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THE BIG STUFF



294 sharks were sighted



187 rays were sighted



219 turtles were sighted



257 Guests joined on megafauna surveys

OUR **EDUCATION**



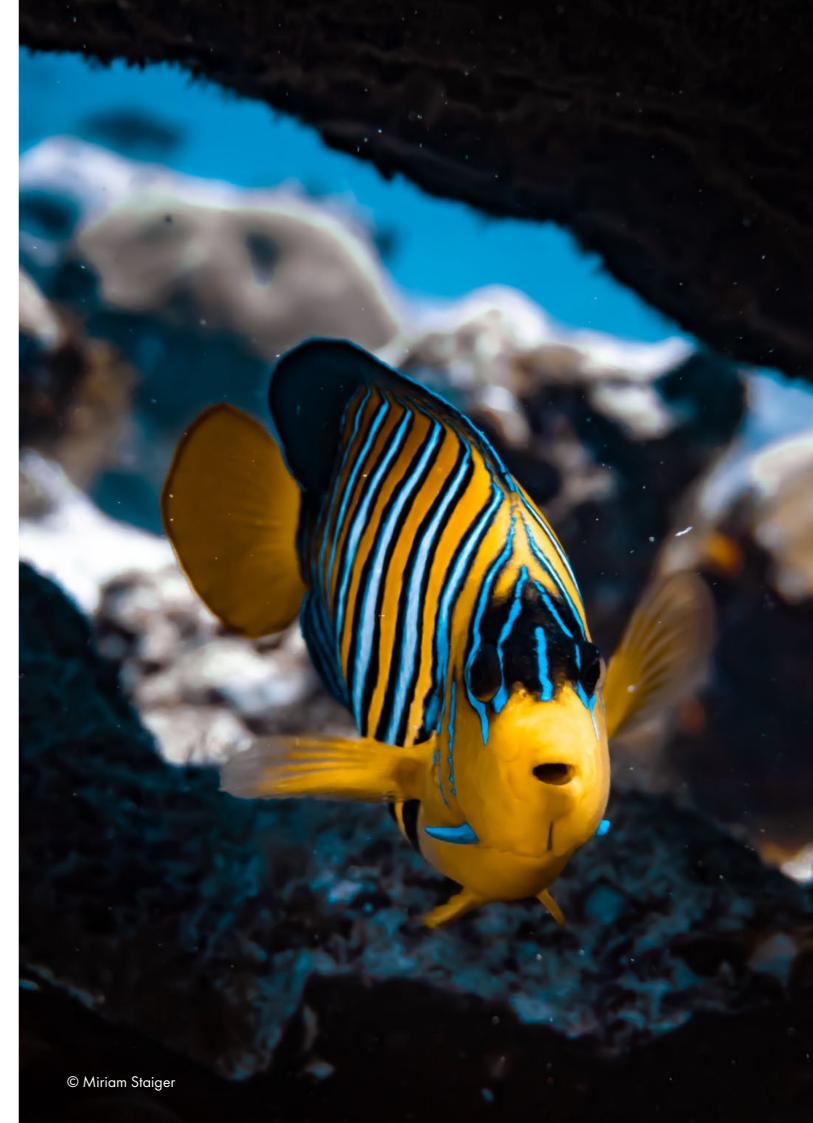
1403 moments of education were shared with guests



204 moments of education were shared with hosts



261 moments of education were shared with the community



SIX SENSES CONSERVATION

IMPORTANT SHARK AND RAY AREAS



The Maldives is a nation heavily reliant on tourism, with its breathtaking 'Underwater beauty' and world-class 'Diving and snorkeling' experiences consistently ranking among the top reasons why travelers choose to visit the country. The marine life, particularly the Maldivian megafauna, serves as a significant attraction for tourists.Due to this, many species protections have come about due to pressure from the tourism industry, including rays and sharks.

In both 2010 and 2014, the Maldives enacted legislation dedicated to safeguarding its shark and ray populations, making it illegal to capture, retain, or harm any of these species within the country's waters. This ban underscored the recognized importance of sharks and rays not only to the Maldivian ecosystems but also to the nation's economy. However, despite this awareness, only a limited number of regions are identified officially as being critical to the survival of these species, with even fewer having comprehensive management plans in place for their conservation.

Designated as Important Shark and Ray Areas (ISRAs), these three-dimensional habitats hold immense significance for one or more shark species. The allocation of these areas is exclusively based on biocentric criteria, rooted in biological rather than political or social factors. These areas are chosen due to their ecological importance in ensuring the wellbeing and survival of one or more shark species residing within them. A call for ISRAs has been issued in the Indian Ocean region, prompting the Maldives Underwater Initiative (MUI) team to compile applications for three sites around Laamu Atoll. The selection process is based on strict criteria, and requires substantial supporting evidence before submissions undergo evaluation by an independent panel of reviewers.

If these areas are designated as ISRAs, it would signify international recognition of their importance. While ISRAs themselves are not classified as Marine Protected Areas, they serve a critical purpose by highlighting knowledge gaps that require further research. Moreover, they equip stakeholders and decision-makers with actionable knowledge to advance the implementation of conservation measures essential for the preservation of these invaluable species.



3 ISRA Applications submitted













OUR COMMUNITY

HELLO HALLU!

"Hello Hallu" in Dhivehi, which translates to "Hello Solution." represents an educational initiative conducted in collaboration with local schools within Laamu Atoll. Participants were warmly welcomed to our newly established Sea Hub of Environmental Learning in Laamu, aptly named the SHELL. The primary objective of this program was to deepen their understanding of the local marine ecosystems and inspire interest in marine conservation.

The choice of "Hello, Solution" as the program's name is symbolic of MUI's overarching mission. Despite 99% of the Maldives being encompassed by water, a significant portion of its population remains unaware of the critical role played by these marine ecosystems in ensuring food security, coastal protection, and biodiversity preservation. Recognizing that altering beliefs and behaviors necessitates education, the MUI team aspires to kindle a newfound appreciation for the natural ecosystems that surround the participants, with the hope that their newfound knowledge will translate into meaningful actions.

Throughout the month of September, four schools from local islands, totaling 76 eager participants, joined us for Hello Hallu. These sessions were conducted in close collaboration with MUI marine biologists and NGOs such as the Manta Trust, Olive Ridley Project (ORP), and the Blue Marine Foundation, enriching the educational experience with hands-on activities and interactive discussions.



The first presentation session of Hello Hallu was dedicated to exploring the Habitats of Laamu, including mangrove forests, seagrass beds, and coral reef environments. Remarkably, although most students were from islands hosting at least one of these ecosystems, pre and post-evaluation discussions revealed that many were unaware of their pivotal roles in maintaining fish populations, preventing coastal erosion, and carbon capture. Following an engaging lecture, participants were actively involved in an activity designed to help them connect these habitats with their respective ecosystem services, reinforcing their understanding of the material.





12 schools visited the SHELL



The following session explored the realm of megafauna residing in Laamu Atoll, with a specific emphasis on sea turtles, manta rays, and sharks. This presentation was led by marine biologists from ORP, Manta Trust, and MUI. The discussions covered topics such as identifying these species, their vital roles in the ecosystem, and the various threats they face. It is worth noting that feedback from all four schools expressed a strong desire to delve further into the biology and behavior of these fascinating creatures in upcoming Hello Hallu sessions, highlighting the program's significant influence.

representatives from the Blue Marine Foundation within the Six Senses team delivered a compelling presentation on sustainable fishing practices in the Maldives. This session also shed light on the intricate food chain dynamics within coral reefs and its profound influence on reef health. The dangers of unsustainable fishing practices, particularly concerning the fishing communities in Laamu Atoll, were emphasized. Participants were also introduced to the Masmahaaveshi website, a valuable resource they can explore independently to further their understanding of sustainable fishing in the Maldives.

Additionally, participants had the opportunity to tour the SHELL, where they explored the newly established facilities and delved into more detailed exhibit tables showcasing the subjects discussed during Hello Hallu. Furthermore, they ventured into the laboratory, where they had the chance to observe our coral spawning tank and the young corals thriving in the settlement tanks. This experience left a profound impact on the students, as it provided them with a deeper understanding of corals as animals and highlighted the gradual nature of their growth.



MALDIVES NATIONAL DEFENCE FORCE VISIT SHELL

Six Senses Laamu hosted and adaptation to the changing trainees from the Maldives climate, and what that means in National Defence Force Non- a local context. 10 trainees and commissioned Officer Academy three teachers participated in the on a unique educational visit to the visit as part of their program's SHELL. The visit aimed to provide geography tour in Laamu. military personnel insights into conservation and sustainability Through these collaborations, Six initiatives that Six Senses Laamu Senses Laamu strives to inspire leads with the partner NGOs. In a generation of environmentally addition, the MUI team shared conscious leaders, fostering an information on recent climate aware and more sustainable news, priority areas for mitigation future for all.



LAAMU ATOLL COUNCIL'S 13 participants PRESIDENT VISITS SIX SENSES

We were honored to host the President of the Laamu Atoll Council, Ismail Ali, along with three other officials, at Six Senses Laamu. Their visit marked a significant occasion as it officially renewed the annual agreement for the beautiful picnic island, Hanhushi Island.

During the visit, the Laamu Atoll Council delegation met with Lawrence, Six Senses Laamu's newly appointed Director of Sustainability and Conservation, to explore challenges, identify opportunities, and share ambitious work plans to shape our collaborative efforts in the coming years. Thanks to this synergistic collaboration and support from the Laamu community, Six Senses Laamu aims to continue making a positive impact together!



WELCOME TO MUI

MEET RAFHA!

We are excited to welcome our newest team member to Laamu. Rafha our new intern.

Rafha grew up in Male' where she often spent time at the beach exploring the small reefs around the island and admiring the marine life in the area. This inspired her to pursue her higher education in environmental science. Throughout her studies in Malaysia at Monash University, she conducted studies on terrestrial plants and animals as well as marine life in freshwater. She has also worked with a Malaysian NGO focused on turtle conservation with their community outreach which motivated her to work in marine conservation in Maldives.

Rafha will be with the MUI team at Six Senses Laamu for the next 6 months and during that time she hopes to gain more experience working in marine research and with the local community.







THE MANTA Manta



TRUST







STRENGTHENING COMMINITY RELATIONSHIPS



Since hiring the Manta Trust's very first community outreach including school teachers, students, fishermen and various other Kunahandhoo and others, talking to 67 community members, regular outreach for younger students.

and research intern in Laamu, the team has been focusing groups of the community. The Manta Trust has purchased children's a lot of their energy on trying to identify ways of increasing books for each school of the Atoll to be donated throughout the community outreach and interest. Ni, our intern who was educational outreach sessions with these schools. The first school born in this Atoll and started her position just over a month to receive one was Hithadhoo School and both teachers and ago, has done a great job in building relationships with the kids were excited for more sessions in the future. The team also communities in Gan, Dhanbidhoo, as well as Hithadhoo, had another meeting with the Hithadhoo Council to discuss more





16 Books purchased

WELCOME ZAKWAN!



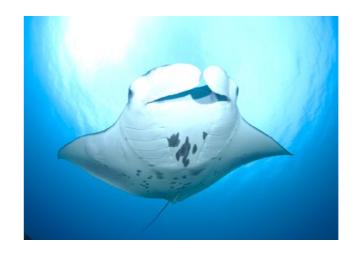
Zakwan is the Manta Trust's new Assistant Project Manager in Laamu and our newest member to the MUI team.

Zakwan was born and primarily raised in K.Malé, Maldives. However, from the age of 11 he traveled for his studies where he spent three years in Dubai and Sharjah in the United Arab Emirates, one year in New South Wales in Australia and half a year in Kuala Lumpur, Malaysia. After he had to come back early from Malaysia due to the Covid pandemic he returned to Malé and completed his foundation course. Discovering this passion, Zakwan chose to first become a diversater and then got into environmental surveying focusing on marine and coastal surveys. Afterwards he decided to try his hand in diving and it was then that he found his love for the marine world and wanted to pursue a career in

environmental conservation. His experience traveling and passion for conservation along with his skillset from environmental surveying enabled him to take the next steps to start working for the Manta Trust in Laamu!

MANTA OF THE MONTH MICHELE - M2551

LAST SIGHTED: 13TH SEPTEMBER 2023



Meet Michele, a curious adult male reef manta who is one of our most sighted Laamu mantas that we have known for over 10 vears!

Michele is a true performer. He usually loves playing with divers and has also recovered well from some minor fishing line wounds. He measures a wingspan of 3m and is our "Laamu Poster Boy" - he even has it's own life sized manta model in our SHELL marine centre.

WORLD MANTA WEEK!



In September 2023 the Manta Trust team celebrated a mantastic World Manta Week! Every year on September 17th the Manta Trust celebrates mantas around the world to raise awareness about mobula conservation, this year's theme was Tourism. This year, the Laamu team wanted to make sure that as many people from the resort and the community get involved in celebrating this day - it soon turned out that one day wasn't enough, so they decided to turn it into a whole World Manta Week!



20 local kids want to become marine biologists



The team put a lot of effort into celebrating World Manta Week not only with guests and hosts but also the community, having organized a special school visit to Hithadhoo School. The kids learned so much about the resident manta ray population they have at Hithadhoo Corner and the team were touched by the excitement of the classes to learn more and get involved. Twenty kids involved said they now wanted to become marine biologists or SCUBA divers, which is truly the reason the team is conducting these outreach sessions to inspire the next generation to build a career in and around the ocean, and protect their natural resources.







As is tradition by now, the celebrations here in Laamu started with a manta ray themed breakfast - from manta ray shaped pancakes served by Jinaad and Miri in manta costumes, manta decorations around the breakfast menu, VR experiences and lots of manta ray chats in the morning to a special manta ray experience in the SHELL, diving deep into the research projects the Manta Trust team is conducting in Laamu and offering new manta ray games. In the evening the team gave a newly made presentation on the arrival jetty, showcasing the exciting work of the team since the start of the year. The celebrations with our lovely guests ended with a special manta ray themed cocktail night later in the week.





HOST **CELEBRATIONS**



200 Educational Moments throughout World Manta Week

Throughout World Manta Week, hosts from various departments have got involved in making this week an incredible success - our amazing engineering team not only cut out wooden manta in supporting and celebrating this day! rays, that Miri painted to build a manta The team ended World Manta Week photo frame, they also made cookie with a Manta Game night for all our cutters in shape of a manta ray, that our pastry team then used to make cute drawing challenges, manta tattoos, other

little manta ray cookies! The gardening team helped MUI make this year's beautiful manta ray sand sculpture and many more departments got involved amazing hosts, participating in quizzes,

fun games and one lucky winner even won a manta gift! The manta week has been incredibly inspiring with nearly 200 educational interactions between guests, hosts and the local community and the team couldn't be happier with how many people celebrated manta rays this year!











BLUE MARINF FOUNDATION





LMSV 3RD **QUARTERLY MEETING**

On the 1st of September, Maldives Resilient Reefs (MRR) and Blue Marine held the Laamaseelu Masveriyaa third quarterly meeting of 2023.

The meeting started with an overview of the past three months: 19 fishers landed a total of 4580kg of fish, none of which were protected species and two new fishers joined the statistics was the high number of sailfish landed during the last three months. The main discussion point of the meeting was brainstorming ways to reduce and make sailfish landings

more sustainable. The three fishers of the quarter were announced and appreciated and after a photo with all the fishers, the meeting was concluded.

The second part of the meeting was taking fishers on a boat trip to show them the boundary of the newly designated Hithadhoo-Gaadhoo Kandu channel MPA and the boundary programme. One of the action points from the past quarter's of Hithadhoo Baaney Kolhu Community Conservation Area. This was done by taking physical reference markers from different places where fishers can deduce the boundary while out fishing.





FISH OF THE MONTH THE MARBLED GROUPER

The Marbled Grouper (Epinephelus fuscoguttatus) is one of the most captivating reef fish found in the vibrant coral reefs of Laamu atoll. Its appearance is defined by intricate marbled patterns on its body, ranging in hues from deep browns to vibrant oranges, making it an enchanting sight for divers and marine enthusiasts. Growing to a max length of 120 centimeters, Marbled Groupers have a large mouth and big lips with a compressed head. Some characteristics which give them an edge as a predator also give them their nickname among the team as grumpy

groupers, is their frown on the face and their big lips and gaping mouth which suck in fish whole.

As a mesopredator groupers play a significant role in maintaining the ecological balance of the reef. They help regulate the population of smaller fish and invertebrates, thereby contributing to the health and diversity of the coral reef ecosystem. Groupers are a commercially exploited species for the export trade, which makes them highly vulnerable and since they are broadcast spawners which aggregate at particular reefs during the full

moon and new moon, they are more susceptible to overfishing since fishing from such aggregations can decimate their populations. To protect groupers here at Six Senses Laamu we do not allow our fishermen from the Laamaseelu Masveriyaa programme to fish them and we conduct annual grouper spawning dives to survey their numbers to document how their population is changing in known spawning locations.



13 groupers caught and released on guest recreational fishing trips



200 RECREATIONAL FISHING TRIPS MILESTONE



The Blue Marine and MRR team has collected data from 200 guest recreational fishing trips at Six Senses Laamu. This is vital data as there isn't any known existing baseline data collected from recreational fishing or big game fishing in the Maldives and these trips are offered at over 160 resorts.

As most reef fish live very long and mature very late in their life, it is important to understand the impact of recreational fishing on reef fish populations. At Six Senses Laamu, Blue Marine Foundation and Maldives Resilient Reefs hope

to get a baseline understanding of the guest recreational fishing activity by collecting data on guest fishing trips with the help of the quest citizen scientists and trained resort boat crew. Data collected on the fishing trips include the species of fish, total length, catch location, fishing effort and number of fish released. So far from the 200 trips, 426 fish have been landed. With every single fish measured Blue Marine and MRR draw closer to the formulation of a guest fishing code of conduct which could be replicated across other resorts in the Maldives



250 guests involved in citizen science





217 guest fishing trips

GUEST SURVEY ON SUSTAINABLE REEF FISHERIES

Blue Marine and MRR have designed a short questionnaire to gauge the knowledge of guests about sustainable fisheries and their knowledge of the Laamaseelu Masveriyaa sustainable reef fishing programme at Six Senses Laamu. Comprising of 6 questions, the survey aims to assess the effectiveness of the team's educational interaction with the guests and how it's going to bring about change in their day-to-day lives. The survey is accessed through a QR code displayed at the Shell, on restaurant menus and on the team's guest presentations.



guest survey





THE OLIVE RIDLEY PROJECT





13 new turtles identified

131 submissions by MUI and DBD



46 in-water surveys



986 turtles in Laamu



2 nsts Laid



18 hours of nest watch

OUR SEA TURTLE GENETICS STUDY KICKS OFF!

The Olive Ridley Project (ORP) team is excited to announce the start of their genetics sampling project here in Laamu!

During her site visit earlier this month, Dr. Stephanie Köhnk, the Senior Project Scientist for ORP, helped to set up the first long-term sea turtle genetics study here in Laamu. The aim of this project is to study the population genetics of the green sea turtles nesting at Six Senses Laamu to better understand the dynamics of the wider Maldivian population. The team will begin collecting and preserving tissue samples from deceased hatchlings and embryos during standard nest excavations, which will then be transported to and analyzed at a lab at the University of Derby in the UK.

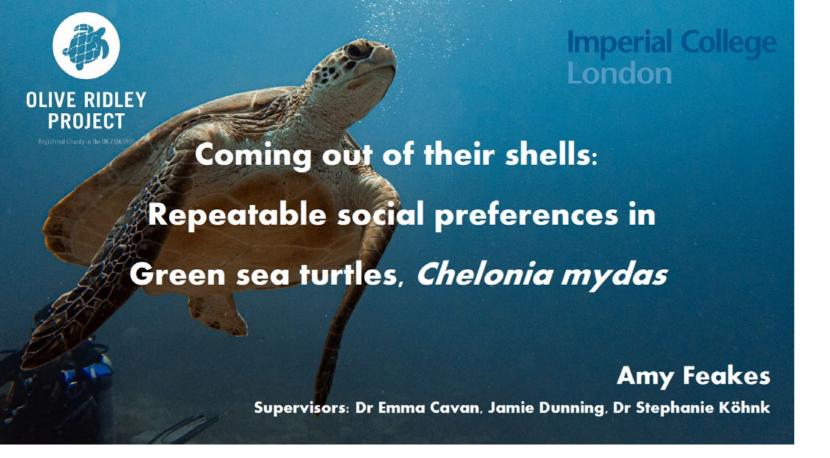
What can we learn from this study? By using previously established mitochondrial markers, we will be able to characterize the genetic diversity of the nesting turtle population and connectivity to other

populations in the Indian Ocean. The data from this study will support both local and regional policy and management plans for this species, while addressing one of the major research gaps in understanding the general stock of green turtles, the second most abundant turtle species in the Maldives.

Why is this important for sea turtle conservation? Green turtles have been widely harvested for meat consumption in the past, and anecdotal reports suggest that illegal harvest is still a prevalent problem in the country. Current non-invasive methods are insufficient in identifying the population's connectivity between atolls and informing about genetic diversity, and subsequently, their resilience towards disruptive events in each sub-area (i.e. atoll). The study will provide information on the long-term effects of sea turtle harvest in the country and guide policymakers to where conservation efforts are most needed.







RESULTS ARE IN! HITHADHOO CORNER BEHAVIOURAL STUDY



Between April and June, Amy Feakes, a master's student from Imperial College London, interned with the ORP and MUI teams to conduct her MSc research project on the social behavior and habitat use of sea turtles at Hithadhoo Corner—a well-known resting hotspot for green turtles in the atoll.

After months of data collection, analysis, and write-up, Amy has completed her study, yielding fascinating results that challenge our understanding of sea turtle behavior. From the 73 dives conducted at this site, Amy concluded that sea turtles do indeed socialize with each other and exhibit a tendency to group when resting. Her findings indicate that pairs of turtles resting in the same location occur more frequently than by chance, suggesting that they may actively choose specific individuals to rest with. The study also revealed that adults, particularly males, have a higher tendency to rest in groups, while smaller juveniles often rest alone.

Although sea turtles have long been perceived as solitary creatures, Amy's study suggests otherwise, demonstrating that they not only tolerate each other's company but may actively seek it out. One plausible explanation could be that

grouping serves as a form of predator avoidance, similar to synchronous hatching when they leave the nest, or as a means of sharing resources, such as a suitable resting spot. This study highlights the importance of sites like Hithadhoo Corner, not only as green turtle aggregation sites but also as locations for more complex social interactions and group behavior. The next step is to publish this study in a peer-reviewed journal, which will lend further credibility to these findings when developing future management plans.





paper written

TURTLE OF THE MONTH



This green sea turtle is most commonly seen in the seagrass meadow between jetty A and jetty B of Six Senses Laamu. You will almost always see her munching on seagrass, the main food for green turtles. She was first seen on 1st of May 2019 and she has since been encountered 16 times.

Saori has a very different personality compared to other green sea turtles in the area. She is much more comfortable with snorkelers and does not shy away when she is approached. Saori's unique friendliness gives people the opportunity to get up close and personal with a foraging green turtle, something that isn't very common in Laamu! However, it is important

to maintain a respectful distance from turtles while they are feeding to ensure they remain comfortable and undisturbed.

Seagrass is vitally important to turtles as it serves as their primary food source, providing essential nutrients and energy for their survival and growth. In return, grazing from green turtles maintains the health of seagrass habitats. Turtles can promote new growth of shoots by the trim, and also aids in nutrient recycling by excreting waste. This mutualistic relationship highlights the important role that sea turtles play as ecosystem engineers in our oceans.

OUR HOME





2,509 Kg organic garden production



280 eggs produced



WELCOME BACK: THE LAWRENCE OF LAAMU

Six Senses Laamu is thrilled to welcome Lawrence back to Laamu, this time as our Director of Sustainability and Conservation.

In his new pivotal role, Lawrence will be instrumental in planning and executing strategies that drive sustainable and conservation initiatives within the resort. His expertise will ensure that our marine conservation efforts, through MUI remain impactful and aligned with Six Senses Laamu's long-term goals for Laamu Atoll. In addition to overseeing our ongoing initiatives, Lawrence will play a key role in managing Six Senses Laamu's collaborations with external organizations, local communities, and stakeholders, harmonizing relationships and collaboration to protect, preserve, and manage the exceptional Laamu atoll.

Lawrence's return promises an exciting chapter, building on his past successes, such as bringing the SHELL to life and evolving the Junior Marine Biology to also be an online program. The team is eager to embark on this journey with him, embracing fresh ideas and innovative approaches toward a more sustainable future for Six Senses Laamu and the beautiful surroundings we call home. Welcome back. Lawrence!



A VISIT FROM OUR SISTER PROPERTY

With the opening of the second Six Senses property in Maldives, Six Senses Kanuhura, we warmly welcomed a visit from their Director of Sustainability, Jacqueline Krikorian. Jacqueline was here for almost a full week, which meant there was plenty of time to explore the resort, meet all of the departments, discover how we can collaborate effectively, and visit the local island of Kunahandhoo as part of the local cultural tour experience. Jacqueline comes with a wealth of experience in agricultural and farming practices and an infectious passion for sustainability.



HAS IT REALLY BEEN THAT LONG?

September 2023 marked the end of the resort's sustainability five-year strategy, developed in collaboration with The Long Run. The Long Run is a global membership community of nature-based tourism businesses committed to driving holistic sustainability through the 4 Cs (Conservation, Community, Culture and Commerce). Jason Rubens, a fisheries scientist with over 25 years of MPA and fisheries experience, visited on behalf of The Long Run to help us conduct our self-assessment and begin our journey to creating the new five-year strategy.



We can all get so caught up in the daily challenges that we forget how far we have come over the years. With multiple staff changes, global pandemics, and new ideas always being introduced, it is important to take a step back and reflect on our achievements of the last five years. We now have multiple scientific papers published with data that MUI has collected over the years (plus one peer reviewed paper with Philippa Roe, former Head Marine Biologist, as the lead author), 6 marine protected areas established, a ranger program, sustainable local fishing program, 14 global and national sustainability awards and 27 research collaborators from across the globe.



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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:

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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.

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