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OUR STORY

The team at the resort often says one of my favorite quotes is "Rome was not built in a day". Reaching big goals takes time; time, determination and innovation. We are fortunate, and grateful, that 2021 marked a significant year for us. We celebrated ten years of Six Senses Laamu's operations. That's ten years of prioritizing marine conservation and sustainable tourism. Ten years of progress towards leaving a legacy in Laamu. And, ten years that I have had the honor of calling this incredible part of our blue planet home.

In the decade that I have been here, no year compares to 2021 when it comes to the advancements we have made towards protecting Laamu's marine ecosystems. The extensive work the MUI team has conducted in the areas of research, guest education, community outreach and communications, combined with the incredible support and encouragement we continue to receive from stakeholders, partners and guests alike, is allowing us to start making tangible impacts and we are seeing the fruits of our labors.

In October 2021, Dr. Sylvia Earle and her Mission Blue team analyzed years' worth of MUI's research data. Their review led them to declare the Laamu Atoll as one of our planet's Hope Spots. Hope Spots are special places that are critical to the health of the ocean — Earth's blue heart. They are areas of vital ecological and cultural importance, highlighting the necessity for its protection. Almost concurrently, the Maldives cabinet approved the protection of six ecologically significant sites in the Laamu Atoll thereby making these the first ever marine protected areas in Laamu.

Following the successes in 2021, an important new chapter now begins. In 2022 and beyond, the MUI team will continue to conduct research, education and community outreach projects to ensure the Laamu Atoll Hope Spot and its marine protected areas are supported, managed and enforced to the best of our ability. A year from now, the 2022 Annual Report will be released from a state-of-theart facility currently being developed, which will empower MUI to further their research, education and outreach projects to a whole new level.

Our success would not have been possible without the support of so many individuals and organizations. Our owners, the HPL Group, are making extraordinary investments into our new Six Senses Marine Discovery Center and their enthusiasm for this new project is both inspirational and heartening. The Six Senses group provides us with endless support and guidance in all elements of sustainable tourism and funding. Our guests, many of whom have offered extremely generous donations to MUI through funding, professional imagery and

scientific advice. The leaders in our local community who have supported our efforts and share our vision for a protected Laamu. And last, but certainly not least, our network of international supporters and collaborators, consisting of some of the most respected persons in their fields, who have donated so much of their time, their talent, their expertise and their passion to help us in our efforts towards protecting Laamu.

2021 was a significant chapter in MUI's history and, on behalf of the entire MUI team, I share a sincere thank you with you all. Thank you so much for continuing to join us on this wonderful journey and we hope to reconnect with you soon.

#WithLoveFromLaamu

Marteyne van Well

Regional General Manager, Six Senses Maldives

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WHO IS MNIs

The Maldives Underwater Initiative (MUI) is a multiple award-winning marine conservation initiative based at Six Senses Laamu. Situated in a Mission Blue Hope Spot, Six Senses Laamu is a five-star resort in the southern Laamu Atoll who created MUI to unite the partnerships it has with various marine conservation organizations.







Six Senses Laamu

The home base of the Maldives Underwater Initiative. Six Senses Laamu sets itself apart from the 200+ other resorts in the Maldives with its dedication to sustainability and marine conservation. MUI is an initiative by Six Senses Laamu, providing the team with a base, funding and the resources required to achieve research, education and community goals.

Six Senses Laamu has been a Fellow Member of the Long Run since 2017. This is a certified membership organization of naturebased tourism businesses committed to driving sustainability through Conservation, Community, Culture and Commerce (4Cs). Six Senses Laamu is also a partner of The Reef-World Foundation, and abide by their Green Fins sustainable dive and snorkel code of conduct.

PARTNERS

WITHIN MUI

The Manta Trust

The Manta Trustisa UK-registered charity that coordinates alobal mobulid research and conservation efforts. Their mission is to conserve mobulid rays and their habitats, through research, education and collaboration. Since 2014, the Manta Trust have been working in Laamu to study the local manta ray population and to educate guests and the local community about the importance and vulnerability of manta rays in the Maldives.





7 years of partnership with Six Senses Laamu





5 years of partnership with Six Senses Laamu

Blue Marine Foundation

Blue Marine Foundation (Blue Marine) exists to combat overfishing by delivering practical conservation solutions, including the creation of large-scale marine reserves. Since 2016, the Blue Marine team at Six Senses Laamu has been working closely with the local community on Laamu Atoll to improve local fisheries management and create functional marine reserves. Blue Marine believes this is best achieved if efforts are locally led. A key aspect of their work focuses on building local capacity for marine resource management.

The Olive Ridley Project

The Olive Ridley Project (ORP) works to protect sea turtles and their habitats through research, rescue and rehabilitation, education, and outreach. Since 2018. ORP has worked to increase scientific understanding of foraging and nesting sea turtle populations in Laamu, and has actively removed ghost nets found in and around the atoll. Guest education and community outreach - communicating the importance of sea turtles and the threats that they face - are key aspects of their work in Laamu.





3 years of partnership with Six Senses Laamu



WITH LOVE

FROM LAAMU

The conservation efforts of the Maldives Underwater Initiative are made possible by the generous contributions and donations of our supporters.

We would like to say a special thanks to Six Senses, our owners, the HPL Group, and our dedicated guests who visit us year after year, always curious to learn more, and our general manager, Marteyne, who's passion for marine conservation drives and empowers us.

Six Senses Laamu's partners, the Manta Trust, Blue Marine Foundation and the Olive Ridley Project; through our collaboration we will continue to achieve incredible things for Laamu.

We are also very thankful for Laamu's community, especially the Atoll Council, who have welcomed us into their home, continuously inspiring and facilitating change. And finally, we would like to thank our international network of renowned scientists, storytellers, research institutions and other organizations who have dedicated their expertise towards making MUI's goals a reality.

THE SUSTAINABILITY

FUND

All Six Senses properties worldwide have Sustainability Funds, which are allocated towards projects that benefit local communities and ecosystems. The fund consists of 0.5% of total resort revenues, 50% of water sales, 100% of soft toy sales, and any guest donations. We are also incredibly grateful for external donations made to our partner NGOs, which make specific research, education and community projects in Laamu Atoll possible.

In 2021, Six Senses Laamu spent USD 152,692 of the resort's sustainability fund on projects that positively impacted numerous people, wildlife, and habitats. The majority of this expenditure was invested in furthering MUI's research, education and community projects. By visiting us at Six Senses, not only can you learn more about our initiatives and the wonderful marine life of Laamu, your stay will also financially contribute to our successes through the sustainability Fund.

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INTERNATIONAL NETWORK OF

COLLABORATORS

Prof. Callum Roberts & Dr. Julie Hawkins University of York, UK (Marine Conservation) Dr Alex Mustard MBE (Underwater Photographer) **Neil Emmerson** (Photographer) Dr. James Guest Newcastle University **Erin Quigley** (Coral Reproduction) GoAskErin (Underwater Photographer) Dr. James Craggs & Matt Drysdale Joel & Jen Penner Horniman Museum & Gardens NewMediaSoup (Coral Reproduction) (Underwater Photographers & Videographers) Ray Rochester Sylvia Earle & Team Vetsonic (UK) Ltd Mission Blue (Manta Ray Reproduction) (Hope Spots and Marine Protection)

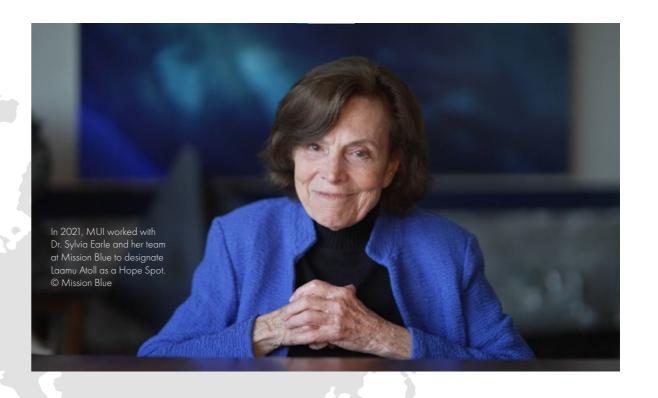
Henthorne

One Blue Ocean

(Ocean Advocacy)

MUI, at its core, is based around collaboration. The initiative was formed in 2018 as a result of the partnerships Six Senses Laamu had formed with three Non-Governmental Organisations specialising in marine conservation. But, our collaboration efforts do not stop there. In an effort to ensure our research, education and community outreach projects achieve the best results possible, we are constantly reaching out to experts in a range of fields across the world for advice and guidance.

Over the years we have invited some of the world's leading marine conservationists to Laamu. In 2021 we worked with a range of researchers and storytellers, entrepreneurs and lecturers, as shown on this map, all of whom played a vital role in helping us achieve our goals this year.



Prof. Yvonne Sadovy, University of Hong Kong, Hong Kong (Fisheries Conservation and Spawning Aggregations)

Environmental Protection Agency Maldives (Marine Protection)

Laamu Atoll Council (Community Outreach and Education)

Laamu Atoll Women **Development Committees** (Community Outreach and Education)

> Dr. Mike van Kuelen, Murdoch University, Australia (Seagrass Ecology and Restoration)

Dr. Michael Rasheed, James Cook University, Australia

(Seagrass Ecology)

Dr. Paul York, James Cook University, Australia (Seagrass Ecology)

Prof. Peter L. Harrison Southern Cross University (Coral Reproduction)

Ocean Geographic

Prof. Peter Macreadie, Deakin University, Australia (Blue Carbon Valuation)

Michael Aw (Ocean Advocacy)

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David Eastaugh

(Videographer)

Lauren Arthur

Jason Boswell

(Videographer and Presenter)

(Videographer & Photographer)

EVENTS OF

2021



The Six Senses Laamu research team conducted the fourth annual survey of the resort's protected seagrass meadows. They collected data from 236 points across the island and also included fish surveys in each meadow.

APRIL





MAY

The #GreenTurtlesGaadhoo campaign was launched by the Olive Ridley Project to raise awareness of the most significant Green Sea turtle nesting site in the country, Six Senses Laamu's neighboring island L. Gaadhoo.



#SaveOurSharks, a campaign by Blue Marine Foundation and funded by Six Senses Laamu was launched in response to rumors of the shark fishing ban in the Maldives being lifted. Shortly after, the Maldives Fisheries Ministry released a public statement indicating that the decade old shark ban would not be lifted.

MARCH



World Ocean's Day was celebrated at the resort with guests and hosts through a swim along the entire length (1km) of the house reef to the nearby sand bank, to raise awareness for marine protection and ocean conservation.



JUNE





The Maldivian Government designated six new Marine Protected Areas in Laamu Atoll, covering 2,678 ha of Laamu Atoll's most critical habitats.

DECEMBER



Six Senses Laamu's Coral Reproduction survey commenced with the aim of gaining a better understanding of natural coral reef replenishment.

FEBRUARY



The Manta Trust were able to distribute 195 sets of snorkel gear to 13 schools in Laamu in August, with the support of Blueyou and Six Senses Laamu. An initial donation of 195 sets were sent in 2019, bringing the total amount to date to 390 sets.



The new Grouper Fishery Management Plan for the Maldives was announced which included new size limits. based on data collected by Blue Marine Foundation at Six Senses Laamu and the Maldives Marine Research Institute.

JANUARY





Blue Marine Foundation began their snorkeling camp program which aimed to provide snorkeling skills for 325 students and teachers.

SEPTEMBER



AUGUST



Laamafaru Festival took place in eight different schools across Laamu Atoll bringing together 1,835 students to celebrate 'Our Oceans, Safe and Protected'.

NOVEMBER





Laamu Atoll was officially designated as a Hope Spot by Mission Blue, the international nonprofit founded by Sylvia Earle.

OCTOBER







MEGAFAUNA

SIGHTINGS



4,251 sightings of turtles



1,709 hours of megafauna surveys



11,381 sightings of sharks



2,090 megafauna surveys



4,765 sightings of rays



59 different survey sites_



1,659 sightings of Napoleon wrasse



Collaborative Megafauna Surveys

For the MUI team, every dive and every snorkel is seen as an opportunity for research. While guests at the resort are enjoying the sightings of our charismatic megafauna, the team is not only educating guests on these animals, but is also recording each and every observation. Consequently, in 2021 the MUI and Deep Blue Divers team spent an impressive 1,709 hours surveying for megafauna, which sums up to 71 full days (or over two months) spent observing the big stuff that lives in Laamu's marine ecosystems. On average, the teams collected data for five hours each day, recording sightings of turtles, rays, sharks, Napoleon wrasse and large groupers. This last year, a total of 2,090 surveys were conducted at 59 different sites around Laamu Atoll and it's safe to say we found some impressive numbers of megafauna sightings!

Diving into the Data

The most sighted group of megafauna by far was sharks, with a total number of 11,381 sightings, followed by rays with 4,765 sightings and, in third place, turtles with 4,251 sightings. An interesting finding is that shark sightings have increased significantly compared to years before: there was an increase of 56% when compared to 2019 where a total of 7,279 shark sightings were recorded. In fact, the number of shark sightings increased despite the survey effort being slightly lower (155 hours less in 2021 than in 2019). The rise in shark sightings could be an indication of a healthier population or also might be due to the fact that, after several years of surveying the reefs in Laamu, the team now have more information available better select dive sites where guests are more likely to have the opportunity to see sharks. Sharks are an indicator of a healthy reef ecosystem, so we treasure every sighting!

A Haven for Endangered Species

The most sighted shark species with an impressive 5,429 sightings was the Grey Reef Shark (Carcharhinus amblyrhynchos). Grey reef sharks are listed as Endangered on the IUCN Red List of threatened species and their populations are decreasing globally. These high sightings numbers are likely due to dives at channels, a favorite for experienced divers, where Grey Reef Sharks aggregate in the stronger currents.

There were also 1,773 sightings of hawksbill sea turtles (Eretmochelys imbricata) and 2,478 sightings of green sea turtles (Chelonia mydas), both of which are classified as critically endangered in the Maldives. Other endangered, threatened and near threatened species which we have recorded in large numbers in Laamu include Spotted Eagle Rays (Aetobatus narinari), Whitetip Reef Sharks (Triaenodon obesus) and Blacktip Reef Sharks (Carcharhinus melanopterus) with 2,726, 5,066 and 678 sightings of each respectively last year. Knowing these species with globally declining populations are some of the most frequently sighted megafauna in Laamu is encouraging, and supports the current efforts of safeguarding the newly designated Marine Protected Areas in and around the atoll for years to come.

Left page: a black marbled ray spotted getting cleaned at Mavah, a dive site on the west of Laamu Atoll. © Jennifer Penner

Below: a member of the Deep Blue Divers team recording a Hawksbill



CORAL REEF

RECOVERY

National Coral Reef Monitoring Program

It is no secret that corals are at the forefront of impacts from rising sea temperatures and the changing global climate. Since 2018, Six Senses Laamu's House Reef has been established as a permanent reef monitoring site under the Climate Change Adaptation Program (CCAP) launched by the Maldivian Ministry of Fisheries, Marine Resources and Agriculture to track the recovery and health of reefs in the country. The last national extreme temperature spike, resulting in mass coral bleaching and loss of live corals, was in 2016. Following this, the live coral cover at Six Senses Laamu house reef dropped to ~12%. Despite smaller scale bleaching events noted from February to April in 2021, Six Senses Laamu house reef has demonstrated a remarkable recovery. The biannual surveys from 2021 showed live coral cover has increased up to 31.9 % in June, and stayed fairly

consistent with 32.5% live coral cover in December. Fish communities are observed to be healthy, including multiple observations of spawning aggregations of vital reef grazers including parrotfish and surgeonfish.

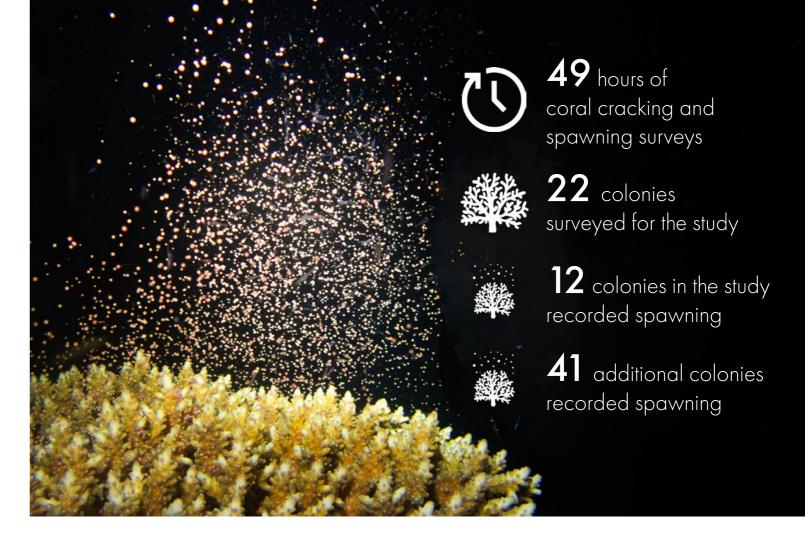


2 reef monitoring surveys conducted on Six Senses Laamu's House Reef



32.5% live coral cover recorded on Six Senses Laamu's House Reef





Coral Replenishment Study

But exactly how do Laamu's reefs recover? That is exactly the question the Six Senses Laamu team are trying to answer with their spawning and reef replenishment study. This study aims to record coral spawning events, in order to better understand the annual cycle of natural coral reproduction in Maldives. Unlike countries such as Australia, where this phenomenon is well documented, very little is known about when different corals spawn in Maldives. With the support of a network of international experts, the team was able to complete a full year of indepth monitoring of spawning on Six Senses Laamu's house reef, including studying the developmental cycle of eggs within various species of the genus Acroporatype of coral particularly susceptible for the impacts of temperature rise.

Throughout the year of study, the researchers from Six Senses Laamu witnessed six spawning events, a great success considering past anecdotal reports predicted that spawning may only happen twice a year in the Maldives. The survey efforts, which took place late at night after every full moon, were possible thanks to a team of 16 members from different departments in the resort. The teamwork made the night surveys not only easier in terms of workload, but also became a highly valuable educational tool for many who had never seen coral spawning before.

To take this further, with the help of visiting expert Matt Drysdale from the Horniman Museum and Gardens' Project Coral, in November 2021 the team set up a coral observation tank. Using this equipment, they could cross fertlize coral eggs and sperm from different colonies and, over the course of two weeks, observe how they transform from a tiny blob, into a swimming larvae and eventually a baby coral settled on a rock within the tank.

In order to fully understand the reproductive cycle of Laamu's corals, the project must continue for multiple years. However, this year's advances have taken coral spawning research forward to a point that it is possible to start looking at how the natural reproduction of corals can be utilized to assist some of Laamu's most degraded reefs, and for us to better understand the recovery of coral reefs in Maldives.

Left page: coral bomies on Six Senses Laamu's House Reef under UV light. © Alex Mustard

Above: a colony of coral on Six Senses Laamu's House Reef sighted spawning during coral replenishment survey dives. © Greg Holder

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SEAGRASS

ECOLOGY

The Grass is Greener at Six Senses

In 2017, Six Senses Laamu began protecting its seagrass meadows and since, they have flourished into diverse ecosystems, hosting regular sightings of grazing turtles, stingrays and sharks cruising by. 2019 was the first year the Six Senses Laamu team did a full scale survey of the meadows within the Six Senses Laamu lagoon and now, three years on, they can track the extent to which the protection has supported the ecosystem.

Surveying Six Senses Laamu's Meadows

The meadows now cover a total area of approximately 158,000 m2 and are made up of five different seagrass species. The largest meadow is now the area between jetties B and C where many of the smaller patches are merging into one, followed by the area between jetties A and B. The meadow to the west of the island remains very stable as most of the remaining seafloor is rubble and rocks, therefore there isn't much space for the meadow to expand. As the island is constantly shifting in shape, as sand moves around, areas of

the meadows will disappear, and others will grow. Much like the meadow on the west of the island, it is likely the meadows will find an equilibrium and reach their capacity, which the team will continue to monitor.

Fish life in the Meadows

The 2021 surveys also included fish Remote Underwater Videography (RUV) surveys, where a camera was left in a location within the meadows to collect data on the biodiversity of fish which rely on the meadows. A total of 1,550 fish were sighted and recorded during the 17 survey transects. Studying the fish populations within seagrass meadows will help us further understand how important these areas are to the wider ecosystem, and the people upon which they rely. The full analysis of the 2021 data will be conducted in 2022 to form a four-year report detailing how the meadows have developed and changed since their protection.

Background photo: A total of 1,550 fish were sighted during 17 surveys of Six Senses Laamu'



158,000 m² of protected seagrass meadows at Six
Senses Laamu



176 data points recorded in the seagrass meadows



35% increase in meadow size from 2020 to 2021



1,550 fish recorded during seagrass surveys



MANTA RAY RESEARCH 1, 191 manta surveys conducted by ray sightings the Manta Trust team

Photo Identification

Much like a fingerprint, each manta ray has a unique spot pattern on its belly that manta researchers use to identify individuals, which helps them understand population dynamics and track manta ray movements. In 2021, a whopping 442 surveys were conducted by the Manta Trust team which resulted in an impressive 1,191 manta ray encounters. 448 of these encounters were captured on camera, either by cameras operated by divers or on remote underwater cameras, enabling the team to identify 67 different manta rays throughout the year, many of which were sighted more than once. Of the manta rays identified in 2021, four had never been seen before, increasing the known manta ray population of Laamu to 138 individuals. All of these newly sighted individuals were juveniles which gives a promising insight into the reproductive health of Laamu's manta rays!



448 confirmed manta sightings through photo identification

Remote Underwater Sensing

As the Manta Trust researchers cannot be in the water all of the time, they deploy Remote Underwater Video and Photography cameras (RUVs and RUPs) at manta aggregation sites, to allow continuous monitoring of Laamu's manta rays. In 2021, the Manta Trust Laamu's remote sensing project reached record numbers. They embarked on a 24/7 surveillance project, in which an RUP camera was permanently deployed on one manta ray cleaning station, to take continuous time-lapse photographs of the area for up to 10 days at a time. The camera recorded across a total of 203 survey days and photographed an impressive 1,974 hours of data (118,468 photographs). These cameras have allowed the Manta Trust team to significantly extend their survey time and provide essential insights into manta behavior and habitat use, without the presence of divers. A Marine Environmental Management student from Exeter University will be analyzing a full year of the RUP data for their masters. This thesis, which will be completed and ready for reading in 2022, will aim to understand the environmental factors that determine manta presence or absence at the site.

Left page: a manta ray silhouetted during a dive in Laamu © Erin Quigley

Below: the Manta Trust use Remote Underwater Video and Photograph cameras (RUVs and RUPs) at manta aggregation sites, to allow cont monitoring of Laamu's manta rays © Jas Corbet



Local Ecological Knowledge Surveys

In 2021, the Manta Trust launched a social media campaign in Dhivehi, targeting Laamu Atoll residents, which reached 31,000+ accounts (read more about the campaign in Our Voice). The aims of this campaign were to increase awareness about manta rays and Manta Trust's research, call out for manta ray sightings in Laamu, and to recruit local representatives to conduct interviews with fishermen on their island. As part of the campaign, viewers took part in an online survey where they could submit manta ray sightings to the team. As a result, in 2021, the Manta Trust team received survey submissions from seven sites where manta rays had never been recorded before in Laamu Atoll. Following this campaign, a collaboration was formed with second Marine Environmental Management student from Exeter University, who will visit Laamu Atoll in 2022 to conduct local ecological knowledge surveys on every inhabited island alongside the Manta Trust team. The data from these surveys will provide an insight into the local communities' knowledge of manta ray presence, seasonality, and threats in Laamu Atoll. It will also help to inform the team of new manta aggregation sites and focus areas for their research in the coming years.

Manta Ray Growth Rates

Since 2018, the Manta Trust team has been collecting data on the growth rate and reproduction of Laamu's manta ray population, as part of a Cambridge University PHD study. How fast manta rays grow still remains a mystery, so the team uses a Stereo Video Photogrammetry (SVP) system to measure their wingspan. The SVP system consists of two cameras mounted on a bar at set distances apart, which are calibrated to take accurate 3D measurements of the rays. In 2021, 16 of Laamu's resident manta rays were accurately measured, adding to their understanding of the Laamu mantas' growth rate over time.

Manta Ray Reproduction

The reproduction of manta rays is another mystery within the scientific community, with no manta births ever being recorded in the wild. Using the world's first contactless underwater ultrasound scanner, created in collaboration with Vetsonic, IMV Imaging, Cambridge University and Six Senses Laamu, the team have been collecting sonograms of maturing and pregnant manta rays to better understand their internal development. In 2021, the team received an improved device that records clearer sonograms and took part in an ultrasound workshop with Ray Rochester, the founder of Vetsonic, which has brought their ultrasound project to the next level.

Manta Ray Aggregation Sites and Drone Surveys

Two major cleaning stations (areas where manta rays gather to be cleaned by reef fish) have been identified in Laamu, but it is highly likely that there are many more undiscovered manta cleaning stations in the atoll. By using drone technology, the Manta Trust team have been able to expand their view of manta rays and their habitats in non-invasive ways, and gain a unique perspective of their behavior. Of the 9 aerial surveys conducted in 2021, mantas were spotted on 2 of them. A highlight of 2021, was getting a call from a resident from Kunahandhoo island, to inform the team of manta pups feeding in their lagoon. Jeremy Austin, a renowned content creator, accompanied the team and captured beautiful aerial footage of these feeding pups while the Manta Trust team jumped into the water to collect identification photographs.



16 manta rays measured





Above: the Manta Trust team using their contactless underwater ultrasound scanner to collect data on a pregnant manta ray. © Andy Ball

Left: two manta rays sighted at a cleaning station on Hithadhoo Corner, a dive site just a few minutes away from Six Senses I gamu @Alex Mustard



4 new mantas to Laamu, bringing the total number to 138 mantas



2 masters research projects started with Exeter University

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Sea Turtle Population Research

The Olive Ridley Project (ORP) studies the population of turtles using photo-ID, a non-invasive technique used to identify animals and track them over time from the natural marks on the body. For turtles, it relies on capturing photographs of the unique scales on their face. In 2021, the ORP Laamu team analyzed 1,182 different photo-ID encounters of turtles, learning about the habitat use and migration patterns of turtles previously identified, as well as adding 132 never seen before turtles to the database. Laamu continues to be the second largest database of green sea turtles by atoll in the country, with 243 individuals recorded-the majority of which has been identified as adults. Meanwhile, the identified hawksbill population of Laamu currently comprises 434 individuals, out of which the majority are juveniles. In 2021, data was also analyzed from 2,057 snorkels and scuba dives to understand the habitat use and distribution of turtles by species and depth, giving key insights into the behavior of these animals and the ecosystems they rely on.



36 new green turtles identified



96 new hawksbill turtles identified

Ghost Gear and Entangled Turtles

Ghost gear refers to fishing gear that has been lost, abandoned or discarded at sea. Ghost gear is one of the most harmful forms of marine debris and is responsible for killing countless numbers of marine animals - including sea turtles. ORP was established to help rescue and rehabilitate sea turtles found entangled in ghost gear. In 2021, ORP recovered three ghost nets in Laamu, amongst which one turtle was found entangled. Luckily, the hawksbill did not need further veterinary attention and was released immediately. Data, on the net material, size, other items entangled in it and more, was collected from each of the nets to input into ORPs ghost net database. This database enables ORP to determine the origin of ghost nets and to identify the specific net types most likely to entangle turtles, therefore helping to develop targeted initiatives to tackle the issue of turtle entanglement.



1 turtle rescued from entanglement



3 ghost nets recovered

Nesting Research at Six Senses Laamu

Since 2018, ORP has conducted nesting research on Olhuveli island, where Six Senses Laamu is located Unlike previous years, where a loose nesting period was observed between Mar-August, in 2021 nests were laid year-round on the island. With just four years' worth of nesting data, further research needs to be done to understand the pattern of nesting on the island. As time goes on, the ORP team will be monitoring to see if this was an anomalous year or if the nesting trends have changed and what might have caused this. A total of 26 nests were laid on Olhuveli in 2021, which is an increase from the nine nests recorded the year before but consistent with data from 2018 and 2019. Another highlight for nesting research last year was the team recording the first remigration interval of nesting mothers in Laamu. This is the amount of time between nesting migrations of a single female. By taking ID photos of a female laying her eggs in 2018, then photographing her again in 2021, the team confirmed a three-year period between nesting seasons for this female.



1,650 hatchlings started their lives at Six Senses Laamu

48 hours after a nest hatches, the ORP team has a permit to conduct a nest excavation where they dig the nest up and collect data on the number of eggs laid, number of turtles which successfully emerged from the nest, number of undeveloped eggs or dead hatchlings and the external conditions (i.e. roots, flooding, pesticide etc.), which may have affected this. In 2021, the ORP team found four cases of abnormal hatchlings, which have never been recorded in the region, including a two headed hatchling, twin embryo, omphalocele embryo (organs outside body), and one with abnormal scutes. All of these besides the hatchling with abnormal scutes were unfortunately found dead, however this shows the value of the research and insights which can be gathered from excavating a nest.



26 nests were laid at Six Senses Laamu



81.69% hatching success for nests laid at Six Senses Laamu





Nesting at Gaadhoo Island

Gaadhoo, an uninhabited island 4.5 km east of Six Senses Laamu, has long been identified as one of the most significant green sea turtle nesting hotspots in the Maldives. ORP has conducted nesting surveys on Gaadhoo since 2018. Unfortunately, in 2021, COVID-19 travel restrictions continued to be a challenge to ORP's efforts to get to Gaadhoo and conduct surveys. Despite this, ORP managed to complete six surveys on Gaadhoo, during which a total of 23 suspected nests and one suspected false crawl were recorded. Although prohibited under Maldivian law, egg poaching unfortunately remains a prevalent issue on Gaadhoo and 69.56% of the nests surveyed showed signs of poaching activity. ORP is working with stakeholders and the government to address and deter poaching on L. Gaadhoo, read more about this in Our Community.

Previous page: an ORP biologist recording a turtle sighting on a dive at Hithadhoo Corner © Alex Mustard

Left: a turtle hatchling venturing into the sea for the first time at Six Senses Laamu © Leanna Crowley

Above: an ORP biologist conducting a survey on turtle nests found on Gaadhoo's western beach. @ Leanna Crowley



23 suspected nests and 1 false crawl recorded over 6 surveys on Gaadhoo



69.5% of suspected nests recorded in Gaadhoo were poached

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FISHERIES RESEARCH

The Laamseelu Masveriya Program

In 2021, Blue Marine Foundation's (Blue Marine) staff continued to collect and monitor the fish being purchased by the resort from local fishers as part of the Laamaseelu Masveriya (meaning Exemplary Fisher) program. Monitoring fish landings is critical because it allows Blue Marine to monitor whether fishers are adhering to the code of conduct and collect data on the frequency of species caught, size and location to provide insight into the health of fish populations on Laamu Atoll. Encouragingly, there were no recorded catches of nationally protected species, including parrotfish and napoleon wrasse, as well as the biologically vulnerable species of grouper and blue marlin. However, size class analyses indicated that 41% of all fish recorded were biologically immature. In particular, 83% of all longnose emperors and 80% of all rainbow runner recorded through the program were undersized. Furthermore, 13 of 17 species which were identified to the species-level were landed below or within 20% of their minimum length of maturity.

Significant quantities of undersized landings indicate that these species might have been overfished. Overfishing of large-bodied mature individuals causes fish stocks to truncate, characterized by large numbers of small-bodied individuals which are less fecund and unable to successfully replenish populations. Fishing intensity was predominately aggregated around reef regions near to the resort, with Hithadhoo Corner being the most intensely fished location despite being within a voluntary marine protected area. In 2022, Blue Marine will be reviewing the code of conduct "no-take list" and dedicating a significant portion of time to fisher education to ensure fishers understand the biological principles behind sustainable fishing and how this benefits them. Blue Marine is confident this will help with code compliance.

Investigating Reef Fishing for Local Consumption

Blue Marine's resource use surveys (read more on the next page) found that most reef fishing practiced in Laamu Atoll by its residents is for subsistence rather than commercial reasons. In 2021, Blue Marine successfully trained seven fisheries officers from seven islands in the atoll to collect fish and invertebrate landings data from their respective islands to understand the scale of this fishery. Full data analysis will be completed by September 2022; however, preliminary findings have been very revealing. Local communities are targeting an extremely wide range of coral reef fish for consumption which have not been previously documented. Species targeted include box fish

and triggerfish, both of which are favorites for divers to see. The diversification in the species being targeted for consumption is a relatively new trend and is concerning to see. There is also significant targeting of protected parrotfish and catch of berried lobsters and Blue Marine is also concerned about the prevalence of destructive fishing gear such as small nets which could lead to over-exploitation. The initial data from this project has provided guidance to the team on their education strategy, proving to them that further education is needed within the communities on the potential impact unsustainable reef fisheries could have on the wider ecosystem.



4000+
individual fish
recorded and
measured



321 local stakeholders interviewed regarding fish consumption



Laamu's Marine Protected Areas

In December 2021, the Maldives cabinet approved the protection of six ecologically significant sites in Laamu Atoll, a huge step in the right direction for Laamu's marine habitats and resources which our local community rely on. Many of the findings from research projects which Six Senses Laamu and partners in MUI have gathered over the years were presented in various governmental meetings to help guide this decision and prove why certain areas in the atoll are in need of protection. In 2021, the team continued to monitor the biodiversity of Laamu atoll, but also expanded their research to consider the socio-economic impacts of marine protected areas in Laamu which may influence the management plans that are being finalized in 2022.

Baseline Surveys

In 2019, Six Senses Laamu and Blue Marine Foundation (Blue Marine), with the help of team members from the Manta Trust, conducted baseline surveys at 19 reefs around Laamu Atoll. These surveys focused on the composition of the site (i.e. coral, rock, algae) and the diversity and abundance of commercially important and ecologically significant species of invertebrates and fish. The information from these efforts was used to provide evidence for marine protection in Laamu, and establish a level of reef health against which to compare future surveys. Now, more than two years on, the team is in the process of revisiting these sites (and a few more) to repeat the surveys and measure any changes to the ecosystem. For these surveys, the team has conducted training to refine their fish length estimations, so that we can more accurately calculate the biomass of fish on the reef as these results will be compared with Blue Marine's fish landings project mentioned in the previous page. In 2021, 14 of these sites were surveyed, totaling 2,500m of reef within which 2,662 fish were recorded. The remainder of the sites to be resurveyed will be completed in 2022.



2,500m of reef surveyed



321 local stakeholders asked about resource use

Resource Use Surveys

In 2021, Blue Marine completed the analysis of their resource use survey which describes how the people of Laamu Atoll are using natural resources. The resource use survey represents the collection of one of the most comprehensive datasets on resource use around Laamu Atoll, capturing resource use information from a range of key user groups; 241 fishermen, 26 fish exporters, 11 island councils, 41 local NGOs and two tourism operators. This piece of research has been, and will continue to be critical as management plans begin to be developed for newly protected areas.

The key findings from the survey efforts are that areas close to the shore (<2.5km) are critical to most commercial fisheries on Laamu Atoll. This is not surprising given that fishers use low-powered smallscale vessels. The dominant fisheries around Laamu are tuna and reef fish, but most reef fishing is for subsistence rather than for commercial reasons. The lobster fishery was reported to be the most valuable in terms of income per month, followed by billfish and then tuna. Typically, fishers rated the status of fisheries they were involved in as being very good, however, for most fisheries, there were a range of responses from very good through to very bad. Similar to the findings from the Fishers Forum, most tuna fishers rated the tuna fishery to be in the worst shape possible. Several unsustainable practices were also identified by fishers, including the use of powerful lights to catch big-eye tuna and yellowfin tuna, the use of nets for reef fishing, SCUBA gear for sea cucumber fishery and the use of chemicals to catch octopus. Invertebrate fishers also noted that the decline of seagrass meadows has negatively affected invertebrate and fish stocks on some islands and that better protection of seagrass would enhance their fishery.

When considering the answers provided by nonfishers (local councils, NGOs and tourism operators), the results showed that two of the channels in the atoll (Hithadhoo- Gaadhoo Kandu and Fushi Kandu) are used by tourists from a nearby resorts for diving, snorkeling, dolphin watching and some fishing which would need to be considered in the context of bringing in management in these areas. Blue Marine has already shared the draft report with the Government ahead of the development of management plans and will continue to engage with them as management plans move ahead to ensure that community needs are balanced with environmental protection.

Public perceptions of MPAs

Community support for MPAs is known to be one of the largest predictors of their success. In May 2021, Blue Marine ran online polls on social media to understand the level of community buyin for protection of five sites proposed as MPAs by the Ministry of Environment, Climate Change and Technology. The social media adverts were run in Dhivehi and targeted to the Laamu Atoll population. Adverts were run for each of the five sites with a fact about the site and asking whether the individual supported the protection of the area and ran on mobile devices only. Each poll reached between 41-49% of the Laamu population with the majority 84% - 91% voting in favor of protecting these areas. Blue Marine believes this remarkable level of community support is a true testament to the community outreach work done in Laamu Atoll by the partners within MUI over the past seven years.

Willingness to pay surveys

Sustainable financing of MPAs is critical to their long-term success. Between December 2020 and April 2021, Blue Marine and Six Senses Laamu, with the support of other partners in MUI, conducted Willingness to Pay (WTP) surveys with guests who visited Six Senses Laamu. These surveys assessed the highest price they would be willing to pay to enter and use Marine Protected Areas (MPAs) in Laamu Atoll. 101 respondents from 31 countries participated in these surveys. The average price that guests were willing to pay to enter an MPA was USD 30, with 88% of the guests willing to pay more than USD 5 and 50% willing to pay up to USD 20. When diving and snorkeling were factored in, guests were willing to pay USD 50 on average. The locations that guests were most willing to pay for were Hithadhoo Corner/Inside area (average USD 65), Gaadhoo Corner and Hassan Haa (average USD 50). Based on the occupancy rates in 2021, this could lead to an annual revenue of USD 66,294 from Six Senses Laamu guests alone. Blue Marine will be using this data to inform the Maldivian Government that user fees could form part of a broader financial business for the sustainable management of MPAs, funding elements such as ranger programs, scientific studies, community education etc. which are critical for their long-term success.



41-49% of the Laamu population responded to online polls about MPAs



101 guests interviewed at Six Senses Laamu



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OUR

GUESTS

MUI's Activities at Six Senses Laamu

When it comes to conservation; research, education and community outreach are not separate things but are inextricably intertwined. That is why MUI provides an insight into all three of these concepts through the activities we host at Six Senses Laamu. Our hope is that, as a consequence of the interaction we have with guests here in Laamu, they will head home with more passion and knowledge about our blue planet, and why and how we can protect it. Activities we host for guests include daily guided snorkels at the resort, the junior marine biology program, snorkels on reefs around the atoll, daily evening talks, kids club activities, reef cleans and the opportunity to meet a marine biologist in an informal Q&A. A member of the MUI team also joins on all dolphin cruises and most dives to sites where manta rays are often sighted to add an educational component to the guest experience and conduct research.

Post-Pandemic Trends

Following the pandemic, it is thought that people are more aware of our natural resources and the threats they face, thus are traveling with a greater sense of purpose- either to contribute to sustainable initiatives or to learn more about the health of our natural world. For us, this trend has been evident. We have had far more interaction with guests in 2021 compared to previous years, averaging an engagement rate of 33%, with some months being as high as 45%, of the resort occupancy. Several activities we hosted were more popular in 2021 than in any year previous. This includes the daily guided snorkel along the house reef or seagrass meadows, which 2,800 guests participated in, and our weekly reef clean which 69 guests joined us in the water for over the course of the year.

Top right: to celebrate World Ocean's Day 2021, 11 guests joined the MUI team for a swim 1 km swim to the sandbank to raise awareness for ocean protection. © Jeanna Crowley

Middle: Guests cheering on turtle hatchlings when a nest unexpectedly hatched at sunset on Earth Day 2021. © Leanna Crowley

Re-Inventing the Guest Experience

For World Ocean's Day 2021, the MUI team invited guests to swim the entire length (1km) of the house reef from the resort to the near-by sand bank with them, to raise awareness for marine protection and ocean conservation. Another new event that was launched was a Campfire Folklore Stories session as part of the resort's festive calendar in December. The aim of this event was to provide guests with a new way to learn more about the local culture of the Maldives and emphasize our link with the communities of Laamu. Guests gathered around the campfire to hear some of the weird and wonderful tales of Maldivian Folklore told by our talented and charismatic Maldivian members of MUI.

Nest excavations, which take place 48 hours after a turtle nest has hatched on the island (read more in Our Research) also became a new guest experience in 2021. Guests got the chance to see the turtle biologists as they collected data for research purposes, and also got to see live hatchlings that were trapped get released. This became an opportunity to teach guests about sea turtle conservation efforts, and explain their life cycle and threats





15,096 interactions with guests



2,827 guests joined MUI for a house reef snorkel



1,316 guests listened to MUI's presentations



1,039 guests witnessed turtle hatchings or nest excavations



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JUNIOR MARINE

BIOLOGY

Since its launch three years ago, our Junior Marine Biology program has gone from strength to strength. In 2019, we were delighted to welcome 13 children onto the team in the first year of the program. In contrast, 17 little VIPs at the resort become certified through the program just in the first month of 2021 alone- a true testament to how it has grown! Collectively over the years, we have now certified over 130 children through the program and conducted a total of 519 hours (364 of which were done in 2021) of Junior Marine Biology education to children from all around the world.

One of the best parts of Junior Marine Biology is having children come back to the resort to continue their journey with us as Junior Marine Biologists. In 2021, we welcomed back four children who had already graduated and were keen to learn more, one of which enjoyed the program for the third time after visiting us in 2019, 2020 and 2021. To ensure kids like these continue to learn new aspects of marine biology, the MUI team are always developing the program and now have eleven different specialties on offer. Introducing the 'Hermit Crab' speciality was a highlight for the team last year and came about as a result of a kids club session where one of our marine biologists discovered the Den's garden had been transformed into a hermit crab arena after children had transported the crabs from the tidal zone of the beach into the jungle of the island. When the Junior Marine Biologists on island at the time completed this module, they marched back to the kids club and, like a true guardian of the oceans, informed the other children of the ecological impacts their hermit crab experiment could be having!



79 children took part in Junior Marine Biology



364 hours of education provided









LAAMU

STORY

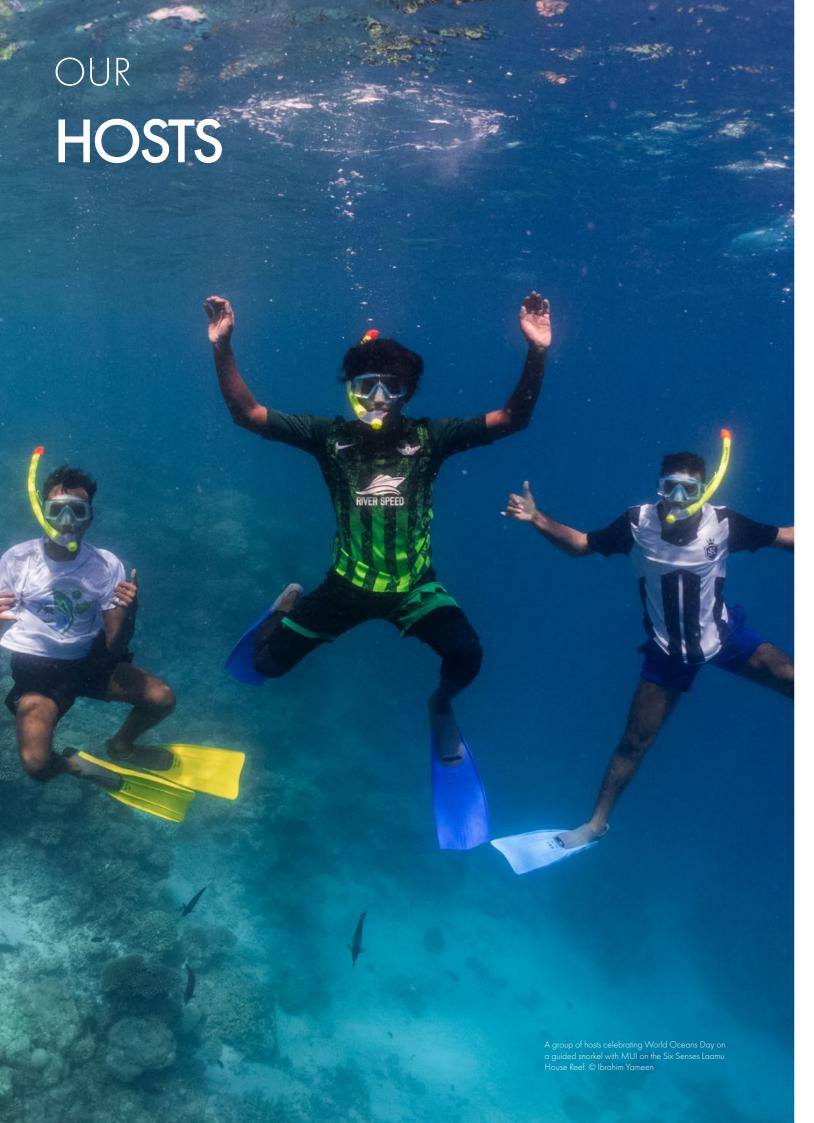
In 2021, we welcomed Tommy to Six Senses Laamu, who became our most qualified student with a whopping 20 sessions of Junior Marine Biology under his belt! Tommy is an enthusiastic little ocean lover who became a dedicated member of our team during both of his holidays in February and August of 2021. At just five years old when he first registered, he was younger than the children who normally participate in the program but, because of his passion for marine conservation, we took him on for a trial. When we explained to Tommy the threats

Left page: a photo series from Junior Marine Biology session with the Baz Family who helped promote the program on their famous

Above: Tommy and his younger sister Bea pictured just before departing the resort after Tommy graduated for a second time with 20 sessions of Junior Marine Biology under his belt. © Ali Sharee

oceans and marine animals (such as sharks which he loves) face, he was equally distressed and determined to make a difference. When given the opportunity to share what he had learnt in the program, he created a stop motion video which raises awareness about shark fisheries and why we need to protect our sharks. But it didn't stop there, after returning home to Portugal, Tommy's parents sent us videos of a presentation he gave to his classmates on what he had learnt during the program, showing us that, even at such a young age, Tommy is already a spokesperson for the oceans within his network of influence.

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Creating Marine Stewards

Our vision is to create a community of local and global marine stewards who can have positive impacts on the oceans in Laamu and beyond. To achieve this, it is important that we provide education for our guests and our local community, but also our hosts here at the resort. The staff force at Six Senses Laamu consists of 57% Maldivians (the national minimum requirement is 45%), thus providing us with the opportunity to engage with a community who will return to their islands elsewhere in the country and be inspired to be guardians of their marine ecosystems.

Employing Local Marine Biologists

Every year we welcome new faces to the MUI team, and in 2021 we were delighted, for the first time ever, to have majority Maldivians on the team. As a rule, we give priority of general internships to Maldivians with the aim of providing opportunities to locals in what is generally a foreigner-dominated role in resorts in the Maldives. In 2021, we welcomed Afaaz to the team as a Marine Biology Intern for Six Senses Laamu. Coming from a fishing family, his interests have always been in sustainable fishing practices and thus, when his internship finished, the Maldives Resilient Reef team (Blue Marine Foundation's local affiliated NGO) offered for him to join their team as the Resort Fisheries and Research Officer. Now, Afaaz helps run resortbased fisheries projects, including the Laamaseelu Masveriya program and is an invaluable point of contact between local fishers and the resort.

Host Trainina

Every new member of staff at Six Senses Laamu attends a three-day orientation course, during which MUI presents their projects and informs the new hosts on how they can get involved with our work. We also train hosts to become citizen scientists at the resort and therefore empower them to help us with our research and conservation efforts.

We also conduct specific training for certain departments. For example, in 2021, the Olive Ridley Project conducted training for the security team on how to react if they find a nesting turtle on their night beach patrols, and to all boat teams how to handle an entangled turtle. All of these trainings help hosts at the resort understand the challenges marine life in Maldives face, in addition to how they can help.

Mission Wellness

Mission Wellness is an internal Six Senses initiative which provides opportunities for staff at the resort to engage in activities that cover the eight dimensions of wellness (Emotional, Environmental, Financial, Intellectual, Occupational, Physical, Social, and Spiritual). Through this initiative, we host monthly activities, such as reef cleans, guided snorkels, host dives etc., to provide our hosts with the opportunity to reconnect with nature. As part of our host education initiatives, we also celebrate many of the international celebration days by creating games and guizzes for them to get involved in. In 2021, these included World Wildlife Day, where 90 hosts participated in a lunch time guiz, World Manta Day, where 25 hosts participated in a competition to name one of Laamu's manta rays and Earth Day, where 40 hosts came together to paint a wall mural in our host village.



1,565 educational interactions with hosts



25 international celebration days celebrated with hosts



Above: Abdulla, one of Six Senses Laamu's Guest Experience Makers celebrating World Turtle Day with guests at breakfast. © Isha Afeef



EKU

Coming Together Since 2016

Eku Eky, meaning 'together' in the local language of Dhivehi, is an initiative that began, in 2016, as a resort-based meeting to bring stakeholders of the local community to Six Senses Laamu to discuss sustainable development in the atoll. In 2019, the meetings moved into the community with quarterly gatherings happening in different schools across the atoll. Each meeting brings together representatives from the atoll council, 11 island councils, women's development committees, 13 schools, 5 police stations, and active local NGOs, who represent the voices of Laamu's 19,000 residents.

Post-Pandemic Eky Eky Meetings

In light of the inter-island travel ban that was imposed due to the global pandemic in 2020, the Eku Eky stakeholder meetings swiftly adapted into an online platform these last two years.



7 hours of marine conservation education was provided during Eku Eky meetings

Eku Eky March 2021 was held virtually via zoom with 16 participants including the administrative officers of the Atoll Council and Island Councils, members of Women Development Committees and Schools. The meeting was started by sharing the Sustainability Fund Impacts of 2020. L. Maamendhoo School shared the pandemic measures in place at the school and the plastic free project they were conducting- the AIR challenge by Parley.

In June 2021 the group met again and this time the planning of Laamafaru Festival 2021 took center stage. Stakeholders provided essential insight and advice to the resort team who were planning the festival, and this discussion ultimately led to the success of the events in November.

Finally, in October 2021, the resort was delighted to invite local stakeholders to the resort to celebrate the launch of the Laamu Atoll Hope Spot and meet again in person for the first time in over a year and a half.



68 members of the community participated in Eku Eky meetings



SUSTAINABILITY

FUND PROPSALS

The Sustainability Fund Proposal Form

Six Senses Laamu's sustainability fund is available to fund projects that benefit local communities and ecosystems. In an effort to increase the amount of projects Six Senses can contribute to, the resort developed a proposal form where by any resident of Laamu can apply for funding for a project which aids in sustainable development and/or marine conservation. In 2021, several forms were received from the community for projects which could have a direct benefit on their island communities.

Kunuhandoo Youth Center

In June 2021. Six Senses Laamu donated funds for the interior design materials and finishes for Laamu Kunahandhoo Youth Center, a project initiated by Laamu Kunahandhoo Council in 2019. The Youth Center of Laamu Kunahandhoo is a dedicated space for engaging its youth in sustainable opportunities and education. Laamu Kunahandhoo Council aims to open the center officially by May 2022 while the pandemic measure within the community has been eased since March 2022.

Emergency trolley and AC for health center

In 2021, Six Senses Laamu partnered up with the Laamu Hithadhoo Health Center with the aim of improving public access to medical care in Laamu Hithahdoo. Through this partnership, the resort donated an Emergency Trolley followed by an Air Conditioning unit for the Community Health Section. This partnership has provided improved access for medical care to the 1.244 residents of Laamu Hithadhoo



2,490 USD donated to projects within the community as a result of Sustainability Fund Proposals

Paints for Maamendhoo school

To create a positive and an exciting environment in Laamu Maamendhoo School, Six Senses Laamu donated outdoor paints. These were used in a community-led school painting event for the reopening of Schools in August 2021, after the school break due to the global pandemic. This community event was initiated by the Laamu Maamendhoo School with the sole purpose of providing a positive mindset for students, teachers and parents in the wake of what was an extremely challenging period. A total of 50 community members joined the event where it successfully created an exciting reopening for 198 students in Laamu Maamendhoo School.

Left page: Members of the Eku Eky community, including local councils, police and Women Development Committees, visited Six Senses Laamu in October 2021 to celebrate the launch of the Laamu Atoll Hope Spot. © Leanna Crowley

Below: Six Senses Laamu hosts donating an Emergency Trolley to Laamu Hithadhoo Health Centre in August 2021. © Six Senses Laamu



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LAAMAFARU

FESTIVAL

The History of Laamafaru Festival

From 2016 to 2019, we organized an annual community festival in Laamu Atoll with the aim of raising awareness, and increasing protection, of sea turtles. The Laamu Turtle Festival brought people from across the atoll together to pledge 'Turtles in Laamu - Safe and Protected'. In 2019, we recognized the growing need to raise awareness about the conservation of entire marine ecosystems and the services they provide, in order to safeguard the Maldives from the negative effects of climate change or unsustainable practices. That is why, in 2019, ourselves and the local stakeholders involved in the event voted to broaden the scope of the 4th annual festival to Laamafaru Festival, or 'Laamu's Reefs Festival' in Dhivehi, under the theme 'Our Ocean - Safe and Protected'.



Above: a student from L. Dhanbidhoo School showing the camera her jellyfish costume during the sea creature parade at her school's Laamafaru.

Right page: a collection of photographs from Laamu Atoll Education Centre's Laamafaru Festival showing the children during the Sea Creature Parade, putting on performances and conducting a beach clean. © LAEC

The Show Must Go On

In previous years, the Laamafaru Festival was always held on one island and resort staff and schools traveled to the venue to organize and participate in it. In 2020, due to a total lockdown on various sislands, the festival took on a completely virtual form, #LaamafaruFestival. In 2021, with local restrictions eased but inter-island travel restrictions still in place, we reached out to local stakeholders to think of alternative arrangements for the event. The solution was that on Saturday, November 6th, 2021, seven different Laamafaru Festivals took place simultaneously on different islands around Laamu Atoll, and an eighth event occurred later in the month. By running separate festivals, every student, teacher and parent in each school had the opportunity to participate. In previous years, participant numbers were limited to boat capacity and transport requirements to and from the festival. Because of this, the 2021 Laamafaru Festivals reached more community members than ever before.

Each of the eight Laamafaru Festivals were run independently but under a uniting banner and suggested activities which raised awareness of how incredible Laamu's marine life is and why it is so important to protect it. The educational activities, which were planned by the resort team, taught participants about marine protected areas- a timely subject as the Maldivian government were set to designate several marine protected areas in the atoll in the weeks to come. These activities included speeches, debates and performances by students, teachers, principles and local fishers. The kids battled it out in competitions including sand sculptures, plastic upcycling and poster making. Many schools also organized clean ups where students and community members collected trash on local beaches or harbors, both helping their local environments and gaining an understanding of what a major issue waste management is in the Maldives.

For the first time ever, the management of Laamafaru Festival was handed over to the community in 2021, with MUI and partners playing a supporting role, and it was a true testament to the spirit of the community. Not only did teachers, parents and students across the atoll come together to organize these events, they also did it to an incredible standard ensuring that every participant, from three to seventy-three years old, walked away with a better understanding of the local marine life and how to protect it.









1,835 students participated



8 festivals, each ran by a different school



245 volunteering hours and 48 teaching hours

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Snorkeling Set Donations

In 2019, the Manta Trust, with the support of Blueyou and Six Senses Laamu, donated 195 sets of snorkeling gear to the thirteen schools of Laamu Atoll. In 2021, these three stakeholders came together again to match the donation, meaning that each school now has 30 sets of snorkeling equipment which can be borrowed by children and used during outdoor learning experiences, such as the snorkel camps mentioned below. Through this project, the Manta Trust hopes to encourage and improve the opportunities for children to experience their local reefs and gain confidence in the water.

Snorkel Camps

Despite being an island nation where the vast majority of its population lives within a kilometer from the ocean, many children in the Maldives have not been taught ocean safety skills and therefore do not have the opportunity to safely explore the incredible marine habitats around them. In an effort to change this, we have been providing snorkeling lessons for school groups in Laamu for many years. In 2021, with local travel restrictions in place, the resort-based MUI team was not able to conduct these activities, but thankfully two members of Blue Marine Foundation (Blue Marine) were based in the local island of L. Gan, and took the lead on this project this year.



195 sets of snorkeling gear donated to schools



250+ school children taught how to snorkel

In September to October 2021, after receiving funding from Blueyou, the Blue Marine team partnered up with Maldivian PADI and watersports professionals to conduct snorkeling camps for eight of the thirteen schools in the atoll. These camps provided more than 250 children with snorkeling and ocean safety skills before they were taken on guided snorkeling tours of their backyard reefs using the equipment which had previously been donated. Blue Marine will continue to deliver the camps to the rest of the schools in 2022, together with the rest of the MUI team.



COMMUNITY

INTERNSHIPS

Supporting Students

It is well known that conservation is best achieved when it is locally led. In 2021, Blue Marine Foundation (Blue Marine) took on six university students as interns to assist with the resource use surveys in Laamu's community. The students traveled around all eleven inhabited islands on Laamu Atoll interviewing communities about how they use their local environment (see Resource Surveys in Our Research, page 33). The Maldives is one of the world's most gender biased societies – ranked 123rd (out of 153 nations) in terms of inequality. This includes low scores for female 'political empowerment,' and 'economic participation and opportunity'. Therefore, Blue Marine encouraged female students to apply and it was great to see that four of the six of these interns were female.

Fisheries Officers

In late 2021, in an effort to expand the data set that we have on fisheries across Laamu, seven local fisheries officer interns were hired and trained to collect fish and invertebrate data from their respective islands. Maldives fisheries expert, Ahmed Riyaz Jauharee, joined Blue Marine's team on Laamu Gan to conduct a three-day training for the officers, covering topics ranging from coral reefs and reef fisheries to fish identification and data collection. After the training, the interns returned to their islands where they collected data on the fish arriving into their communities. The fisheries officers were employed from November 2021 to February 2022, and during this time they recorded data on a total of 458 fish landings from seven different islands. The information from this survey effort will help Blue Marine understand fishing patterns in Laamu and how much biomass is being removed from the atoll.

Right: Fathimath Unaiza, the Fisheries Officer from L. Hithadhoo collecting data on a fish landing from her island. © Blue Marine Foundation

Right page: Ali Faiz entering fish landing data logs from the previous night of suverys. © Blue Marine Foundation



6 internships provided to Maldivian University students



4 female students supported



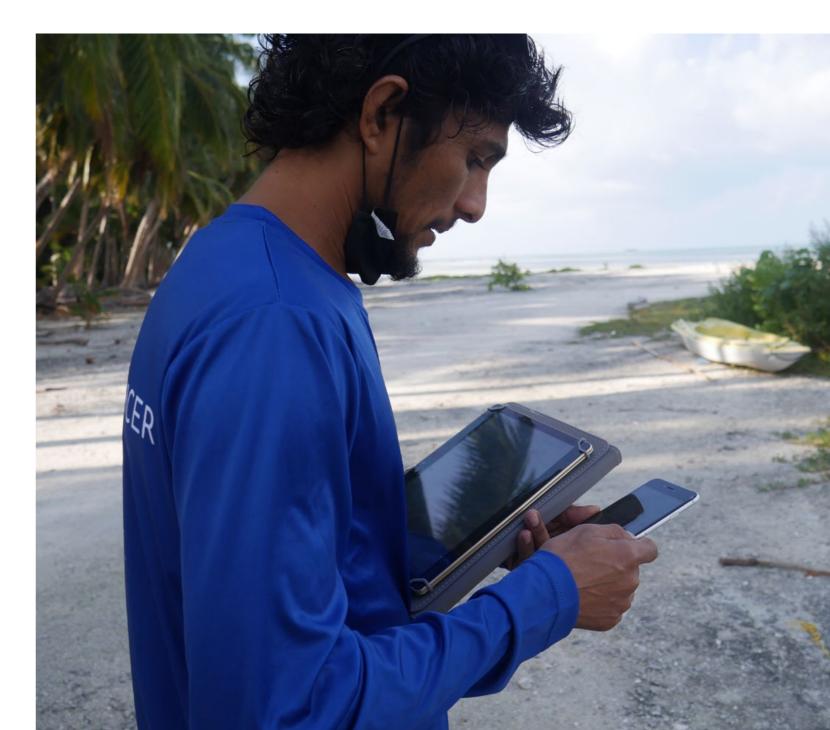


7 fisheries officers trained in fisheries management and data collection techniques

LAAMU

STORY

Ali Faiz is a thirty-year-old fisher from Laamu Dhanbidhoo who joined Blue Marine's fisheries officer program as the representative from his island. As a veteran fisher, he already knew a lot about different species of fish but Faiz said he learned new things during the training and the survey. In particular, he found information given by Riyaz A. Jauhary on the amount of bait loss during hand line fishing to be one of the most interesting. Faiz was also quite surprised to learn that corals release eggs and spawn, previously he assumed that coral reefs grow as little pieces of coral break off and attach to the reef. He said learning that corals spawn and planting corals is not necessarily effective is one of the most important things he learned. After returning to his island, Faiz started collecting data from fish landings. He reported that most of his community were keen to help and get involved, often helping to line up the fish as he measured them and asking questions.



STARTING

CONVERSATIONS

Laamu's First Fisher Forum

In the Maldives, fisheries management is not communicated well and therefore not adhered to because it is decided by the national Government with little input from fishers on the ground. Blue Marine Foundation's (Blue Marine's) vision in Laamu Atoll is to see fishers play a larger role in management decisions of the resources they depend on. With this in mind, in 2021 Blue Marine organized the first fisher forum ever held in Laamu Atoll, in partnership with Laamu Atoll Council, for local fishers to get together and discuss their perceptions of the fisheries.

32 fishers attended representing nine of the eleven inhabited islands on the atoll, and eight different types of fisheries (skipjack tuna, reef fish, groupers, bill fish, sea cucumber, lobster, octopus and invertebrates). The forum was also an opportunity for Blue Marine to share the results of the resource use surveys (read more in Our Research) conducted on all inhabited islands with over 240 fishermen in the atoll.

The common themes raised across all groups were a lack of market opportunities and the lack of youth involvement in the fisheries sector. Other issues identified include the lack of ice availability in the atoll, negative climate change impacts on the marine environment, difficulties in fishing due to an increasing shark population, the need for improved understanding of the financial opportunities for fishermen, establishment of fishermen registries at the island/ atoll level, training opportunities for youth, improved enforcement of illegal fishing activities and protection of juvenile fish. The reef fishing group raised their concern over their lack of involvement in the designation of Marine Protected Areas on the atoll and felt the decisions were very biased towards the tourism industry. Invertebrate fishers raised concern over the negative impacts from development projects on key invertebrate habitats and expressed the need for proper environmental assessments prior to commencing projects.



32 fishers attended Laamu's first ever fisher forum





LAAMU

STORY

In 2021, the Manta Trust received some amazing manta ray and megafauna submissions from the Laamu community, most of which came through their Viber group "Laamu Enmadi Vaahaka", meaning Laamu manta chat in Dhivehi. Thanks to a successful sponsored social media campaign (read more in Our Voice) the participant numbers and engagements on this group grew throughout the year. Some great messages we received from this chat in 2021 included reported sightings on feeding mobula rays, whale sharks, and a feeding manta ray pup in Kunahandhoo lagoon. After seeing the message about the manta pup, the Manta Trust team were able to jump on a resort speedboat, make it to Kunahandhoo in a matter of minutes and identify the manta which ended up being a new individual to the database.

Engaging with Local Policy Makers

As in any community, there are several stakeholder groups in Laamu who have the power to bring about positive change and therefore they are key community groups which we aim to reach through education initiatives. In 2021, Blue Marine facilitated education sessions for 40 island council members and Women's Development Committee members from Isdhoo, Gan, Fonadhoo and Hithadhoo islands. During these one-hour sessions, participants learnt more about climate change, Marine Protected Areas and sustainable fisheries, and hopefully will keep this information in mind when making future policy decisions which impact the people of Laamu.



40 policy makers attended education sessions



Left page: a fisher presents his group's discussion points during the first ever fisher forum in Laamu Atoll. © Blue Marine Foundation

Above: Shaha Hashim, Blue Marine Foundation's Maldives Project Manager concludes and education session with council members. © Blue Marine Foundation

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TOURISM

OUTREACH



Laamu tourism coalition

In 2021, Blue Marine Foundation (Blue Marine) launched the Laamu Sustainable Tourism Coalition with the view of encouraging the few tour operators in Laamu to set standards for environmentally responsible tourism. It is important to do this now, before a growth in resorts, guesthouses or tourism operators begin operating in the atoll. The coalition uses Six Senses Laamu as a model for others to look to, from which Blue Marine and the rest of the partners within MUI, encourage the other operators in the coalition to commit to improving their practices. The coalition will decide on rules for the following:

- Protecting the marine habitats within the operators iurisdiction
- Following the Green Fins Code of Conduct for Snorkeling and Diving activities
- Following best practice code of conduct for megafauna interactions with guests
- Participating and contributing to megafauna citizen science
- Following best practice reef fishing code of conducts for all fishing and fish purchases
- Prohibiting the feeding of fish and sharks and rays
- Prohibiting anchoring on reefs
- Supporting the local community to become engaged in environmentally responsible behavior
- Contributing resources and/or hosting community events
- Agreeing to not sell shells and other marine items
- Investing in marine conservation through userpay fees to access Marine Protected Areas.



Manta Sightings from Citizen Scientists

Citizen science submissions of manta ray sightings, from dive centers and tour operators in Laamu, are limited due to Six Senses Laamu being one of just two operating resorts in the atoll. However, in 2021 local island tourism resumed in the Maldives, which resulted in the reopening of Reveries dive center in Gan. The Manta Trust team gave an online training to the Reveries team about their research, how to dive sustainably with manta rays, and how to submit sightings data. Additionally, the Manta Trust have utilized the passing liveaboards that cross through Laamu Atoll during the Northeast monsoon season (December-April), to pass on Manta Trust educational materials and request sightings data, of which they received a wonderful array of manta IDs; a highlight being surface feeding mantas at Fushi Kandu (also known as 'Machines' to surfers) submitted by a surf liveaboard.



A Change of Hands

In April 2021, it was announced that the island of L. Gaadhoo, adjacent to Six Senses Laamu, had been given to a government subsidy company for agricultural use without due process. The sudden decision to hand over the management of the island to a cooperation concerned the team as it was unclear what, if any, impacts this may have on the southwestern beach of Gaadhoo. This beach is one of the most significant nesting grounds recorded in the Maldives for endangered Green sea turtles. So, to ensure everyone in the area was aware of the significance of the island during this transition phase, the Olive Ridley Project (ORP) spearheaded a campaign to raise awareness for the habitats of Gaadhoo

Campaigning for Gaadhoo

The #GreenTurtlesGaadhoo campaign took place over social media, and celebrated the biodiversity of the island including its enclosed mangroves, seagrass meadows, reef habitats, and nesting beach. In May, the ORP team called on the President of the Maldives, via a letter with partners, to designate Gaadhoo's nesting beach as a Marine Protected Area. That month, ORP also reached out to Agro National Corporation Ltd (AgroNAt), the company now overseeing Gaadhoo, to start communications about the significance of the island and were delighted to start working together for the nesting beach's protection. Following this, adhoc nesting surveys to collect data on nesting and poaching frequency on the island were resumed by ORP.

Gaadhoo's Protection

In December 2021 Gaadhoo's nesting beach, its surrounding seagrass meadows, reefs, and enclosed mangrove habitats were all designated Marine Protected Areas by the Maldives government. Following the announcement, ORP held a meeting with the Minister of Environment, Climate Change and Technology to discuss ways forward in which ORP can continue to offer support and provide technical assistance for developing management strategies for Gaadhoo's nesting beach. ORP also continues to work closely with AgroNat in Gaadhoo's protection.



23,800 people reached through the #GreenTurtlesGaadhoo social media campaign



17 stakeholders pledged their support to protect Gaadhoo

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SOCIAL

MEDIA

In 2018, the Maldives Underwater Initiative brand was formed, providing an identity and voice for our team's ever-expanding array of projects in the realms of research, education and community outreach. Since, we have witnessed the power of social media and digital communication within conservation, educating thousands far and near about the importance of marine protection and inspiring change for the good of our oceans.

MUI on Tiktok

Last year, MUI joined the ever growing community of TikTok and developed content targeted at educating and inspiring Laamu's local youths. Whilst we passed on the dance trends, we were able to shed light on many important topics such as the beauty and threats L. Gaadhoo faces and what happens during research surveys behind the scenes.

#EyesOnTheOcean

In November, the Manta Trust held a two-week social media campaign on MUI's accounts, targeting residents of Laamu Atoll. The aims were to increase awareness about manta rays and Manta Trust's research, call out for manta sightings, and to recruit and train local representatives to conduct paid interviews with fishermen about the manta rays that they encounter during fishing trips. In total the campaign reached 31,000+ accounts, almost 16,000 of which came from sponsored Facebook posts. Since the campaign, the Manta Trust received many manta ray sightings from the Laamu community in areas they had never encountered mantas themselves.



829,729 accounts reached through MUI's channels



50,000+ impressions



15,818 followers



2% increase in followers



200+
organizations
pledged their support
to the #saveoursharks
campaign



31,000+
accounts were reached in Laamu through the #EyesOnTheOcean campaign



#SaveOurSharks

In March 2021, the former Minister of Fisheries sparked widespread outrage when she implied that the Maldives may consider lifting the ban of shark fisheries to generate profit for the country. The Maldives is one of seventeen shark sanctuaries in the world and it was the second country in the world to become a shark sanctuary in 2010. One of Blue Marine Foundation's greatest achievements in 2021 was rallying an alliance, 200 organizations strong, against the lifting of the ten-year shark moratoria. The Maldives #SaveOurShark Alliance, which was generated through direct communications and a sponsored social media campaign funded by Six Senses Laamu, represented a diverse range of stakeholders with varying interest in a healthy Maldivian shark population. It was created to demonstrate widespread support for the continuation of the Maldives as a shark sanctuary. The alliance was successful, and in April 2021, the former Minister confirmed that the Maldives would not lift the shark fishing ban.

THE POWER OF

WEBINARS

MUI Webinars

With local travel restrictions still in place in the Maldives, 2021 was a time to harness the power of digital communications for our community outreach initiatives.

In February, to celebrate the International Day of Women and Girls in Science, we held a live panel with the female members of our team answering questions locals had asked both before and during the event.

To raise awareness for the protection of seagrass in the Maldives and celebrate World Seagrass Day, we hosted a webinar targeted at local marine biologists aiming to empower biologists and citizen scientists around the nation to collect data towards the Maldives National Seagrass Monitoring Network.

On World Turtle Day, May 23, 2021, the Olive Ridley Project (ORP) hosted 'Turtles in the Maldives', a webinar for the local community. During the two hour event, which was co-hosted by Six Senses Laamu, Ministry of Environment, Climate Change and Technology, and the Environment Protection Agency, over 50 different people joined through Facebook and Zoom.

In September, we organized and hosted a workshop titled 'Creatives for Conservation' with the aim of bringing together photographers, videographers, artists, writers and poets in the Maldives to show the power of communication within conservation and inspire locals in Laamu to use creative means to spread positive messages within their networks.

Finally, in November, the Maldives Resilient Reefs organized a webinar with Professor Callum Robert discussing 'The Future of Maldives Coral Reefs' talking about coral reefs, climate change and the latest IPCC report. Over 57 people joined in the webinar.

External Webinars

Our reach would not be possible without the support of external organizations who empowered us to tell our stories in communities across the globe. We were invited to speak as experts in marine conservation and sustainable tourism for several online events including webinars by Ocean Geographic, the Long Run and International Luxury Travel Market Japan.

We were also approached by a working group consisting of the German Ministry of Environment, UNEP, Consumers International and the One Planet network to use our #ProtectMaldivesSeagrass campaign as a case study within a toolkit for Biodiversity Communication. As a result of this presentation, the campaign was chosen to be represented in the final toolkit which has been published on the One Planet Network website as a free tool for anyone to use.



1,322 people reached through external webingrs



5 webinars organized by MUI



1,851 people reached through our webinars

MULIN

HIGH DEFINITION

Content Creators

In 2021, our library of high-quality content increased dramatically thanks to the support of professional photographers and videographers who donated their time, images and videos to the team. We are extremely grateful to Alex Mustard, Erin Quigly of GoAskErin, Joel and Jen Penner of Newmediasoup and Henthorne of One Blue Ocean for their support!



3 features in long-form videos



5 content creators donated assets to MUI

Big Screen Debut

In September, we welcomed Lauren Arthur, Jason Boswell and David Eastaugh, a team of videographers from South Africa who had been commissioned to produce two stories on marine conservation in the Maldives. For both stories, which are hosted on WWF and DW Akademie, MUI was chosen to be featured as the leading conservation initiative for seagrass research and protection.

Just a month later, another film crew arrived at the resort, this time from the BBC Studios' Natural History Unit, with renowned presenter Steve Backshall. The crew covered a story on our reef replenishment research and also attended a snorkeling camp session with Blue Marine Foundation in L. Gan. The footage was featured in Our Changing Planet, the first installment of the most ambitious environmental series the BBC has ever commissioned and was watched by 2.7 million viewers in the U.K. when it aired on April 24, 2022.



THE LAAMU ATOLL

HOPE SPOT

A highlight of the year came on Thursday, October 28, 2021 when Laamu Atoll was officially designated as a Hope Spot by Mission Blue, the international non-profit organization founded by Dr. Sylvia Earle. The announcement came as a result of an extensive application from Six Senses Laamu, with all MUI partners as supporting organizations, which used years worth of the team's research to highlight Laamu's unique marine ecosystems and benefits they provide.

Hope Spots are special places identified by Mission Blue's scientific council as being critical to the health of the ocean. These areas are proven to hold significant ecological, economic and cultural importance, and so hold the potential to reverse damage from negative human impacts. From its rich reefs, vast seagrass meadows and culturally significant mangroves, the research MUI presented to this council proved that Laamu Atoll ticked all the boxes for Mission Blue as an area worthy of the highest protection.

The designation called for a celebration in true Six Senses Laamu style. Members of the Local Councils, Women Development Committees and Police, as well as journalists from the capital city, were invited to the resort for the day. They enjoyed a behind the scenes tour of the property, lunch with family and friends who work at the resort, a conference hosted by MUI (during which they became the first people to hear the news from a pre-recorded video by Dr. Sylvia Earle herself) and a sunset celebration on the beach with guests and hosts. Following this, the world was told the news through extensive press and social media coverage, putting Laamu where it belongs- as an area people around the world look to with admiration and hope.







Above: Shaha Hashim, Maldives Project Manager for Blue Marine Foundation (BLUE) and Maldives Resilient Reefs receiving her Rehendhi Award. © Maldives Presidents Office

Right: Flora Thompson-Ashby Assistant Director of Sales UK, receiving the ATM award on behalf of Six Senses Laamu. © WTM

PRESS AND

AWARDS

In the Press

In the wake of the pandemic, travel experts all seem to be suggesting similar trends- that travelers care more. They care about the company they are spending money on, about the impact they may have and about the lessons they can learn whilst away. So, when focusing on writing about what's 'trending' in the travel world, MUI and our works ticked all the boxes. With 37 publications writing about our projects and the sustainability initiatives at the resort, 2021 was an incredible year for us to prove to both consumers and other organizations around the world that the tourism industry can be a force for good, working for, instead of against, nature.

Taking Home Gold

In 2021, Six Senses Laamu nominated one of the key figures in MUI for two awards, both of which she deservedly won. In September 2021, Shaha Hashim, Maldives Project Manager for Blue Marine Foundation and Maldives Resilient Reefs was awarded the Rehendhi Award, a national accolade for Maldivian women presented by President Ibrahim Mohamed Solih in the capital city of Malé. Two months later, she was named Activist of the Year in the first ever Regenerative Travel Impact Awards. Through these awards, Shaha, who has been working with Six Senses Laamu for several years, was recognized for her contributions towards protecting marine ecosystems, increasing biodiversity and providing the Maldives with greater resilience to the effects of climate change. Shaha is a voice for many who do not have the capacity or platform to speak, she works towards fair and well managed resources based upon scientific evidence.

In October 2021, it was announced that Six Senses Laamu had won global recognition at the World Travel Market (WTM) Responsible Tourism Awards for Reducing Plastic Waste in the Environment. The international judging panel were said to be impressed with the extensive range of ways in which Six Senses Laamu has worked to reduce the use of plastics in the resort, to reengineer their supply chain to eliminate plastic and implement plastic-reduction and education in the local community. After taking the gold in the regional competition for the category of Reducing Plastic Waste in the Environment, Six Senses Laamu's achievements were compared with projects across the globe, and were crowned as the winners for the global competition too.

Finally, in December 2021, the MUI team received their first ever award in their name when they were named Marine and Coastal category winners at the 2021 Skål International Sustainable Tourism Awards. This is the second Skål trophy on display at Six Senses Laamu after the resort was crowned winner of the same category in 2018. The award celebrates the team's dedication to marine conservation through their research, education and community outreach work since the last award three years ago.



37 articles were written featuring MUI and Sustainability at Six Senses Laamu



4 awards won and finalists for 3 additional awards

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SUSTAINABLE

LIVING

Permaculture

"With year-round sunshine at Six Senses Laamu, we are blessed with natural plants blooming throughout the year and the yield of 2021 certainly was much more productive then previous years" shared the Resident Permaculturist, Vadivazhagan Selvam, who looks after 60 beds of herbs and lettuces, 24 chili beds and a mushroom hut. His team also forages the island's plentiful harvest of coconuts, lemongrass, pandan leaves, ginger galangal, moringa and aloe vera. Much of this harvest is thanks to the compost generated at the resort from food waste, which in turn helps the successful yield of healthy crops.

Renewable Energy

In June 2021, Six Senses Laamu announced the launch of the first phase of generating on site solar energy within the resort. This project has long been under development and is vital in Six Senses Laamu's goal of having as minimal impact on the environment as possible.

Six Senses Laamu's Climate Action Plan has a target of generating 350 kWh generated from 1,174 marine-grade photovoltaic panels, to be installed on 18 rooftops at the Heart of the House. Thanks to the solar panels installed in 2021, the property is currently generating 80 kWh of solar energy which has produced 118,821 kWh of clean energy throughout the six months it was in operation in 2021. As a result, Six Senses Laamu saved on 6,914 liters of diesel that did not have to be burned, equivalent to return 7 flights from London to Maldives.

Zero Waste & Earth lab

Six Senses Laamu's Earth Lab serves as a place dedicated to engagement and innovation. It is a place for in-house production and practices the philosophy of Waste to Wealth. In 2021, 1,269 guests joined Earth Lab's educational activities which involves workshops such as Soap Making, Candle Upcycling and permaculture where guests develop a self-sustaining mindset and open their hearts and minds for a better future of the planet.



3,772 kg of organic greens harvested at Six Senses Laamu



27, 146 kg of compost generated at Six Senses Laamu



118,821 kWh
of power generated
from solar panels at Six
Senses Laamu



450 kg of glass recycled at the Earth Lab



94 litres of coconut oil produced at the Earth Lab



30,631 bottles of clean drinking water produced in glass bottles at Six Senses Laamu

Right: Six Senses Laamu's Organic Garden, © Wendy H



AN INITIATIVE BY



SIX SENSES

LAAMU







