BLUE & GREEN LAAMU

SIX SENSES

The Marine Conservation & Sustainability
Newsletter by the Maldives Underwater Initiative

JANUARY 2024



MALDIVES UNDERWATER-INITIATIVE by Six Senses Laamu

WHAT'S **INSIDE**\$

04 SIX SENSES CONSERVATION

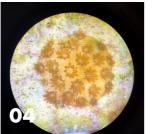
08 OUR COMMUNITY

10 THE MANTA TRUST

14 BLUE MARINE FOUNDATION

18 THE OLIVE RIDLEY PROJECT

22 OUR HOME













THE BIG **STUFF**



217 sharks were sighted



80 rays were sighted



146 turtles were sighted



41 Guests joined on megafauna surveys

OUR **EDUCATION**



1350 moments of education were shared with guests



257 moments of education were shared with hosts

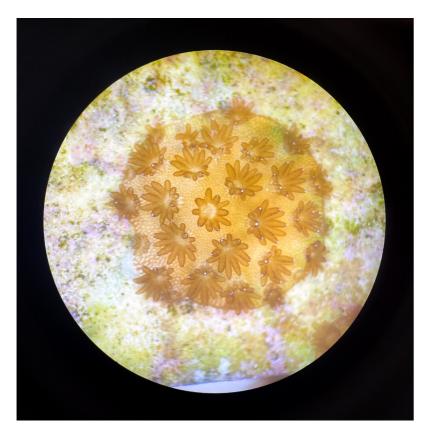


50 moments of education were shared with the community



SIX SFNSFS CONSERVATION

CORAL BABIES BLOOMING



It's been 10 months since the MUI Team initiated the Collaborative for Reefs in Laamu (CRL) Project and the coral babies aren't just getting bigger but we are gaining more and more babies with every cycles, with each spawning the will be planted on nearby reefs spawning!

these beautiful coral babies called "Budding". Budding is when buds off from their parent polyp so the survival rate of these recruits and the future.

the colony can grow. Some of the keeps them safe from predators baby coral which started with just

and overgrowing algae. The team 1 polyp have more than 30 polyps will keep these coral babies in their now! The team has collected tanks for 2 years, for them to grow spawns from 5 different moon a bit older and then these corals number of baby corals increasing. as a way of restoring the coral The team has over 20,000 coral reefs in Laamu. As this method of The first-ever babies are 10 months babies in the rearing tank as of restoration is through the coral's old and the team has witnessed now! Not all of these corals will natural reproductive cycle, we are survive, some of them will be maximizing genetic diversity within growing through the process outgrown by other corals and the restored population to give others will merge themselves. The these corals a higher chance of the coral polyp clones itself and safe ex-situ environment improves survival from a bleaching event in

PROTECTED AND CONSERVED AREAS FORUM



A representative from Six Senses team, along with from across all areas contributed knowledge from others from each of the NGO partners within MUI, were invited to attend the 2024 Protected and Conserved Areas Forum in Male during January. This event was the first of its kind and brought together government officials from the Ministry of Climate takeaways will help to guide how Six Senses can Change, Environment and Energy, Ministry of Tourism, Ministry of Fisheries and Agriculture, EPA, NGOs, Rangers, and international experts. The presenters

their field in protected area development, funding and management. As the only resort representative at this event, it was a privilege to hear updates on different ongoing projects within the Maldives. Key aid the protection of key areas for biodiversity and support government and community efforts.



33 presentations



8 Breakout and

FLOATY BOAT IS ON THE MOVE!



The MUI team is thrilled to share the latest updates from our underwater adventures featuring Floaty Boat. In the past, this autonomous surface vessel has been instrumental in releasing our coral larvae in their planula stage onto the reef, but Floaty Boat is playing a major role in assisting us to map our reef as well! Given El Nino's influence in 2023, we anticipate a rise in water temperature in the months ahead. As history has shown, the previous El Nino year took a devastating toll on the Maldives and resulted in a significant 75% coral cover loss nationwide, we expect an even stronger bleaching of many of our vibrant corals within the coming months.

To better understand the effects and recovery of this bleaching event, the team has taken steps to closely study it. Floaty Boat can follow a set track across the reef that can easily be adjusted on an iPad and with an added GoPro attachment, the vessel can also capture images underwater every 0.5 seconds. The team plans to conduct this survey before bleaching, during bleaching, and after bleaching. These captured images will not only serve as visual records but will play a crucial role in constructing 3D maps. This data is invaluable for us to respond to the changes our reef is undergoing and to establish a baseline for coral diversity and distribution before and after the bleaching event.

We extend our heartfelt gratitude to the Queensland University of Technology for their support, in providing the equipment through the Ocean Kind funding facilitated by Matt Dunbain. Additionally, a special acknowledgment goes to Serena Mou for her help throughout this project!

JUNIOR MARINE BIOLOGY IN 2024

Our Junior Marine Biology program got off to a great start in 2024 with 4 students joining Junior Marine Biology in January 2024. The JMB program continues to develop with each and every student coming through the program. We are constantly developing new and exciting ways for the students to learn about our work here at the Maldives Underwater Initiative by Six Senses Laamu, and how they can protect the oceans back at home too.

We excited to welcome to the team -Matteo Lucas Alexandre Otis



4 new JMB students





This month, the MUI team warmly welcomes Mark Sharman back to the island. Mark is a wildlife cinematographer and recently wrapped up filming for the BBC's Our Changing Planet series in March, and now he's back to collaborate with the MUI team. His presence will greatly enhance our documentation efforts, providing an in-depth look into many of MUI's ongoing projects. With Mark on island for over a month, this gives us a chance to boost our outreach efforts, fostering a deeper understanding of our complex and long-term initiatives within our research, across our education and for the community.







cinemaphotographer on island

OUR COMMUNITY

KUDA FUSHI AGRICULTURAL ISLAND

Lawrence and Adam met with the new owners of a local agricultural island, Kuda Fushi. Due to COVID, the island has been in a low-production state for several years, and with the new ownership, it is looking to revamp its agricultural infrastructure and practices. We were guided through the island, being shown the cucumber growing houses, which are utilizing insect nets to prevent any pests from damaging their crop. This also means that no good insects can pollinate their cucumber flowers, resulting in the need for hand pollination for flower fertilization. Despite the additional effort, the method means no pesticides or additional pest control methods are needed. Watermelon and passionfruit vines are also growing in designed plots. And the island has many coconut, banana, and breadfruit trees, with some papayas also scattered throughout the jungle.

After the agricultural island tour, we brought the Kuda Fushi team to Six Senses Laamu for a resort tour and lunch. We spent lots of time in the organic Leaf Garden and Earth Lab, discussing heat and salt-tolerant seed types, permaculture practices and composting techniques.

We have already received our first crop of cucumbers from Kuda Fushi and are looking forward to the next delivery of fresh, local produce.











 $30\,\mathrm{kg}$ of

SUPPORTING LOCAL ECOTOURISM AND CULTURE

The Maldives has a rich and vibrant One monumental event was the change of religion from Buddhism to Islam in the 12th Century. There are many archeological artifacts and the remains of multiple Buddhist structures and buildings. Ancient Buddhist stupas were dismantled they were covered with earth and this wonderful country. soil. These covered stupa, called Havitha in Dhivehi and locally called Haiytheli in Laamu (meaning seven steps - which comes from the seven tiers of the stupas), are an incredible sight, rising from the ground several meters into the air.

In 2023, Six Senses Laamu supported the funding of a Nature Heritage Trail being developed in L. Gan island,

just a 30 minute boat ride away importance to visitors. After the tree history that spans thousands of years. from the resort. The project is led by the Maldives Heritage Society, a to the Haiytheli. Thoha pointed out the Laamu-based NGO dedicated to the conservation, preservation and baths of the stupa, before guiding us promotion of the heritage of the Maldives. The nature trail is the first of several phases that will sustainably develop the area with eco-tourism. Whether you are tapping into your and their valuable stones used in that connects Maldivians and tourists other buildings, and in some cases with the history and environment of

> Senses Laamu met Thoha, president of Maldives Heritage Society, for a sneak peak at the development of the project. We each planted a tree, the Whistling Pine - a non-native, but culturally significant tree first introduced in the 19th Century. The trail will have several sections of different plants and information boards describing their

planting, we walked the trail through depression in the ground, that was the around the complex of Havitha, which looked just like small hills.

spiritual side, or noticing the distinct tree species and land formations, there is undeniably a strong presence and significance to the area. We This month, nine lucky hosts from Six are proud to be supporting locally planned and managed ecotourism development like this and are eagerly awaiting the day when we can bring guests here. At the moment, the guest activity is not ready, but you will be the first to hear about it when it is.



9 hosts visited







800+ years of buried history



THE MANTA Manta



TRUST









MANTASTIC DONATIONS

donation from one of our lovely guests, Allan, who the Laamu Allan had spent months and months collecting manta researchers. What makes Allan's contribution particularly noteworthy is his quest for the elusive GoPro Hero 4s - devices that have become as scarce as gold dust in our conservation efforts. GoPro Hero 4s are not produced anymore, and

This month the Manta Trust team received a generous you might think that there are better quality cameras out there now, but the team prefers them over the team was lucky enough to dive with last year! They newer models for some of their important research never got out of touch and since leaving Six Senses projects for a variety of reasons! We can't believe Allan went through so much effort of not only locating and purchasing a huge amount of equipment for the and acquiring these & so much more, but also getting them transported all the way from Australia.

> Thank you so much Allan for your continued support and passion for the cause. It means the world to us!





WELCOME REESHA!

The team is incredibly excited to introduce you to our newest team member - our Laamu Atoll Community Outreach and Research Intern, Reesha. She joined the team at the beginning of the new year and will be assisting our team to understand, communicate and facilitate ways of benefiting the local community of Laamu with what Manta Trust has to offer.

With this MMCP internship, Reesha's aim is to explore and nurture meaningful connections between conservation efforts and the needs of the atoll community. She has previously volunteered in marine conservation activities for close to a decade, with a background in education and multimedia design. With us, she will work alongside schools and local institutions to raise awareness and to identify and develop activities that can help people to foster a healthier relationship with the marine environment.

"There will be ups and downs and it is challenging work but I am hopeful for our ecosystems and our people's livelihood - in these changing times, we can't be losing hope, right? I consider it an awesome incentive that I get to work with the community and learn more about these magnificent ocean giants that our home is blessed with. Mantas have a lot of lessons for us and we have a duty to protect them."

We are really happy to have Reesha aboard our Manta Trust team and are grateful for all the hard work she has already put in.

ULTRASOUNDING MANTAS

This January, the MUI team had a special filmmaker guest, Mark Sharman, on site. When the Manta Trust team took him on the research boat, the pressure was high, as the ideal footage would have of course been an ultrasound scan of a wild manta ray on one of Laamu's cleaning stations. But scanning mantas in Laamu usually happens in peak season between May and June, which is also when the team last obtained a useful scan! So the team explained to Mark the chances of filming this would be low at this time of year, but that, as always, the team would take the scanner just in case.





Together they all jumped and descended to the nearest cleaning station. And then, about 5 minutes into the dive, a beautiful large female started entering the cleaning station. She directly approached the team, making circles around them and the cleaning station and hovered calmly above it, waiting for the cleaner wrasses to do their job. This is when Miri, Manta Trust's project manager in Laamu, took her chance and slowly ascended on top of the station, still in sight for the female manta, to then slowly approach the female as calm as possible. And what a success - this female, called Scooter Scooby, stayed so calm for the entire scan which lasted over 2 minutes - it was almost like she

waited for Miri to finish a very thorough scan! The team were so excited - what were the odds of this happening and Mark filming it? Not only was this Mark's first time seeing and filming a wild ultrasound scan on a manta ray - the team did a second dive afterwards and got even more scans from a second female, called Pina Colada.

The team definitely celebrated the day and can't wait to share the videos that Mark took. Maybe the team should have some actual Pina Coladas to cheer the event!

All ultrasound scans are conducted under specific research permits administered by the EPA and MoU by the Hithadhoo Council for conducting research at Kandu Kolhu (Hithadhoo Corner).

MAKING CONNECTIONS

הַלְּכֵּרְ בַּנְרִישׁ נְבֹּרָכֵּצִ יִעְרָהִישָּ בָּאֹרָ 2024 בְּלִישׁ נְבִּרְישׁ בָּאֹרָ בּאָרָשְׁ בַּאָרָישׁ

xxx03 01



פתם 'על המתם בצל 2024" בישלעהצת פתפתבתם.

This month the Manta Trust was invited by the Fonadhoo Police to a regional community forum. The team is very grateful for Maldives Police Service for giving them the chance to participate in this public perception forum for compiling their Strategic Plan. It was a great opportunity to meet key stakeholders of the Laamu community in one place and hear their concerns and needs discussed. Reesha, our new Community Outreach and Research Intern, represented our team at the forum and learnt a lot about the key issues affecting the community and was excited to communicate with the team the ideas that the

people of the community had shared on ways to improve things across Laamu atoll. Reesha also started making connections with members from the Women Development Committee and teachers from a local pre-school. Since manta themed kids club sessions have been conducted at Six Senses Laamu for many years now, the team wants to explore the possibility of providing kids club sessions for the local community too.



BLUE MARINE FOUNDATION











268 fish landed

FIRST LAAMASEELU MASVERIYAA QUARTERLY MEETING



team held the first Laamaseelu and suggestions and for the team Masveriyaa fisher meeting of the to provide updates to the fishers. At year this month. Ten fishers attended the meeting, an overview of the last LSMV programme has been rolled including two of the newest fishers five months fishing data was given out to 3 new resorts in 3 other atolls recruited in the programme, one of and action points reviewed. After and that this wouldn't have been whom supplies Six Senses Laamu discussions with resort management with live lobster caught by hand in and the fishers prior to the meeting, the northwest part of Laamu atoll. the team shared the decision with These meetings are an opportunity the fishers to remove sailfish from for the team and fishers to hold the purchasing list as sailfish is now collaborative discussions; for the listed as vulnerable on the IUCN

Blue Marine and MRR fishers to share their views, concerns red list and the fishers accepted this

decision. The team also shared the exciting news (and photos!) that the possible without them as pioneers of supplying fish sustainably to Six Senses Laamu.



HITHADHOO SCHOOL SEAGRASS WORKSHOP



Ten teenagers from Hithadhoo island generously gave up one morning of their weekend to attend a seagrass workshop run by the Blue Marine and MRR team with help from MUI's new Community Outreach Coordinator.

The team is working closely with Hithadhoo residents to raise awareness of their marine habitats (they are fortunate to have seagrass, coral reefs and mangroves around their island) and build local capacity, in preparation for the official establishment of the first Community Conserved Area (CCA) in the Maldives, which the team is championing and due to come into effect this year.

The teenagers (aged 13-15 years old) were asked what they knew about seagrass, a few knew it was important for fish and turtles but otherwise the knowledge level was low, so the team got to work! The first part of the morning was spent learning the basics in the classroom; what

seagrass is, how it is different to algae and why it is an important ecosystem. Then followed information relevant to the survey - species identification, how to estimate percentage coverage of both seagrass and algae and assessing seagrass health. Armed with this information and all the necessary equipment (quadrat, ruler, data sheet, information guides, mask and snorkel), the children were divided into two groups and guided by the team for the practical survey session in the sea. They worked together to identify species, measure the blade length, estimate percentage coverage in the quadrat and assess health by looking at epiphyte growth. Everyone had an opportunity to do each task and now they have a much higher level of knowledge about their seagrass meadows.







FISHER OF THE MONTH -AHMED MOHAMMED



This past month, the team welcomed a brand-new fisher to the Laamaseelu Masveriyaa Family. Ahmed Mohammed is from the neighboring island of Hithadhoo. Originally a tuna fisher turned reef fisher, Ahmed Mohammed is wellversed in all the tricks of the trade when it comes to fishing. While he excels at catching reef fish, his primary specialty lies in locating and collecting lobsters. He mainly focuses on outside reefs during the 'Iruvai' (NorthEast) monsoon when the seas are calm, and visibility is high.

Ahmed states that he prefers lobster fishing over reef fishing due to their high value, as well as the time he spends snorkeling while searching for the lobsters. Moreover, he mentions that before joining the program, he did not fully grasp the importance of releasing berried lobsters, and he is pleased that he is now engaging in more sustainable practices. Having registered just last month, he has already sold more than 100

FISH OF THE MONTH - SAILFISH

Known as the torpedoes of the ocean, the Indo-Pacific sailfish can zip through the water at incredible speeds, making them one of the fastest swimmers in the ocean. They are primarily found in warm oceans and are named for their distinctive sail-like dorsal fin and speedy swimming. With their long, slender bodies and vibrant colors, they are a sight to behold. Sailfish are predators that use their bills and impressive speeds to slash through schools of fish, stunning their prey or sometimes impaling



them before eating them. Although sailfish are typically solitary hunters, they can coordinate their efforts and uniquely corral schools of fish, taking turns feeding. They are not only fascinating to watch but also play a crucial role in maintaining a healthy balance in the marine ecosystem. Recently designated as vulnerable on the IUCN Red List, they have been removed from the Laamaseelu Masveriyaa purchasing list as a no-take species. This decision was supported by both the fishers and the kitchen and purchasing departments, ensuring the prolonged sustainability of the species.





THE OLIVE

RIDLEY PROJECT



20 new turtles identified



160 submissions by MUI and DBD



33 in-water surveys complete



1032 turtles in

TURTLE IN THE SPOTLIGHT - MUI!



Say Hello to Mui!

Sound familiar? Mui, which translates to "pearl" in local Dhivehi, was named after the MUI team here at Six Senses Laamu! This very newly named juvenile green turtle was first encountered on November 24th last year at Hithadhoo Corner, our local hotspot for resting green turtles. Mui has already been sighted 12 times since then, solidifying their place as hard shelled species. Beyond their a true Laamu resident.

Mui measures about 35 cm in straight carapace length, which is about as small as you'll find a juvenile green on a reef, so we can assume that they may have just left their openocean phase to enter the resident foraging population in Laamu. Green turtles typically attain maturity at around 65 cm in carapace length, and can grow up to 120 cm! It's no wonder these are the largest of the captivating appearance, these turtles play a crucial role in maintaining the health of seagrass beds. By project done by ORP.

grazing on seagrass, they prevent any overgrowth and suffocation of the meadows, while also promoting biodiversity by ensuring no one seagrass species dominates.

"Green" sea turtles got their name from the distinctive green fat found around their bellies; a result of their herbivorous diet. Mui's appearance also marks a sign of hope for the recovery of the Maldives' sea turtle population, and underscores the importance of the photo ID research



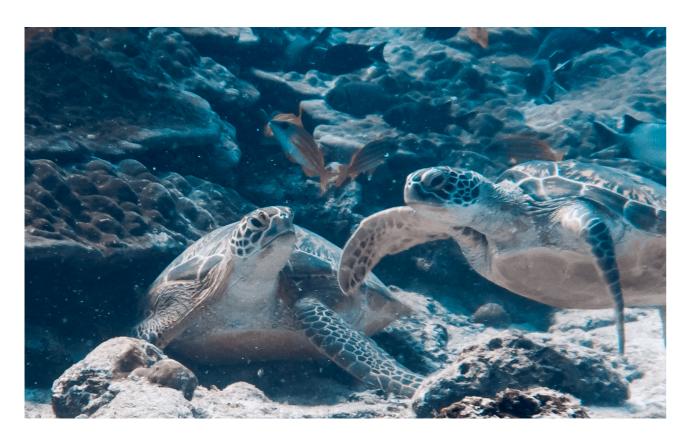
In January, Ibrahim Inaan, the Sea Turtle Ranger and Community Officer for L. Gaadhoo, took 7 members of Gan Youth Society and Maldives Heritage Society on a beach survey on Gaadhoo's nesting beach as part of the first training sessions with the project's NGO partners. In addition to learning a great deal about sea turtle nesting and excavations, the members received training from Inaan on gathering nesting data during the survey.

7 new NGO

Community partnerships such as these are important to foster a sense of stewardship among community residents while also considering local knowledge and perspectives, which will be vital for the long-term success of the project. Both NGOs have already expressed interest in being more involved and taking part in more surveys with other members of their respective groups.

ORP and EPA initiated partnerships with Gan Youth Society, Maldives Heritage Society, and Fonadhoo Environment and Sustainable Development (FESD) in July last year to enhance community stakeholder involvement and support for the protection of Gaadhoo nesting beach. In the next year, these NGOs will actively participate in conducting surveys, educational sessions, coordinating events, and also providing invaluable advice and local context for the project.

WHAT DO SEA TURTLES DO WHEN WE'RE NOT LOOKING?



Reef serve as favored resting spots for many of social behaviors of sea turtles. Laamu's green sea turtles. During the daily House Reef snorkel sessions with guests, it's a common While interactions among adult turtles during as "Smelly," a juvenile green turtle frequently found every snorkeling excursion.

and their proximity to the resort provide a unique opportunity to study the behavior and habitat preferences of resting sea turtles. Using RUV cameras, the team can remotely observe these individuals for extended periods of time without the disturbance of scuba divers or snorkelers, and are able to document the movements, breathing patterns, and any direct interactions between individuals. Of particular interest

This month, the Olive Ridley Project (ORP) team to the team are the social interactions between in Laamu have begun analyzing RUV (Remote individuals of the same species and those of different Underwater Video) footage of the resident sea species, which are normally rare to witness during turtles on Six Sense Laamu's House Reef. The dives or snorkels. These observations will contribute underwater pinnacles scattered along the House to a broader study by ORP to better understand the

occurrence to spot two or three turtles leisurely breeding and around fish-cleaning stations have perched atop these pinnacles. What's more, is that been extensively documented, detailed accounts these turtles often include familiar individuals, such of interactions during foraging or resting, which encompass the majority of sea turtles' life history, resting on the same boulder coral during nearly remain scarce. This is primarily attributed to the challenges of monitoring groups of turtles over prolonged periods in their marine environment. RUV The suitability of these pinnacles as resting spots cameras therefore offer a solution to this challenge, providing insight into the underwater lives of sea turtles. Already, the team has captured fascinating interactions between juvenile-female and malefemale pairs, challenging the conventional perception that sea turtles are solitary creatures.



interactions recorded



OUR HOME





5,885 Kg metal recycled with SecureBag



65 guests experienced our local islands

water made for guests





371 eggs produced



57 guests joined the sustainabiliy tour

KANUHURA KNOWLEDGE SHARE



Lawrence, Director of Sustainability and Conservation, traveled to Six Senses Kanuhura for a knowledge sharing and strategy development visit. Six Senses Kanuhura was opened under Six Senses management in September 2023, and as a recently opened property, it has multiple unique opportunities for sustainable operations and development.

They boast a large hydroponics facility that can grow 760 plants, more than 5000 orchids growing in the property (including an endemic species bred by orchid researchers) and nesting white-tailed tropic birds. All of the sustainability initiatives are managed by Jacqueline, the Director of Sustainability at Six Senses Kanuhura, whose expertise is in agriculture and ecology. Alternatives to traditional soil-based farming methods are important to develop in the Maldives, where land space is limited and soil conditions can be challenging to grow in. Lawrence has come away feeling like he's just scratched the surface of what hydroponics and aeroponics can offer for the Maldives.

We also tried a few Earth Lab workshops that are new to each other, such as making soap and beeswax wraps. These workshops utilize natural and recycled materials, such as freshly pressed coconut oil and old linen sheets.



2 workshops developed



species of orchid

WELCOME FITHU TO THE COMMUNITY OF LAAMU



new member of the sustainability and conservation team

We are excited to introduce you to our new Community engagement coordinator for Six senses Laamu and MUI - Aishath fithura (Fithu)

Fithu grew up in K.Male' but she often got to travel and explore different islands in the South side of the Maldives. Her life has always been intertwined with the ocean and it has been her safe space and her muse growing up.

"One thing my mother still talks about now is how as a child, I was always curious and never scared about the ocean and my keenness to go explore the deep blues"

She previously worked as an multimedia artist before doing her internship with Maldives Whale Shark Research Programme, This is where she fell in love with conservation and research which enabled her to expand on her interest into exploring the ocean. One of things she enjoyed the most during her time with MWSRP was building connections to the surrounding community through education and outreach measures

Through her internship she came to realize that conservation efforts not only have to come from marine biologists but from everyone, and how conservation work will have minimal impact if the surrounding community doesn't do its part in putting the same amount of effort in conserving the home we all live in. The education, sustainability measures and involvement of the community is a pivotal component to preserve all the effort within conservation.

Fithu is very excited in her new role to work closely with the community of Laamu Atoll and is eager to get stuck into the many projects for the community of Laamu.

WE COULD NOT HAVE DONE IT WITHOUT YOU!

We are tremendously grateful to the mulitude of donors who so generously donated funds to the MUI team's research projects; we are indebted to you all.

A special shout-out to our friends who donated \$10,000 USD and more:

Jeffrey Andy and Amy Erin and Don Take Two London Sabine and Guy

We look forward to sharing with you the achievements that you made possible.

> To learn more about marine conservation and sustainability initiatives at Six Senses Laamu please contact:

Greg Holder

Base Leader & Guest Education Coordinator greg.holder@sixsenses.com

Lawrence Menz

Director of Sustainability and Conservation lawrence.menz@sixsenses.com

To stay up to date with the latest news, events and visiting experts follow the Maldives Underwater Initiative and Six Senses Laamu on social media.

@maldivesunderwaterinitiative







@sixsenseslaamu



