

BLUE & GREEN LAAMU

The Marine Conservation & Sustainability
Newsletter by the Maldives Underwater Initiative

JULY 2022



MALDIVES UNDERWATER INITIATIVE by Six Senses Laamu

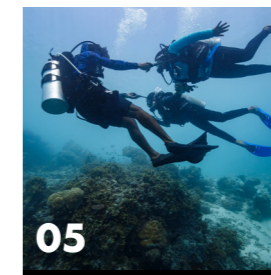
This shot by Marteyne van Well, Six Senses Regional General Manager, was ranked in the top fifteen of last year's Six Senses Laamu's Underwater Photographer of the Year Competition.



This shot by Jasmine Corbett, Project Manager for Manta Trust, was taken at Hithadhoo Corner also known as Manta Point.

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THE BIG STUFF



301 megafauna surveys were conducted by the MUI and DBD teams



301 sharks were sighted



115 rays were sighted



204 turtles were sighted

OUR EDUCATION



1,347 moments of education were shared with guests



181 moments of education were shared with hosts



79 moments of education were shared with the community

SIX SENSES CONSERVATION

PADI WOMEN'S DIVE DAY

On July 16 every year, PADI Women's Dive Day is celebrated all around the world. At Six Senses Laamu, we celebrated all the amazing women in diving with some wonderful dives and smiles!

14 female hosts from different departments came together and enjoyed a beautiful morning dive at one of our inner reefs, Tingadu Faru. The divers were delighted to see colorful corals and some megafauna!



In the afternoon, the resort welcomed 18 girls and women from islands across the Laamu Atoll. This included school students, teachers, Women Development Committee members, and local council members. They first joined our Sustainability and Community Outreach Manager, Adam for a sustainability tour to learn about Six Senses Laamu's conservation initiatives and sustainability practices.



Following this, Deep Blue Divers and MUI then took these ladies on their first ever scuba dive! This was a very special and exciting experience for all participants, who were presented with certificates at the end. Some of them even expressed interest in getting certified!

With happy vibes all around, PADI Women's Dive Day was a huge success here at Six Senses Laamu! 🌊



SHARK AWARENESS DAY

July 14 marks an important day for MUI, Shark Awareness Day! Sharks are vital to the oceans; they are considered a keystone species which means they have a disproportionate effect on the whole ecosystem even though their physical numbers are relatively small. However, even though they are known to be such an important part of our oceans, they still suffer from an image problem. Therefore, Shark Awareness Day is of vital importance to help more people understand why and how we can protect these species.

A special presentation was put on at the arrival jetty for guests and hosts to learn about sharks, while throughout the day the MUI team had launched a Kahoot quiz for all hosts to get involved with and test their shark knowledge. It was a hugely successful day with many people ending the day with a better understanding of these misunderstood and vital species. The team hopes that all the participants walked away inspired, aware, and determined to make a change. 🌊



29,163 people reached through infographic on social media with MUI



12 hosts joined online for the Shark Kahoot Quiz



SEAGRASS SURVEYS MORE IN-DEPTH THAN EVER BEFORE!

July was an incredibly successful month regarding MUI's annual seagrass surveys. This year marks 5 years of seagrass protection around Olhuveli island by Six Senses Laamu, and the MUI team is eager to find out what ecosystem benefits this habitat protection brings. MUI has been monitoring the seagrass meadows within Six Senses Laamu's lagoon since 2019. The monitoring involves in-depth surveys on not only the seagrass itself, but also the investigation of what animals are utilising the meadows around the resort.

MUI is also extremely excited to have had their first Maldives National University (MNU) student come on island to conduct these surveys as part of their Bachelor's degree. Athif, MNU student and MUI intern joined the team for one month and together with MUI's second intern, Mufliha, and research coordinator, Miriam, surveyed Six Senses Laamu's seagrass more extensively than ever before. Data was collected at all seagrass meadows surrounding Six Senses Laamu which involves taking information on composition, species density, and canopy height. This is crucial data to understand the diversity of seagrass as well as how much the meadows have grown since first protecting them in 2017. Other types of data collected include amount of epiphyte growth and algae as well as the sediment type to better understand the health of the meadow and the preference of substrate type for specific seagrass species. The depth and GPS location is also recorded in order to accurately map the meadows and analyse spatial distributions and variety of seagrass around the island. We also wanted to know the further ecological benefits of the seagrass meadows,



particularly to fish populations. To study this, three type of surveys were used; diversity and abundance transects, diversity timed swims and Remote Underwater Video (RUV).

Almost 23 hours were spent on surveys and a total of 282 quadrat data points were collected in July alone making it a total of 432 quadrat data points (adding onto data collected in May 2022). Only a few surveys are still needed to complete this year's seagrass surveys before Athif will then analyse the data and write up his thesis on the results. MUI is extremely excited for the outcomes of this year's survey as the information will be used not only to understand how dynamic the meadows are but also to understand the ecosystem services seagrass provide. 🌊



23 hours of in water seagrass surveys



432 quadrat data points collected in total



22 coral colonies sampled for gamete development

THE MANTA TRUST



RETURN OF PUCK AFTER 9 YEARS!

The Manta Trust Laamu team were excited to encounter Puck the manta after 9 years in Laamu Atoll! Puck (MV-MA-2908) is an adult male, who was first encountered in Laamu in 2012, with his last sighting in the atoll in 2013. In 2021 and early 2022 he was resighted in Meemu atoll (2 atolls north of Laamu), so it was very exciting to document his travels back to Laamu after so long.

Generally, Laamu hosts a small, but highly residential population of manta rays - 138 to be precise! The topography of Laamu Atoll differs from that of the more northern atolls, with only six channels that cut through the outer reef. While Laamu Atoll experiences strong oceanic currents, water movement through the Atoll is restricted, and therefore manta ray migration is less prominent than in other atolls.

This means the Manta Trust Laamu team tend to see the same individuals over and over and can easily track changes such as growth and reproduction.



1 manta returned after 9 years



4 remote underwater photography deployments with 260 hours recording time

However, there are some individuals that are more mysterious, and have only been encountered a few times. This suggests that perhaps the Laamu mantas are more migratory than the team once thought! In the Northeast Monsoon (November-April) the manta sightings tend to be lower in Laamu, so although it is likely that they are utilizing unknown sites on the Western edge of the atoll, there is also a chance that they are utilizing sites in Thaa and Meemu (the two atolls north of Laamu) during this time. Only more research will find out! 🌿

2021 ANNUAL RESEARCH REPORT

The Manta Trust Laamu team are delighted to share their 2021 Annual Research Report, covering all their manta ray research in Laamu Atoll throughout the year.

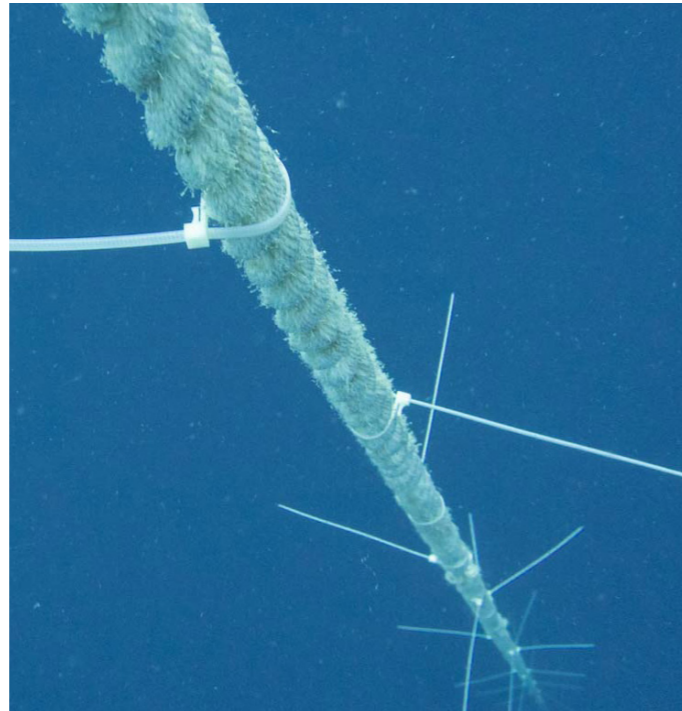
They have analyzed sighting trends, environmental influences, population demographics, migration and residency, pregnancies and courtship, and sub-lethal injuries; essentially everything you could ever need to know about the Laamu mantas! To read the full report click [the following link](#). Happy reading! 🌿



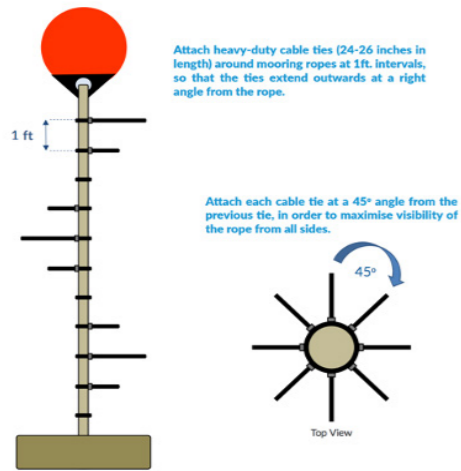
ANTI-ENTANGLEMENT TECHNIQUES

The Manta Trust Laamu team have resumed their efforts to make every mooring line in Laamu safe for manta rays, by installing anti-entanglement measures. By attaching cable ties in a spiral up the mooring line, the line is more visible to megafauna, so they can spot and avoid it more easily.

Unfortunately, with the increasing number of mooring lines installed in the Maldives, the cases of manta ray entanglement in mooring lines has become more common. At Six Senses Laamu, all boat moorings are installed as per Manta Trust guidelines, and the Laamu team have been working to add cable ties to mooring lines of nearby islands Hithadhoo and



INSTALLMENT DIAGRAMS



Maamendhoo, with the aim of adapting every mooring line in the atoll! The team urges all persons and organizations who have their own moorings to click the following link for more information and to read about the entanglement mitigation measures. 🌊

To learn more about mooring line-entanglements click [this link](#).



40 manta rays encountered



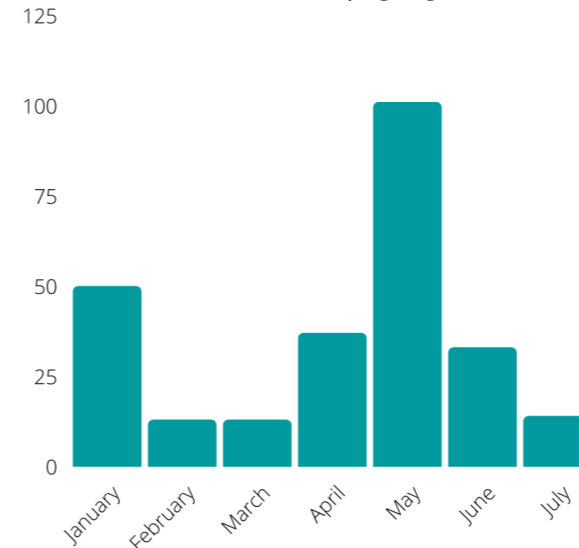
8 manta rays measured



Photo taken by Jasmine Corbett at Manta Point

SIGHTING TRENDS SHIFTING

Confirmed Manta Ray Sightings 2022



2022 has so far, presented some unusual manta ray sighting patterns for the Manta Trust Laamu team. May to June are typically “peak months” for manta ray sightings, as this couple of months marks the start of the Southwest Monsoon, whilst January to April present typically low sightings.

This year, the month of May presented very high sightings, following the usual trend, however, June was very quiet for manta ray sightings, without any increase in sightings following in July. Interestingly, January also presented unusually high sightings, which seemed to be a prolonged peak sighting period continuing from 2021, which usually finishes by November. With the changing climate, and fluctuations in normal weather patterns, it is not surprising that manta ray seasonality may be impacted, as their presence or absence at a site is highly influenced by weather patterns. The team will continue to monitor any changes in these trends throughout the rest of the year, and the years to follow, to understand whether new peak seasons will be established. 🌊



BLUE MARINE FOUNDATION

BLUE MARINE FOUNDATION

LAAMASEELU MASVERIYAA UPDATE

Following an extensive socio-ecological assessment of the Laamaseelu Masveriyaa program earlier this year, the team have been making substantial changes to the program operation. The Laamaseelu Masveriyaa program was established by Blue Marine Foundation (Blue Marine) in partnership with Six Senses Laamu in February 2020 to ensure that the resort sources sustainably caught local seafood through supporting local fisher livelihoods.

Despite being heavily impacted by the global pandemic, the report confirmed that Six Senses Laamu had not sourced any protected species. However, a number of areas were identified where the program could improve. In particular, inconsistent data collection was found to be hindering the ability of analyses to identify meaningful trends in landings data.

Over the past 4 months, the team has worked to improve the Laamaseelu Masveriyaa data collection process. This has involved conducting multiple training sessions with relevant

resort staff, in addition to re-structuring the data collection sheets and developing an effective fisher incentivization model.

July marked the second month of the new program structure, and the team are happy to report that all fishers who sold fish to Six Senses Laamu during the month were able to fully complete the data landing sheet. The team now have complete records of the type and size of all fish species being sourced by the resort, as well as where exactly in Laamu these fish have been caught. These data will be vital when informing future program adaptive management.

The Laamaseelu Masveriyaa program modifications will continue through-out 2022, with the team currently recruiting a new cohort of committed local fishers into the program. Early signs suggest that the future looks bright for the Laamaseelu Masveriyaa program and with that, the sustainability of resort reef fisheries in Laamu.

JUDE'S VISIT TO MALDIVES

This month, the Maldives field team welcomed Blue Marine's Senior Project Manager, Jude Brown, to Laamu. Jude has been overseeing the Maldives project team since April 2022, but this was her first field visit to see the work of the team in person.

During Jude's visit, the team conducted a walk-through of the Laamaseelu Masveriyaa fisher program. This provided a valuable opportunity to discuss the operational effectiveness of the program with resort staff and gain feedback to inform future program adaptive management.



4 departments engaged in the program

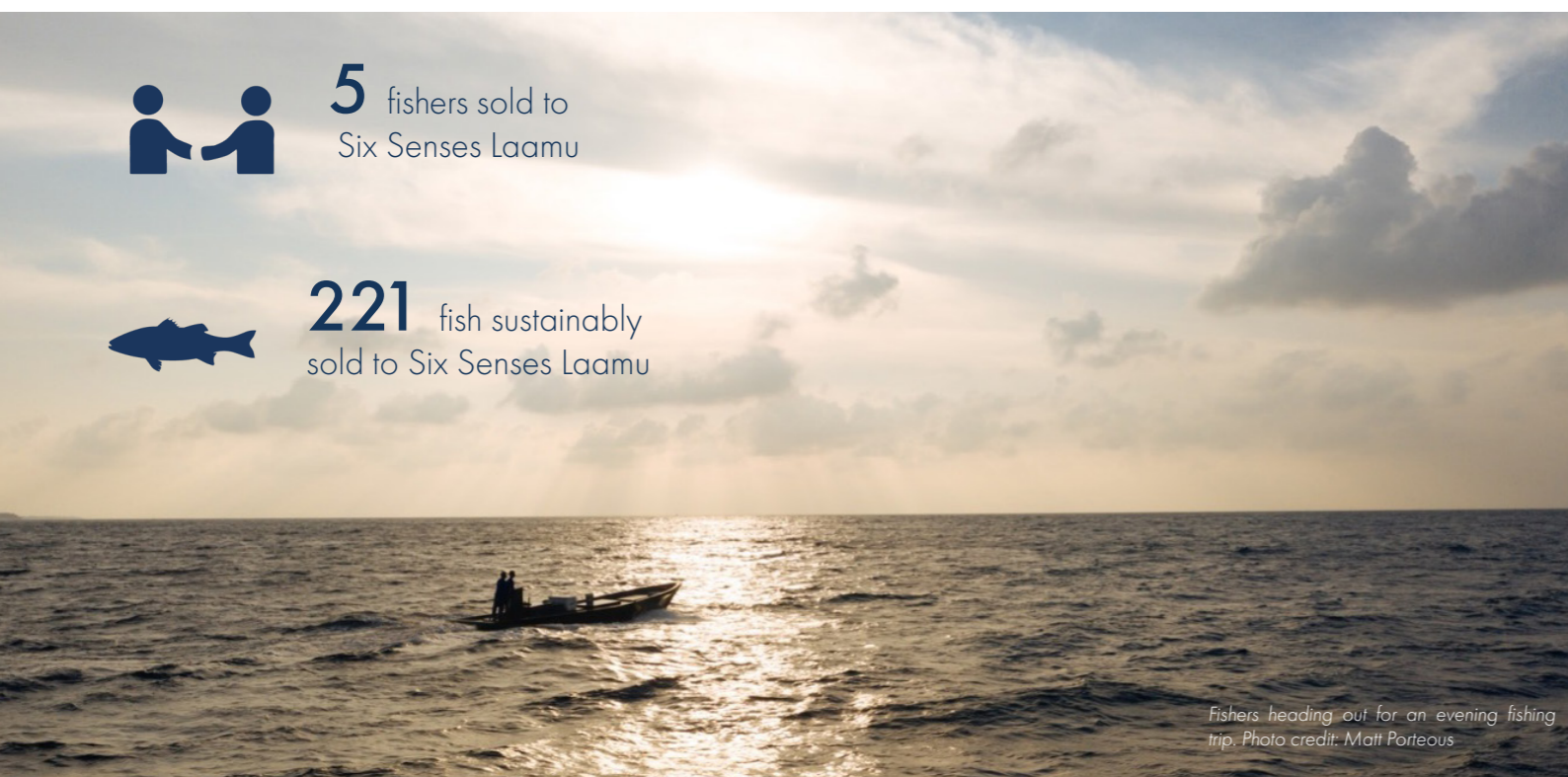
CATCH OF THE MONTH

This month, the team noticed that fishers in the Laamaseelu Masveriyaa program were catching a large number of Wahoo (*Acanthocybium solandri*). Wahoo are a semi-pelagic fish which are primarily caught by trolling, with some individuals reaching lengths of up to 250cm.

The seasonality of wahoo in Laamu is not well-documented, so the team turned to experienced fishers for their opinions on the large numbers of wahoo landed this month.



11 guest fishing trips surveyed



5 fishers sold to Six Senses Laamu

221 fish sustainably sold to Six Senses Laamu

Fishers heading out for an evening fishing trip. Photo credit: Matt Porteous



OLIVE RIDLEY
PROJECT

THE OLIVE RIDLEY PROJECT

RED LIGHTS, CAMERA & WE WAIT FOR ACTION

After a very successful nesting season, we geared up for the hatching season. New NestWatch volunteers have been trained and are eagerly monitoring the nest from 7pm till 1am.

During the hatching season, our guests can sign up for a once in a lifetime experience of seeing turtle hatchlings begin their life by crawling to the ocean. However, we cannot guarantee guests will see it, since the hatchlings will not be kept once emerged, so that we give them the best chance of survival possible. As nature is unpredictable, the duration of how long it takes between us spotting the nest hatching, and the babies disappearing into the ocean is unpredictable. However, thanks to our team of volunteers, we give our guests the best chance to share this magical moment.

Always remember, to respect the wildlife and enjoy this wonder of nature, remember these key points of the Turtle Hatching Protocol:

- Keeping it dark, do not use white lights and flash photography, our team will greet guests with red lights
- Keeping as quiet as possible
- No touching or handling of turtles
- Watch where you stand
- Stay 3 m away, backing up if the turtle crawls towards you

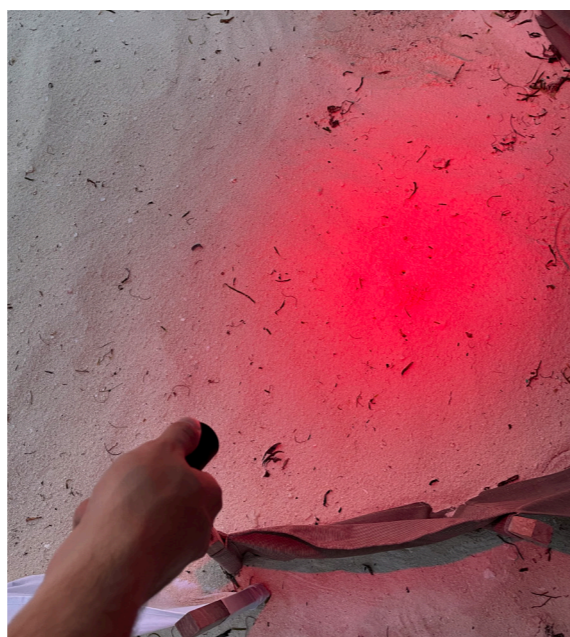
With our assistance in making sure all turtles that emerge from the nest make it to the sea, we hope to improve the chances of turtles reaching adulthood, which currently globally is 1 out of 1000. 🌊



20 new NestWatch
volunteers trained



35 hours of
NestWatch



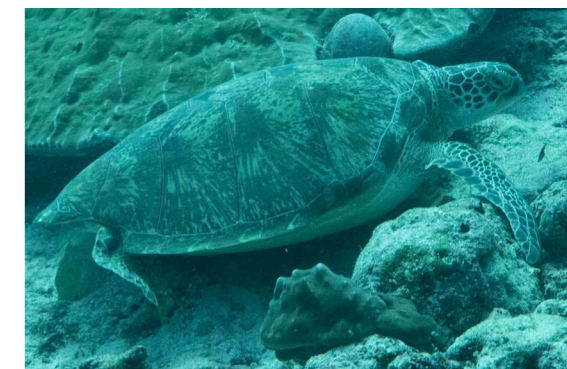
TURTLE OF THE MONTH SHARKBITE

GR1008

Sharkbite is a female green sea turtle who was first sighted in 2019. She is seen quite often relaxing at Hithadhoo corner, one of our regular and significant dive sites. She is a living proof of how resilient turtles are. Although her name is Sharkbite we cannot say for certain she was bitten by a shark, however, turtles do use their carapace like a shield to protect themselves from predators.

Only 1 out of 1000 hatchlings survive to adulthood and our sharkbite is a survivor. Turtles face multiple threats from the moment they emerge from the nest, including predators such as crabs, birds and the big fish as well as sharks. However, humans are still the biggest threats to turtles. That includes habitat destruction, the pet trade, plastic pollution and in some places, turtle meat consumption.

Despite all of these threats, our Sharkbite survived, and we hope she will thrive on our reefs. 🌊



4 new turtles
identified in Laamu



11 false crawls

EROSION ISSUES WITH GAADHOO PROTECTED BEACH

During our recent survey visit to Gaadhoo island, we found that the beach, recently designated as a Marine Protected Area, has significantly eroded.

During recent storms the sea surges had gone deep into the vegetation and all of the existing nests are feared to be completely washed out. Due to the surges, a massive part of the beach has completely eroded leaving little space for the turtles to nest. We also found lots of plastic that had been washed up into the vegetation by the surges.

Our surveys will help us understand the changes within the beach dynamics and how it will impact the nesting of the turtles, and we are continuing to work with the island owners to make sure this area stays an important location for sea turtles. 🌊

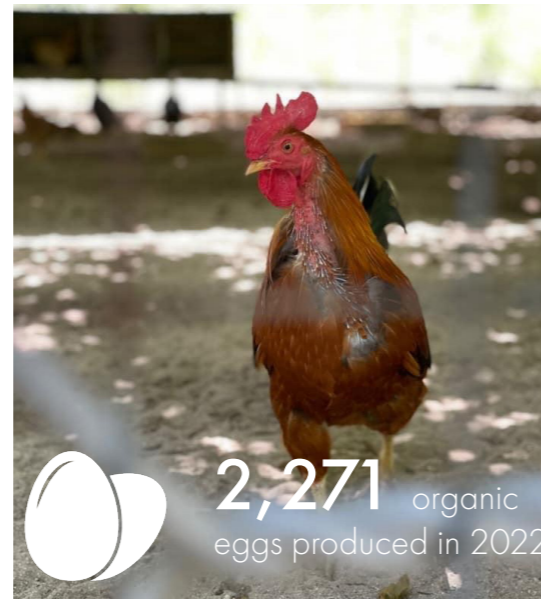


OUR HOME

OVERVIEW OF THE BIANNUAL EARTH LAB PRODUCTION

Earth Lab serves as a place dedicated to engagement and innovation. It plays an important role to inspire and educate the guests, fellow hosts and community members in practicing sustainable and self-sufficient living through the waste to wealth production, farming and educational workshops.

In 2022, over a period of 6 months, Earth Lab team increased its compost production by 8 percent and the organic garden production by 12 percent and the organic egg production by 44 percent, in comparison to the last year's annual production. The educational sessions for guests have increased by 12 percent after launching the Earth Lab Discovery experiences and by resuming the local island experiences. Earth Lab team is incredibly delighted with the biannual productions and is looking forward for another successful six months ahead. 🌱



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