A. Locke Pia Theisen and Brigitta Schürmann Thomas Hagler, Alice Stauffer and Family **Barbara Goldfield** Sandeep Dey **David Posner Thomas Sheridan** 

**Meagan Travlos** Cassandra J Fazio and Pamela Borne **Carol and Ken Mccarthy Gary Hoshiyama and Patricia Wood** Jane Horgan **Marylenel Smeets Rebel Rice and Adam Chodorow** 

**Rebekah Sheppard** Julie Carrasco **Stephanie McCord** Lee Hon Sow Liz Skipper Sandra Schultz Jay Parchure Ashleigh Lutz-Nelson **Becca Stievater** Janel Padaoan Jeffrey Flocken **Lucas Meers** Meredith McClintock ZoomYourTraffic Web Solutions Al Larson **Arviri Adonakis** Valerie and Bernard Sadoulet Yasuyo Yamazaki Joseph Moreira **Mary Walls Marie and Marc Mulkey** Misako Hill **Valerie Face Madison Scallan** 

Maya Horio









# List of volunteers

As always, MareCet cannot do a lot of the work that we do without the generous time and help given to us by volunteers. So we want to say thank you to all the following amazing volunteers we had in 2022! The memories made and friendships forged will not be forgotten for a long time to come.

Lee Qai Qet Nurul Izzati Siti Norazliyana **Chan Yee Send Chong Ming Li Celine Tay Maria Marcos** Lim Sia Wei **Steve Watson Tay Sheau Ying Hiew Ming Hui** Masha Ramnai **Mohd Hafizuddin** Lee Hao Ran Lee Qai Pin **Zailis Ishak Darshini Kandasamy** Nur Fatini Adeline Lee Samantha Ambie Yap Sin Yee Alicia Khor Tan Soo Wei **Beatrice Loh Joey Song Goi Shin Yee** Michelle Yip **Ng Wan Suan** Nurul Ainni Mazlan Ho Hui Swen **Hegabisek Kumar** Hariz bin Khairul Hisham **Chuah Yean Mae Paramieet Kaur** 

Tsng Hao Yuen Reena Nadhirah Rusidi Loh Yan Ru Syasya Saidi Nursarah binti Mohammad **Firdaus Aloysius Elaine Goh Yi Yin** Lee Ying Li **Nabilah Ariffian** Lim Chin En Niky Indriyani binti Supandi Afifi Noraha binti Mokhsin **Hor Weng Liang** Tan Wen Yun Sai Gayathri Sivaraman **Kit Ying Chong See Ming** Nur Safiah Amni Mohamad Azron Lucy Wong Zi Ni **Chen Yuen Lian** Hairul Abdullah John Cheng Hsin Juan **Lim Shu Fang Muhamad Nasiruddin** Aiman bin Azaha **Mohd Faris Amjad bin Mohd Nuriffah Atigah** Lim Yi Qi Choi Yi Lau **Billy Lim Chun Ginn Cheah Siew Siew Praga Shini** 



**Cheah Yin Yee Nurul Atikah binti Nordin Nurain Zafyra Mohd Isa** Muhamad Faris Aiman bin Ramli Reena H Fadzli Luqman **Dasi Ong** Nur Nabila binti Malek N Liza Ong Jun Hom **Kok Wai Yew Koh Chew Lian Leong Sin Yee Ethan Aun Kye Jay** Jody Hoo Kar Yee **Leong Zhi Ping** Khor Han Jie **English Society of SEGi University** Sofea **Avanesh** Kara Xiang Li Ma Siwen Ma Siyi Juariah Muhamad

#### Volunteer Testimonials

#### Most Volunteered Person (MVP)



"I would like to convey my gratitude to the MareCet team. I really appreciate the warm hospitality and patience given to us. You were all very accommodating and fun to work with, it was such a pleasant environment where I did not feel out of place. The past 11 days I spent with you guys were very enriching. I learnt so much not only on the dolphins and coastal seas, but also extending to the fishing community, the hard work of marine conservation, appreciating the beauty of Kedah and Perlis and many more. I may just be another volunteer to you guys, but each of you have impacted my life in many ways. Your passion for conservation is truly admirable and commendable. This experience has rekindled my ambition to make a change for our world and hopefully to one day be like you guys."

Lee Qai Qet LDR, March 2022 "My time as a volunteer with MareCet heightened my perspective on the emphasis and urgency of wildlife conservation. Not only did I get to contribute to the inner workings of conservation, I also had the opportunity to spend time with brilliant, motivated people with clear, ambitious goals. Days were unpredictable, but every day was as fulfilling as ever. Not many experiences in my life hold a candle to seeing dolphins in the wild while stabilising an underwater acoustic device transmitting clicks and whistles. The future seems so much more hopeful when you're surrounded by people who are actively working towards a world that they believe in."

#### Nurul Izzati LDR. March 2022

"Experiencing the dolphin research survey with MareCet was truly a blast! I had a great time learning about our local marine mammals, their habitats, the nitty gritty parts of research (such as deploying the acoustics to track research data). The team was very open in sharing about every aspect of their work and knows how to make sure we're always learning a bunch while also having a really great time out at sea! It has been absolutely eye-opening and mind-blowing learning about the work they do + to actually see these animals in the flesh! Truly grateful for the experience and the generous time MareCet spent on showing us their work in Langkawi."

#### Celine Tay LDR. March 2022

"If only one word is allowed to summarise my volunteer experience with MareCet, it would be "extraordinary". I can only say that I got so much out of this experience, it was so satisfying, and I didn't regret joining the Langkawi Dolphin Research during my free time. So many dolphins and once-in-a-lifetime experiences as the days were unpredictable. But I enjoyed the volunteering work on the boat! And it was so much fun to meet all the MareCet team & other volunteers, it is great to know there are so many people caring about the cetaceans around Langkawi Island. The team was caring enough to brief and explain everything to me and other volunteers, they are so motivated, passionate, and brilliant. I learned so much knowledge about Langkawi and marine life throughout this volunteer experience. I would go back again & again to just do a little bit more for marine life."

Ming Li LDR. March 2022

#### Volunteer Testimonials

"I didn't even know we had dolphins in Malaysia before I joined an observation trip at Matang Estuary a few months ago. I was overjoyed when I was accepted as a volunteer for a 10-day dolphin research trip in Langkawi. How do you describe a trip where you saw pods after pods of dolphins and porpoise, sometimes having lunch with so many dolphins surrounding our boat that we didn't know where to look, enjoying frequent acrobatic performance of dolphins leaping in the air, and swim in the open ocean with a 250° view of the Langkawi Archipelago?

I have gained so much respect for Dr. Louisa, the Dolphin Scientist, and the entire Research Team of MareCet. They have a GO GO and CAN DO attitude.

I learned that there is so much involved in dolphin research:

- 1. There is lots of preparation before and after the field trips. Funding is always a constant challenge. Getting equipment ready, finding and coordinating volunteers, cleaning equipment after each outing, downloading all the footage, charging the equipment for next morning, entering data collected, sending/sharing the information to relevant institutes, submitting reports to sponsors, etc. Not to mention lots of data to analyse (both photographic and acoustic data) after the research trip.
- 2. There is lots of bureaucracy involved. Getting cooperation and approval from authorities is not easy.
- 3. Researchers are exposed to the elements sun, sea, rocky waves, rain, no toilets, etc.

Their days during field surveys start at 7am and end after midnight. Their social life and family life are put on hold while they are away for weeks/months.

One has to be really passionate to do what they do, day in and day out.

It is a privilege for me to be a small part of this trip. Seeing dolphins and porpoises in the wild and playing a tiny part in their conservation is more than a dream come true for me. I would join again in a heartbeat."

YeeSend LDR, March 2022

"Whenever we saw whales, and after we got back, I always thought to myself — "What a life"! To wake up every day pioneering conservation in Malaysia, and ride back into the sunset, makes every day spent with MareCet a day well spent! It was my first time spending this much time out on the sea, and I truly enjoyed the adventure, including all of the sun and storms. The team was very welcoming and gave me a lot of useful advice as a conservationist, which I am sure will shape my future in a few ways. I learned a lot in a short period, and I can't think of a better place to do this than MareCet. It is tough to do conservation, especially in Malaysia. The hard work that MareCet does deserves all the respect and support that they can get. I'm grateful that MareCet chose to share this experience with me and can't recommend it enough to my peers!"

#### Hao Ran LDR, June 2022

"It was truly an eye-opening experience for me, as someone who did not have any prior volunteering experience in this field. While spotting whales and dolphins up close with my own eyes was the highlight of the project, what really intrigued me the most is the passion and dedication the team had towards these marine mammals. Willing to battle the elements of the sea not for money nor for fame but for the sake of conservation and research. The team were very friendly and despite myself not from a field related at all to nature, I never once felt out of place. Through this project it definitely paved the way towards a newfound interest in me and a better consciousness towards the environment."

Qai Pin LDR, June 2022 "The past 11 days with MareCet have been an amazing journey.

I am grateful to MareCet for providing me with the opportunity to volunteer in Kedah-Perlis dolphin research. When I started my volunteering with MareCet, never could I imagine I would gain so much more. I have learned some marine knowledge during the fieldwork, which is definitely different from my major. This journey has broadened my horizons and everyone I met was both friendly and wonderful. This volunteer programme was well-organised, and the MareCet team were very helpful, inspiring, and approachable, and they guided me well. I really enjoyed every part of my volunteering, and I am happy that I was able to be a part of this project. I felt very grateful that Malaysia has this NGO and I really respect those who work in this field. The enthusiasm of MareCet's team really touches me so much. It was not easy, but they are making some things with different impacts. I would definitely recommend it to anyone who is interested in this volunteer programme. I wish all of you all the best and hope our paths meet again."

#### Ming Hui LDR, June 2022

"A once-in-a-lifetime opportunity! I've always wanted to volunteer with MareCet since I first heard of them from a friend. In the course of 10 days, I learned much more than I ever could in the classroom. Though it may be gruelling sometimes, it is also one of the most rewarding experiences.

From observing and learning about majestic dolphins to interacting with interesting people from all walks of life and learning about the secret gems all over Langkawi. Shout out to Jol Ern and Sher Lynn for making a group of strangers feel like family:)"

#### Alicia Khor LDR, September 2022



















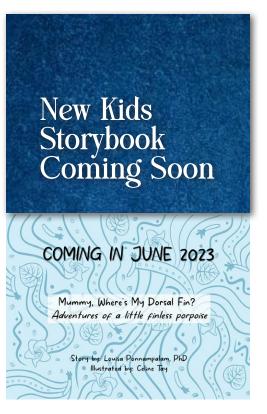


# Coming in 2023

# Marine Excursions and The Blue Classroom by MareCet

We are resuming our dolphin edu-tours and marine excursions/ The Blue Classroom programme after a very hectic 2022. Stay tuned as we roll out more educational field trips including 'A Day Out with Dolphins with Dolphin Researchers' in Matang, Perak, and Junior Marine Explorer in Langkawi Island in 2023! Join us on our edutours and excursions to learn first-hand knowledge and experience with our very own dolphin researchers about marine mammals and their beautiful marine habitats. Our marine excursions are also available for private booking, contact us at <a href="mailto:excursions@marecet.org">excursions@marecet.org</a> to find out more.





MareCet will be self-publishing a kids' storybook, in June 2023, in conjunction with World Ocean Day 2023! Authored by Dr P, the book titled, "Mummy, where's my dorsal fin? The adventures of a little finless porpoise" is illustrated by talented Malaysian artist Celine Tay Chuan Mei, with whom MareCet has collaborated with on past creative exercises. The book centers upon Aluna, a young Indo-Pacific finless porpoise, who sets out on a round-the-island adventure around the Langkawi Archipelago with her mother, Cheriya. Along the way, she learns all about the islands' geological wonders, meets some of the other Langkawi residents, gets taught about avoiding dangers in the wild, and learns about local efforts in marine conservation. The book will first be published in the English language, and is likely to be translated into a Bahasa Melayu version in the near future. The e-book version of the book will be available as a free download from the MareCet website, while print copies of the book will be up for purchase by anyone who would like a copy. Production of this book has been made possible through funding support from Yayasan Sime Darby, and the book itself is aimed at providing young children with an enthralling learning experience about the beauty of the Langkawi Archipelago, where MareCet has been working in over the last decade.

# The Whale Truck Keeps on Going in 2023

Our Whales On-The-Wheels (WoW) mobile marine education nationwide tour continues its journey this year, after successfully completing three tour segments in the southern and north-western regions of Peninsular Malaysia in 2022. For those in the Klang Valley and greater Selangor state, and the east coast region of Peninsular Malaysia who have been following our tour and eagerly hoping to catch our Whale Truck, we will finally be bringing the mobile exhibition to you! We have two tour segments this year, tentatively scheduled for July 2023 visiting Terengganu, Kelantan, Pahang and Johor (east coast), and October 2023 in Selangor, Putrajaya and Kuala Lumpur. Stay tuned to MareCet's social media pages for the official tour schedules, which will be announced closer to the date.

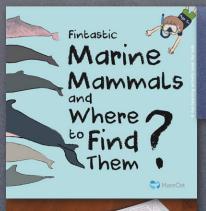
If you are interested in sponsoring our Whales On-The-Wheels nationwide tour or even volunteering your time, do contact us at <a href="mailto:outreach@marecet.org">outreach@marecet.org</a> or +6011-1577 6802 to initiate a discussion or enquire further. We would love to hear from you!





# Lil' MareCet Shop

As of 2022, Lil' MareCet Shop is now available at <a href="TeamRakyat">TeamRakyat</a>! What is TeamRakyat? TeamRakyat is an e-commerce platform that is built with the aim to help fundraising for local non-governmental organisations by allowing them to sell their merchandise in support of the NGOs' conservation efforts. Apart from <a href="Shopee">Shopee</a>, you can also place your orders on Team Rakyat. All proceeds from the purchase goes towards supporting MareCet's efforts on marine mammal research and marine conservation. Lil' MareCet Shop can be contacted through <a href="shop@marecet.org">shop@marecet.org</a> or Whatsapp to +6011 1577 6802 for international orders and/or any merchandise related enquiries.



#### 'Fintastic Marine Mammals and Where to Find Them?' Kid's Activity Book

MareCet's first published kid's activity that focuses on marine mammal and marine conservation. It is packed with various informative contents and a lot of fun activities that suit children at the age 5 and above (even adults) making it a great educational tool to learn about marine mammals and their habitats. This book was developed by MareCet and illustrated by a local artist, Kok Ching Ying (from 牛勿 anything), with the support from ERM Foundation Malaysia. Get your fins on the book today!



#### New! Lumbatik Passport Holder

Our latest *Lumbatik* Collection product - the *Lumbatik* Passport Holder has arrived! This passport holder comes in three different colours; **Blue**, **Lavender** and **Black**. We also included a slot for card and pen to make it easier for travellers during their trips. This passport holder is created with the collaboration from DAYBREAK Society. Every purchase of this passport holder will go to supporting MareCet's marine mammal research and conservation efforts as well as the livelihood of the disabled community registered under DAYBREAK Society.

Fintastic Book	RM20
Lumbatik Passport Holder	RM60
Lumbatik Art Frame	RM30
Lumbatik Bucket Bag	RM300
Lumbatik Tote Bag	RM250
Lumbatik Sarong	RM200
Lumbatik Purse	RM60
Dolphin Plush Toy	RM80
Dugong Plush Toy	RM80

## Do-It-Yourself Lumbatik Art Frame



Our DIY *Lumbatik* art frame is a great tool for you to unleash your artistic imagination and get creative by combining colours to create your own art piece. This DIY art frame set includes 1 *Lumbatik* frame, 1 colour palette, 1 brush and 3 colour dyes; **red**, **yellow** and **blue**. Mix and match your dyes to get a variety of colours! Adjusting the amount of water will help you get the colour swatch that you desire. Grab yours now from the shop!

#### New! Indo-Pacific Humpback Dolphin Plush Toy



Our latest release in the Plush Collection, inspired by one of the dolphin species that we studied - the Indo-Pacific humpback dolphin or generally known as the pink dolphin. True to its name, we used pink-patterned batik fabric to create this plush toy. This pink dolphin plush toy is suitable for all ages, toddlers to adults alike. Apart from being your fluff companion, this plush can also be a great gift to be given to your loved ones. This plush toy is produced with the collaboration of DAYBREAK Society. Every purchase of this product will go to supporting MareCet's marine research and conservation efforts, as well as the livelihood of the disabled community registered under DAYBREAK Society.



#### The Lumbatik Collection

*'Lumbatik'* is an original designed *batik* fabric by MareCet. The name 'Lumbatik' is derived from the combination of the words *lumba-lumba* (meaning dolphin in the Malay language) and batik. The batik design is inspired by the dolphin species that we study - the Indo-Pacific humpback dolphin, and traditional motifs in Peninsular Malaysia where we work. *Lumbatik* is made in Kuala Perlis, a coastal area on the west coast of Peninsular Malaysia, where we study and conserve the dolphins. Our range of *Lumbatik* products include different styles of bags, purses and pareos. The purchase of these products support both our marine mammal conservation efforts in Malaysia, as well as local artisans.



Endangered Dugong Plush Toy

Our dugong plush toy makes a spe-shell gift for babies, kids and even adults! The plush toys are inspired by one of the marine mammal species which we study in Malaysia - the endangered dugong. These dugong plush toys are made by women in local communities in Malaysia at fair trade price. The purchase of these plush toys supports MareCet's conservation efforts for the endangered dugong population in Malaysia, as well as the livelihood and empowerment of local women.

The sea is around you and in you. The sea is your home, before your birth and after your death. The sea gives and the sea takes. Water connects all things - life to death. darkness to light. - Avatar: The Way of Water Support MareCet @marecet © @marecet MareCet Marine Mammal Research & Conservation **Marecet TV** @marecetmalaysia **(1) (2)** +6011 1577 6802 www.marecet.org

USJ 12, Subang Jaya, Selangor, Malaysia