

BLUE & GREEN LAAMU

*The Marine Conservation & Sustainability
Newsletter by the Maldives Underwater Initiative*
MARCH 2023


SIX SENSES
LAAMU

 MUI

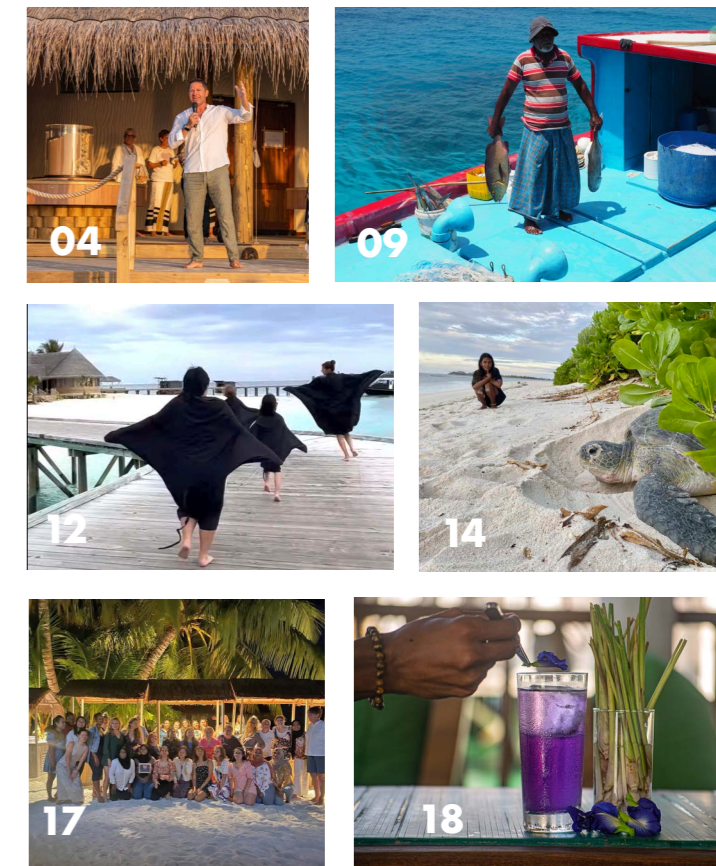
MALDIVES UNDERWATER INITIATIVE by Six Senses Laamu

Credit: Miriam Staiger







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THE BIG STUFF

-  **455** Guests joined on megafauna surveys
-  **661** sharks were sighted
-  **475** rays were sighted
-  **250** turtles were sighted

OUR EDUCATION

-  **1394** moments of education were shared with guests
-  **166** moments of education were shared with hosts
-  **75** moments of education were shared with the community

SIX SENSES CONSERVATION

THE SHELL IS OPEN



On March 1, the resort celebrated the Grand opening of the SHELL, The Sea Hub of Environmental Learning in Laamu. This brand new facility has been in the works for many years after a number of delays and postponements. Many hours have been put in by the MUI team, Regional Manager Marteyne van Well and many others, to create the incredible experience that the SHELL now offers. In addition to 150 in-house guests, the resort was very honored to welcome government officials, including the Minister of Tourism of the Maldives, dignitaries, press, industry experts, as well as senior leadership of the resort owners HPL Hotels & Resorts and Mr. Jacobs, the CEO of Six Senses. With all these inspirational and excited people under one (Cadjen thatched) roof, the SHELL was officially opened.

The SHELL has multiple spaces designed for guest



education and offers curated and immersive marine conservation experiences. Its 2,336 square foot (217 square meter) central exhibition space allows guests to explore the colourful and vibrant local marine life and their homes, in an out-of-the-ordinary encounter. The SHELL also features designated facilities for hosting world-class researchers to further expand MUI's ambitious goal to see sustainable resource management in Laamu.

With the goal of bringing an immersive experience to the guests at the SHELL, the central gallery also called the Tank, boasts a high-resolution LED display floor and five educational viewing booths for kids and adults, featuring the diverse underwater scenes of Laamu atoll and give insights into selected micro-topics on marine life. This immersive gallery, designed by Illuminate Productions in Singapore, is unique and one of a kind in the Maldives and seeks to showcase and educate guests on the exciting marine life around Six Senses Laamu. Inspired by a glass-bottom boat, the content is periodically updated to reflect new footage captured at sea by the resort's dive team and diver hosts, bringing about an ever-changing canvas that guests will be able to experience during different visits to the resort.

The team understands that conservation doesn't happen overnight, and that to be truly successful a combination of scientific research, community support and international understanding needs to be implemented. The SHELL aims to bring together all these elements in an innovative and exciting way to safeguard the environment and people of Laamu.



THE COLLABORATIVE FOR REEFS KICKS OFF

In March, MUI had a team of visiting researchers in Laamu to set up the first stages of the Collaborative for Reefs in Laamu (CRL). The CRL project is a combination of the MUI team, the Maldives Coral Institute and international researchers. These international researchers came from four different institutions; Peter Harrison & Jaimee Moynihan from Southern Cross University, Steve Simpson from the University of Bristol, Matt Dunbabin & Serena Mou from Queensland University of Technology, and Jamie Craggs from The Coral Spawning Lab, working with the team from MUI to conduct this project.



The purpose of the CRL project is to discover the best methods of coral regeneration through larval replenishment. Similar methods of larval replenishment have been used on the Great Barrier Reef in Australia and found to be very effective. The MUI team will be working with these

collaborators to adapt them for use in the Maldives, and the first trial was completed in early March!

On the 9th of March it was a full moon. This is the signal that many coral species will use to time their spawning. Every month, the MUI team sample coral colonies to track this, and check for the development of pigmented eggs which indicates that species will spawn soon. When the signals are right it stimulates coral colonies of the same species to release their bundles of eggs and sperm into the water column at the same time. However, although millions of eggs are released into the ocean, relatively few make their way back to the reef. This is where the CRL project and the MUI team are hoping to help. The CRL team collected up the coral gametes after



a spawning event, waited for ex-situ fertilization, the coral larvae were then split between the coral rearing system in the SHELL lab and a larval rearing pool moored in front of the resort. The larvae were then raised in a safe environment until they were ready to settle back on the reef (~4 days after spawning). When the coral larvae began to move around, trying to find a place to settle, material was added to the lab tanks for

the coral larvae to settle on and the coral larvae in the rearing pools were delivered to the reef via an Automated Surface Vessel (also known as Brie the Floaty Boat!). Brie is able to travel along a GPS coordinate track and deliver pumps of concentrated larval liquid to the reef. This minimizes the number of coral larvae lost to the open ocean and maximizes the number of new coral babies that repopulate areas of degraded reef.

The MUI team are very proud parents and have been observing the newly settled coral in the lab and been tracking their development. The coral recruits are currently depositing their calcium carbonate skeleton and taking in their symbiotic algae! They will be monitored in the field, and in the lab, to track their development. When the recruits in the lab are big enough to be out planted on the reef, the MUI team will place them in areas of the reef which have been degraded.

Through these methods the CRL hopes to replenish areas of Laamu Reefs which are struggling to recover after past bleaching events. They are methods which are scalable, effective, and can theoretically be used to replenish large stretches of reef, giving coral reefs a regenerative shot in the arm when they need it most.



LISTENING TO THE REEF



The MUI team has been working with Steve Simpson from the University of Bristol to discover the sounds of Laamu's Reefs. Although we don't often think about what we can hear underwater, a reef is actually a very noisy place! These sounds come from the organisms that live in the reef, from snapping shrimp to clownfish. Much like how birds have distinctive bird song, lots of fish species can make noises that they use to communicate with each other. This is something that is only gradually being uncovered and the MUI team are some of the first people to listen to Maldivian fish! The reef soundscape can also be used as an indicator for health, and by taking recordings of the different reefs around Laamu we can monitor for changes over time.

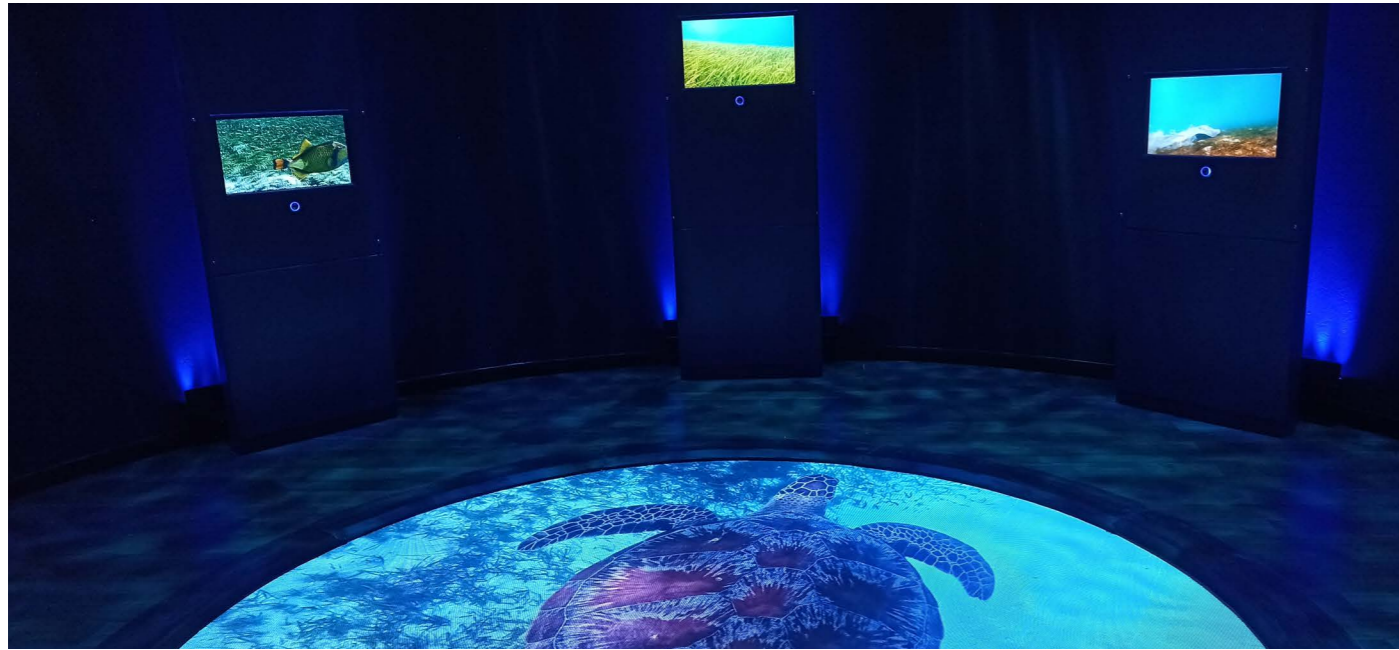
 **~21000** coral larvae released onto the reef

 **600+** baby corals growing in the SHELL lab

 **600+** baby corals growing in the SHELL lab


 **20+** audio recordings taken

MUI CELEBRATES WORLD SEAGRASS DAY



World Seagrass Day is celebrated on March 1, but due to the grand opening of the SHELL, the MUI team had to postpone the celebration to a later date. So, on March 28, the MUI team celebrated seagrass on their own World Seagrass Day, with the resort guests. The day started with a guided snorkel into the beautiful protected seagrass meadows around the resort. The guests had an amazing experience with lots of fish and megafauna sightings, including turtles, rays and sharks. In the afternoon, the lab was opened up for a special workshop, where guests had the opportunity to have a closer look at seagrass samples, identifying species and observing them under the microscope. While all of these activities were ongoing, The Tank in the SHELL displayed special videos where guests could see some incredible footage of life in the seagrass. A special management cocktail party was held at the SHELL beach in the evening and the day ended with a special presentation from our intern Athif, at the SHELL theatre room. The presentation was live on MUI instagram and the audience got many insights on life among the seagrass.



 **6** different species found around Six Senses Laamu

 **76** guests directly involved in World Seagrass day celebrations

BLUE MARINE FOUNDATION




TALKING FISH AT THE MALDIVES MARINE EXPO!

The Maldives Resilient Reefs team took part in the Maldives Marine Expo held in Hulhumale' from March 15-19. It was a great opportunity to share MRR and Blue Marine's projects with the wider community. The four-day Expo organized by the Maldives Boating Association was attended by various business representatives from the tourism industry, government officials, and members of the public. The MRR team exhibited a stall alongside other leading marine conservation NGOs in the Maldives. Afaaz, Blue Marine's Resort Research & Fisheries Officer, shared the concept and progress of the successful Laamaseelu Masveriyaa programme run at Six Senses Laamu.



Visitors from the tourism industry were also urged to take part in the Fish & Seafood Sourcing Survey being conducted to inform the rollout of the Laamaseelu Masveriyaa program across the country. MRR also debuted the Masmahaa Veshi education website, where visitors learned about the marine environment and sustainable fisheries by completing the platform's learning modules. Shaha, Blue Marine's Maldives Programme Manager, also had the opportunity to share her experiences with blue economy and conservation in the Maldives during ADEX's panel discussion at the Expo.

 **419** individual reached

 **6** tourist operators engaged



FISHER OF THE MONTH - SAUD MOHAMED



Saud,, from the neighbouring island of Maamendhoo, is one of the longest serving members in the Laamaseelu Masveriyaa Program. Saud has been fishing since the age of twelve and is truly a jack of all trades, catching reef fish using trolling and hand lining. The resort can always rely on Saud to supply freshly caught emperors, snappers, job-fish, wahoo and barracuda. Moreover, he is also a coconut collector and toddy tapper. He and his wife spend most of their time making fish products at their island home by the beach. In March, Saud supplied fish to the resort 17 times and accrued 15 sustainability points which makes him eligible to receive the

fisher premium bonus and fisher of the month for the month for of March. The premium bonus can be earned by any fisher who accumulates more than 15 sustainability points by following the fishing code of conduct under the programme. Saud says: "I have seen the decline in reef health over the years and I am confident that the sustainable practices will foster recovery, but only if everyone works together!"

 **17** fish landings

 **15** Sustainability points accrued

FISH OF THE MONTH – BLACK TREVALLY

The black trevally earns its name due to the distinctive dark colour on its body. The dark colour intensifies when it is caught. It has a steep forehead and long curved pectoral fins. Perhaps the most distinctive feature is the black spot on the upper margin of the operculum (a fishes gill cover). The black trevally, which can grow up to a 100 cm, is generally a solitary fish which can be found on outer reef slopes and deep drop-offs. They can coordinate hunting together in small schools ambushing small fish during the night. Often selected as the catch of the day at our restaurants due to their flavourful flesh, black trevally can be prepared in a multitude of ways such as sushi, sashimi, grilled or with a spicy curry.



 **28** Black Trevally landings

BLUE MARINE WELCOMES JENNY

In March, we welcomed Blue Marine’s new Laamu Project Manager, Jenny Baker, to the resort. She comes with 13 years of experience in the hospitality industry and over seven years of experience in marine conservation organizations such as Blue Ventures, Reef-World Foundation, Suffolk Wildlife Trust and Natural England. She is also a PADI Dive Master and has an MSc in Tropical Marine Biology from University of Essex, UK. She speaks four additional languages including advanced German, conversational French and Spanish and basic Russian.



Jenny is delighted to join the accomplished MUI team at Six Senses Laamu and to have the opportunity to make a positive impact to marine conservation in Laamu Atoll.


Jenny will oversee various projects to increase effective marine protection, improve sustainability of reef-based fisheries, improve environmentally responsible tourism, strengthen local capacity and participate in outreach with Six Senses guests and the local community.

SEAFOOD SOURCING SURVEY COMPLETED

In March, Blue Marine and MRR successfully completed the Fish & Seafood Sourcing survey, conducted across all the resorts in the Maldives in collaboration with Ministry of Tourism and Ministry of Fisheries, Marine Resources and Agriculture. The survey aims to gain an understanding of how local fish and seafood are being sourced by different types of tourism



operators across the country and the willingness of the tourism operators in embracing sustainable seafood sourcing practices. The survey was carried out using an online questionnaire comprising of 39 questions spanning three sections covering seafood sourcing procedures, traceability of the seafood sourced and the willingness to adopt sustainable fish and seafood sourcing practices. The outputs of this survey will inform the rollout of the Laamaseelu Masveriyaa programme which has been successfully piloted at Six Senses Laamu and inform effective policy making at the national level.

 **32** resorts completed the survey

 **160** resorts reached

THE MANTA TRUST




MANTA MADNESS KIDS CLUB



The Manta Trust team is so excited to finally utilize the SHELL in their kid's club sessions. This month, the kids were one of the firsts to ever do manta games in the SHELL learning all things manta: from manta biology, the importance of cleaning stations and the remote camera research the team conducts in Laamu to why we need to protect them. The team can now utilize the life-sized manta models in the center to play manta identification games and tell the kids stories about the individual manta rays. All four manta models in the SHELL are models of actual Laamu mantas that the team sees during dives. Kids (and parents) can also color in some of the manta coloring pages for the interactive wall in the kids' room. The paper is then scanned via QR code and the exact manta with the name of the child and it's coloring will appear on the wall and swim around with other animals. Finally, whenever kids feel like it, they can dress up as little manta rays and play games – this month the kids decided to play catch with Miri, the Manta Trust project manager, chasing her around the island and having a good laugh while doing so.

 **6** eyes-on-the-reef deployments

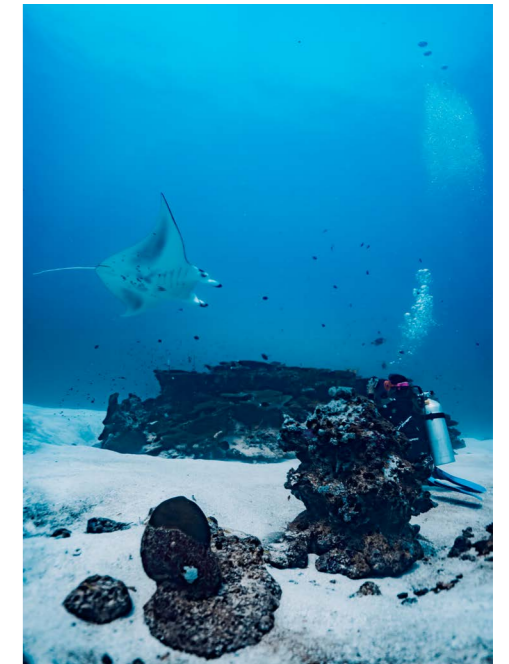
 **5** drone surveys conducted

 **4** manta ray sightings



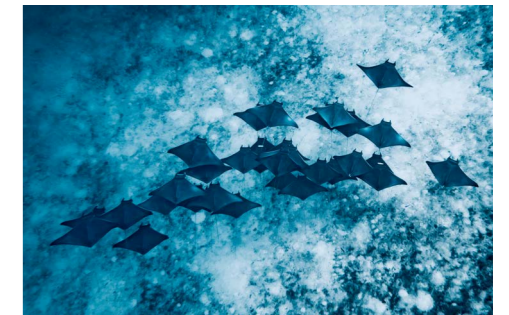
TIME TO SHINE FOR MOBULA RAYS

March is always a time of the year where manta ray sightings are at their lowest. Luckily the sightings have started to pick up towards the end of the month, with a particularly beautiful and long encounter with Ouyala the manta ray getting cleaned for 20 minutes at a single cleaning station.




But even during the time without manta sightings, the team wasn't bored – apart from getting involved in other exciting MUI projects and finally going through all the remote camera footage, a not too different little cousin of the manta ray, has filled the "manta gap" with some incredible encounters!

The Shorthorned Pygmy Devil Ray (*Mobula kuhlii*) has been repeatedly sighted by the MUI and Deep Blue Divers team at a reef inside the atoll both during snorkels and dives and have put on some great shows for all that have encountered them. Mobula rays belong to the Mobulidae family, the same family as manta rays, but are even less understood than manta rays. Manta rays are larger than devil rays (although some species of devil rays can get up to 3,5 m) and mobula rays have their mouth on their ventral side, while manta rays have a terminal mouth.



The Shorthorned Pygmy Devil Rays are on average 1 meter wide from wing tip to wing tip. These elegant creatures are usually very shy and elusive and therefore hard to study. It is not surprising that not much is known about their life history traits – for example we don't know when mobula rays sexually mature or for how long they live. Usually this species of mobula is sighted in shoals of ~15 individuals but this month the teams have encountered them in numbers of 70, even divers that have been in Laamu for many years are fascinated by these encounters! The frequent sightings of mobulas inside the atoll this month have given the team hope to better understand these agile creatures. Any mobula sightings and photos or videos from around the world can be submitted to the Manta Trust online and are highly appreciated.

 **13** sightings of mobula rays

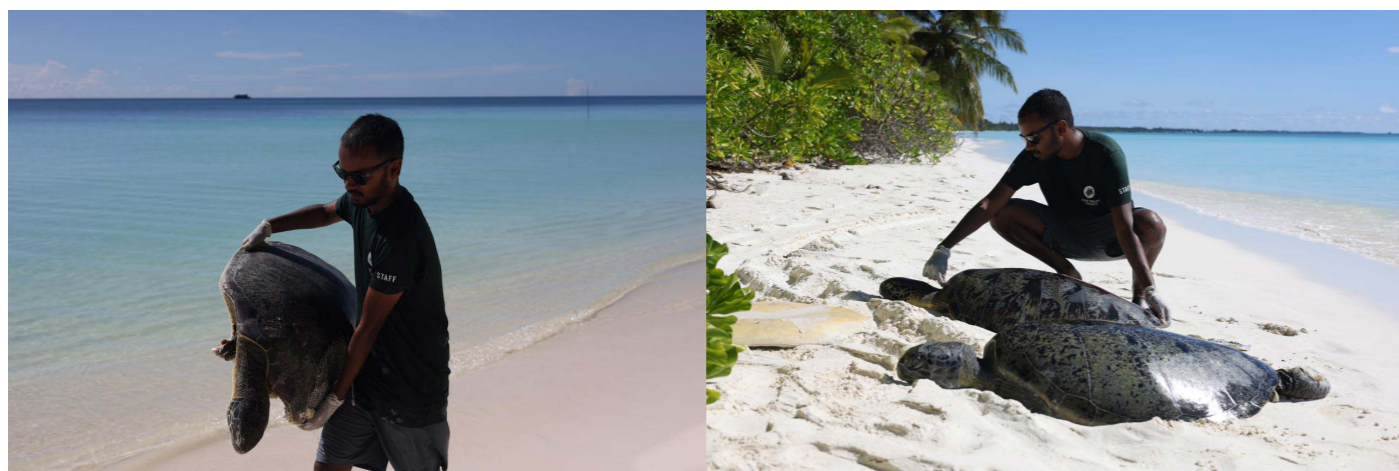
 **75** mobulas encountered in single school



OLIVE RIDLEY
PROJECT

THE OLIVE RIDLEY PROJECT

POACHING - A SAD REALITY MONTH



Earlier this month, Inaan, Laamu's Sea Turtle Ranger and Community Officer, was called by a community member to report two sea turtles that had been found poached at a beach in Gan, one of the local islands in the atoll. At the scene, he discovered a male and female green turtle that had sadly been caught and butchered for their meat, leaving what was left thrown in the shallow water to wash up on shore.

Inaan is co-supervised by the Olive Ridley Project and the Environmental Protection Agency of Maldives (EPA), and acted on their behalf to officially report the poaching incident. He collected photo-ID data, carapace measurements, and photographic evidence to send to the EPA. The EPA and the Maldives police have since taken over the investigation, and are still looking for the person(s) responsible for this poaching incident.

Despite being a fully protected species by law, poaching of sea turtle eggs and meat remains one of the main threats to the national green turtle population. This represents one of few formally reported cases of poaching in the Maldives, and highlights the importance of having a ranger on the ground to tackle this issue from within the community, not only through enforcement, but through education as well. While poaching is not an issue that will disappear overnight, this is a big step in the right direction towards improving protection of this incredible species.

SAVE IT FOR LATER

With the recent cases of turtle rescues in Laamu atoll, ORP organized a sea turtle entanglement and rescue training for new and existing MUI and Deep Blue Divers staff.

The training was attended by 15 hosts, and covered ORP's protocol for reporting and rescuing an injured or entangled turtle, guidelines on how to handle and disentangle a turtle, and basic first aid. The participants were also instructed on the proper protocol for removing and reporting ghost gear found around the atoll and wider region.

Ghost gear refers to any fishing gear that has been abandoned, lost or otherwise discarded, and is a major threat to marine species, not only in the Maldives, but across the world's oceans. Inquisitive turtles try to use the floating mass of fishing gear as a resting platform or are attracted to prey such as crabs that are already entangled, and as a result get entangled themselves. The long term database built by ORP and its collaborators allows them to document and determine the origin of ghost nets, which can help to develop targeted initiatives to reduce loss of fishing gear.

 5 ghost nets were collected in 2022



SUN SALUTATION!

At the start of this month, the team was greeted with a beautiful sunrise nesting from one of Laamu's new female green turtles.

This was a rare treat, as green turtles usually emerge at night in the cover of darkness, when they're less exposed to the heat of the day. They crawl up and along the beach until they find a suitable spot to nest, then they prepare the area by clearing any debris and digging an egg chamber, before laying, covering and camouflaging their eggs, and finally returning to sea. This is no short process and can easily take up to two hours!

The Sea Turtle Biologist was informed of this female by the Six Senses security team, who regularly patrol the beach at night and have been integral in supporting our nesting research. The team waited patiently until she began laying to collect photo-ID data and take carapace size measurements, as turtles go into a trance like state during this stage of nesting and the risk of disrupting her is much lower! After she finished nesting, she slowly made her way back to the sea just as the sun was rising. Truly a spectacle of nature to behold!

 4 nests laid on island by this female



TURTLE IN THE SPOTLIGHT

Say hello to Roanna (HK3822)!

This little hawksbill is a regularly sighted resident of Laama Faru Haa, one of Six Senses Laamu's most popular snorkeling sites, who never shies away from the camera. Roanna is a 40 cm juvenile who was first sighted five years ago in January 2018, and has since been encountered 145 times, making them the most sighted turtle in Laamu! They're also one of our most easily recognizable individuals, with a large, distinctive scale extending from their eye to the back of their head on both sides of their head.

Juvenile hawksbills like Roanna, can often be seen foraging for sea sponge amidst the coral reefs around Laamu. In Maldives, hawksbills reach adulthood at an estimated 60 cm carapace length, so this turtle still has a long way to go before they begin making the long journey to their natal grounds. Roanna's inquisitive and easy-going nature makes them the perfect subject for our photo-ID research, and we hope to continue seeing her for many more years to come!



➔➔ 145 encounters in five years.

OUR COMMUNITY NATIONAL CAPITAL ACCOUNTING WORKSHOP

Adam, Six Senses Laamu's Sustainability Manager, attended an NCA Inception workshop in partnership with the University of New South Wales (UNSW) and Rekam Nusthra Foundation on March 13-14. The workshop was a comprehensive 8-hour training program aimed at discussing the importance of Natural Capital Accounting (NCA) in the Maldives and sharing case studies from Indonesia.

The workshop was organized in response to the Ministry of Environment, Climate Change, and Technology's (MECCT) decision to undertake a two-year pilot project in Laamu Atoll. The project aims to leverage NCA to help protect and conserve the biodiversity of the Maldives.



The workshop was a resounding success, with participants gaining a deeper understanding of NCA and its applications. Additionally, the UNSW team visited the SHELL and met with the MUI team, to provide additional information about NCA in Laamu Atoll.

With the support and guidance of MECCT, MUI, UNSW, and Rekam, the project is expected to be a success. The NCA project in Laamu Atoll is a crucial step towards preserving the natural capital of the Maldives, and it is hoped that the lessons learned from the workshop will help guide the project's success.

20 stakeholders participated

8 hours of training

OUR HOME

WOMEN'S DAY CELEBRATION

On March 8, Women's Day was celebrated at Six Senses Laamu with a special dinner for all the women hosts on the island. It was a moment of pride and appreciation for the hardworking and dedicated women who contribute to the success of the resort. The special dinner held at the Sip Sip beach was a small way to express gratitude and show support for the talented women who make Six Senses Laamu a truly special place. The culinary department went above and beyond to create a special dining experience that made these women feel appreciated, respected, and valued.



The importance of celebrating Women's Day cannot be overstated, as it is an opportunity to recognize the achievements of women and the ongoing fight for gender equality. By highlighting the contributions of women, we can inspire future generations to break down gender barriers and create a more equitable world.

Moreover, empowering women is crucial for achieving a sustainable future, as women tend to prioritize environmental conservation and sustainable practices.

Sadha, Human Resources Coordinator at Six Senses Laamu, shared after the dinner, "We were proud to celebrate Women's Day with all the amazing

women who work at Six Senses Laamu. This event was a reminder of the strength and resilience of women, and their immense contributions to our resort and society as a whole. By supporting women's empowerment, we are creating a brighter and more sustainable future for everyone."



 **39%** are women in tourism industry of Maldives

NEW BEVERAGE INITIATIVE AT CHILL BAR

As the sun beats down and the warm sea breeze blows, you feel a desire for a refreshing drink. You're drawn to Chill Bar at Six Senses Laamu in the Maldives, where Kavish, the Bar Manager, greets you warmly and tells you about the innovative new beverage program featuring carbonated infused water. The program is designed with a focus on sustainability, aiming to reduce waste and incorporate locally sourced ingredients as part of the Six Senses philosophy.

Kavish explains that this initiative was inspired by a desire to reduce waste and incorporate local ingredients as part of the Six Senses philosophy. Growing up in Mauritius, Kavish was always curious about mixing drinks with local ingredients, which led him to become a bartender. However, being located in the Maldives posed a challenge as there were limited local products available on the coral islands.

But rather than seeing this as a hindrance, Kavish saw it as an opportunity to come up with new ideas. With the help of his team, they were able to reduce their consumption of tin soda cans and instead use a CO₂ cylinder with a proper regulator to make soda steam. They worked closely with the organic garden team to collect butterfly pea flowers, lemongrass, and wasted fruit peels to make infused water.

The process is simple - they keep the ingredients overnight in the water to infuse and then add xylitol sugar before straining the mixture and using the carbonator to make the drink. The result was a delicious and refreshing drink that not only tasted great but also had a positive impact on the environment.

Kavish and his team are proud to share their story with guests and spread the Six Senses philosophy of wellness and sustainability. The regenerative tourism concept is an inspiration for Kavish and many other hosts at Six Senses Laamu, where they get to connect guests with the people and environment.

As you sip on your carbonated infused water, you can't help but feel inspired by the dedication and passion of Kavish and his team. Their commitment to sustainability and innovation is a testament to the power of a great idea and the impact it can have on the world.



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