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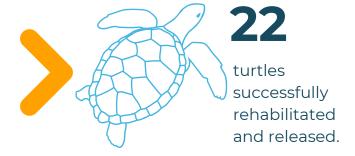
ATOLL MARINE CENTRE ANNUAL REPORT 2024

ANNUAL OVERVIEW

A BRIEF GLANCE AT 2024:

23 TURTLES ADMITTED

- 5 adults (including 2 sub-adults)
- 3 juveniles
- 15 hatchlings (3 requiring salt water therapy).





101 **INTERNATIONAL VOLUNTEERS**

hosted from 18 different countries around the globe.

1.925 **RESORT GUEST VISITORS**

from 5+ different resorts.



PARLEY BAGS SENT TO MALÉ



Continuing our partnership with Parley Maldives, an estimated 2,500 kg of plastic was sent to be recycled.

4 GRANT PROJECTS COMPLETED!

from The Asia Foundation, Allied Insurance Company Maldives, the Oceanic Society, and GEF/ UNDP for projects relating to Climate Change and Conservation Awareness and Plastic Pollution.

SEA TURTLE NESTS

excavated for research purposes under permission from the **Envrionmental Protection Agency**



RESORTS

trained in sea turtle rescue and response procedures

LIVESTREAMING **SESSIONS**

with international schools.

AWARENESS SESSIONS

conducted in local schools.

NEW RESORT PARTNERSHIPS!



We stationed marine biologists at two new resorts: Six Senses Kanuhura (Lhaviyani) and Amilla Maldives (Baa).

SEPARATE CLEAN-UP EFFORTS



including community beach cleans, volunteer beach cleans, snorkel cleanups and beach clean surveys.

ABOUT US

Atoll Marine Conservation Centre (AMC) is a sea turtle rehabilitation and marine conservation facility, founded in 2012 by the locally managed non-governmental organisation (NGO) Naifaru Juvenile. Based in Lh. Naifaru, AMC was originally established in response to local residents keeping sea turtle hatchlings as pets.

This activity results in sea turtle hatchlings being kept in unsuitable conditions such as small containers or freshwater, and fed inappropriate diets that cause nutrient deficiencies, health complications, and deformities. In some cases, mishandling of hatchlings has resulted in severe spinal and carapace damage, which dramatically decreases the life expectancy of a turtle, often preventing them from reaching sexual maturity. Although this practice was banned in 2016 and is far less common today, it still persists in isolated cases.



Above: Hawksbill sea turtle after taking a breath at the surface.

Over time, our focus has shifted from caring mostly for hatchlings, to rescuing and rehabilitating sea turtles of all ages. Most of the turtles we admit were entanglement in marine debris or ghost gear, often suffering serious injuries such as missing flippers or buoyancy syndrome. With the dedicated care of our trained marine biologists and licensed veterinarian, we provide medical treatment and long-term rehabilitation, with the ultimate goal of releasing recovered turtles back into the wild.

As the only sea turtle rehabilitation centre based on a local island in the Maldives, we are situated in a unique position to conduct meaningful community outreach and awareness raising, which has become a central part of our work. We take a holistic approach to marine conservation by tackling issues like plastic pollution and improper waste management, as well as carrying out coral restoration.

OUR GOALS

- SEA TURTLE RESCUE & REHABILITATION
- 2 COMMUNITY OUTREACH
- 3 CORAL RESTORATION
- PROTECTING NAIFARU & SURROUNDINGS

MEET THE AMC TEAM



Mohamed Ahmed Fulhu Co-Founder

2024 has been a great year for AMC, and it would not have been possible without it's incredible staff, who embody AMC's mission and values, sustaining the day-to-day operations while also driving new projects and innovative ideas forward.

We are deeply grateful to all those who contributed their time, energy, and expertise throughout 2024, making everything in this report possible.

TEAM LEADS & VETERINARIANS



Karen Angle Marine Biologist & Acting Marine Team Lead February-August 2024



Bennath Chillingworth Marine Team Lead Aug 2024 - Present



Gaby Boka AMC Veterinarian Jul 2023-May 2024



Daniela Caballero AMC Veterinarian May 2024 - Present

MARINE BIOLOGISTS



Lorraine Aldridge Marine Biologist Dec 2023 - Dec 2024



Dana Maestri Resort MB Amilla Maldives Mar - May 2024



Abdulla Resort MB Amilla Maldives

Jun 2024 - Present

Mariyam Rafha



Adam Athif Mohamed Sea Turtle Biologist Six Senses Kanuhura Apr 2024 - Present

MEET THE AMC TEAM

MARINE BIOLOGY INTERNS & ASSISTANTS



Rasheedath Anum

Marine Biology
Intern

Aug 2022 - Present



Dua Abdullah

Marine Biology

Assistant

October 2022
March 2024



Audha Ibrahim

Marine Biology

Assistant

Aug 2023 - Jul

2024



Mohamed Naisam
Nashid
Marine Biology
Intern
Aug - September 2024



Aishath Janaan

Marine Biology
Intern

Sept 2024-Present



Erin Doherty

Marine Biologist

Assistant

Oct 2024 - Present



Above: Staff photo, November 2024.



Above: Staff photo, June 2024.

O5 ATOLL MARINE CENTRE ANNUAL REPORT 2024

Centre Expansion

Lots of exciting changes happened to our rehabilitation centre in 2024. From expanding our capacity with a brand-new turtle tank, to defining the centre's boundaries with striking new blue wall—these improvements have strengthened our ability to care for rescued sea turtles while creating a more welcoming space for visitors.

New Tank Construction

In January 2024, we began demolishing older tanks to make way for T5 (Tank 5)—now one of the largest tanks at our centre. This new tanks features a continuous seawater circulation system, ensuring our patients always have access to fresh sea water, pumped directly from the ocean, rather than needing to manually carry out daily water changes for each each tank.



Above: Demolition of an older tank to make space for T5.

Designed for versatility, T5 can be divided into three smaller sections, increasing our rehabilitation capacity to eight sea turtles at a time!



Above: Construction of T5 in progress during January 2024.

By April, T5 was fully constructed, painted, and ready to welcome its first patient—Redhan, who thrived with the additional space to swim and dive during her recovery.

Expanding both the number and size of our tanks not only allows us to rescue and rehabilitate more sea turtles, but also ensures that each turtle has more space within their individual tank or designated section. This provides a more comfortable environment for recovery.



Above: T5 complete and in use by its first ever patient—Redhan in April 2024.

Looking ahead, we plan to undertake similar upgrades by constructing another larger tank with an updated water circulation system, similar to T5.

This will enable us to further expand our intake capacity and improve conditions for our rescued sea turtles.

Centre Wall

In July 2024, we took another big step towards expanding our centre—a crucial development that will allow for the construction of additional tanks and further increase in our rehabilitation capacity. We began building a new outer wall along our expanded border!

This new enclosure provides greater security and privacy for the turtles in our care, creating a safer environment for their rehabilitation.







Above: AMC's outer wall under construction, July-August 2024.

By October, the wall was complete and painted, creating additional space within the centre. The newly enclosed area now has a more professional feel, replacing the previous fencing and improving the centre's overall aesthetic.

We are now looking forward to having the walls decorated by a local artist—a project we're excited to hopefully bring to life in 2025.





Above: AMC's outer wall complete, painted and sign-posted with opening hours, October 2024.



Above: New AMC information display boards installed around the centre, October 2024.

Inside, the centre also received a revamp, with the inner walls and tanks freshly painted, giving the space a vibrant, polished, and refreshed look. Additionally, we added joalies (traditional Maldivian swings), hung from the centre's tree, providing a relaxing space for visitors and volunteers to unwind. We also installed informational display boards around the centre, offering visitors engaging insights into our conservation efforts and the threats facing sea turtles.



Above: New AMC information display boards installed around the centre, October 2024.

With so many exciting transformations, our centre was looking remarkably different by the end of 2024 compared to the start of the year. We can't wait to see what further improvements that 2025 will bring as our rehabilitation facility continues to grow!

Veterinary Clinic Updates

2024 marked significant progress for our veterinary clinic. Key achievements include:

Digital X-Ray Machine



Above: Ummeedhu during her admission x-rays.

Acquiring a digital X-ray machine has revolutionized our patient care, enabling onsite radiographs.

All long-term patients receive comprehensive studies, and we plan quarterly evaluations for those undergoing buoyancy syndrome treatment. This machine has benefited 13 sea turtles, two pet birds, two pet cats, and one brown nobby.



Above: Kanbili during his pre-release X-rays.

Multi-Parameter Monitor

This machine is used during anaesthesia and for monitoring critical patients, especially birds and mammals.



Above: the multi-parameter setted up on our surgery table

Microscope Upgrade

Our new microscope provides better image quality and can connect to a screen for group learning. Having two functional microscopes allows simultaneous evaluation of slides during veterinary volunteer programs.



Above: AMC's new microscope.

Infusion Pump

An infusion pump is a valuable tool for small patients, ensuring precise fluid delivery. Critical cats were among the first to benefit.



Above: New infusion pump.

Additional Equipment

An upgraded scale makes weighing patients easier, and a donated refractometer facilitates measuring total plasma proteins and urine specific gravity. We also received a new surgery kit.

The generosity of our supporters enabled us to reach these huge milestones on our way to expand the veterinary clinic at our rescue centre.

Since the installation of this new equipment, we've seen the immense impact it has had on our ability to provide timely and accurate medical care for our patients, both sea turtles and domestic pets—like cats and birds—alike.

Cat Spay & Neuter Program

In 2024, AMC's Veterinarian at the Atoll Vet Clinic, continued implementing our successful cat spay and neuter program!

This year, a total of 65 cats were sterilized, including 36 males and 29 females.

Of these:

- 45 were either owned cats or sent by a cat rescue NGO.
- One was a stray cat from Naifaru.
- 19 were from Siyam World Resort.

From the Siyam World Resort cats:

- Two were sent to our facilities.
- The remaining 17 sterilizations (3 females and 14 males) were performed onsite in May by AMC's Veterinarian, assisted by a Marine Biology Intern, using the resort's new animal surgery room.



Above: female cat being connected to the monitoring equipment prior surgery.

Rescues Beyond Sea Turtles



Above: brown noddy with severe left wing droop.

In early September, Athif, our Sea Turtle Biologist at Six Senses Kanuhura, rescued a brown lesser noddy with a severe wing droop. The bird was transferred to our facility the next day for examination, treatment, and rehabilitation under permit EPA/2024/PS-SP/14.

While no fractures or other wing abnormalities were found, the bird displayed severe neurological symptoms. Unfortunately, it passed away within hours. A post-mortem revealed a cranioencephalic injury with severe haemorrhage, likely caused by a collision with a sharp object.

Atoll Volunteers

Our Marine Conservation Volunteering Program, in partnership with Atoll Volunteers, offers hands-on experience in sea turtle husbandry and rehabilitation. Our international volunteers are vital to sustaining our centre, not only by volunteering their time to help carry out daily sea turtle husbandry tasks, but their program fee also provides critical support for our operational costs.

We are deeply grateful for the dedication of our volunteers, whose contributions help fulfil our mission.



Above: Volunteers deep-cleaning a tank during centre duties.

This year, we hosted a total of 101 volunteers from 18 different countries! The majority of volunteers were from the U.K, closely followed by the U.S and Australia.

We were also thrilled to host volunteers from multiple countries across Europe (Fig. 1).



Above: Volunteer and Marine Biology Intern, Janaan, scrubbing one of our turtle patient's carapaces during weigh day!

Beyond Europe, our volunteer family expanded to include individuals from Canada, Brazil, the Dominican Republic, Singapore, and South Africa.

Looking ahead, we hope to broaden our global reach and welcome more diverse representation from around the world.

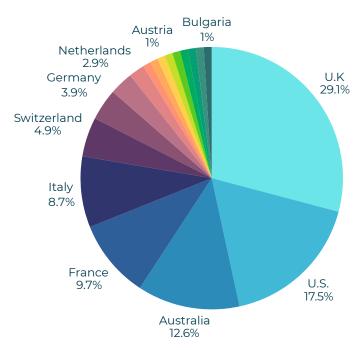


Figure 1. Volunteer's nationalities in 2024

Volunteer Testimonial

"The staff at AMC are some of the most passionate and inspiring people, whose genuine love for their work is contagious and makes volunteering so special.

For 3 weeks, I was able to contribute to Tom, Cora, Olga, Hope, and Loabi's rehabilitation and care. I felt so thankful to look after these turtles, as well as meet other people from all over the world and experience beautiful excursions that showed me more of what the Maldives have to offer.

Thank you, AMC, for everything. I am so grateful for all the memories I made! For anyone considering joining the programme, I can't recommend it enough. I promise you will enjoy every minute, as I have done" - Lucy Phillips, volunteer from the U.K.



Above: Volunteers filling Hope's seagrass tunnel with fresh seagrass collected from the ocean.

Family Packages

This year, in collaboration with Atoll Volunteers, AMC continued our successful partnership with local guesthouse 'One the Island', to host our popular family packages! These packages offer an activity-filled holiday for the entire family—fun and rewarding for both kids and adults.

Parents and children can volunteer parttime at AMC while also enjoying exciting excursions, such as snorkelling and experiencing the unique Maldivian lifestyle. We believe these experiences leave lasting impressions, create lifelong memories for our young volunteers and foster a passion for protecting our ocean.



Above: Family volunteer receiving their turtle adoption certificate from Marine Biologist, Karen.

In 2024, we were delighted to welcome 8 families from countries such as Switzerland, the United Kingdom, the United States, Italy, Singapore, and Australia, for an unforgettable holiday that prioritises giving back to the environment and inspiring young minds.

Veterinary Student Program

In 2024, we had the pleasure of welcoming six veterinary medicine students from the United Kingdom, the Netherlands, Belgium, Bulgaria, and Australia. Most of them were in the final stages of their studies.

In addition to their daily responsibilities in the rehabilitation centre, the students had the unique opportunity to shadow our Veterinarian during a variety of medical procedures. They assisted with sample collection, processing, analysis; participated in cat spay and neuter surgeries; and were actively involved in the admission process of new rescues, as well as in the routine checkups of our current turtle patients. Their learning experience was further enriched through a series of lectures covering topics such as sea turtle medicine, haematology, diagnostic imaging, and more.



Above: Dr. Daniela getting ready to tube feed Loabi with the assistance of a veterinary student.

New Partnerships

We are thrilled to have partnered with two new resorts in 2024, stationing a Marine Biologist at Amilla Maldives in Baa Atoll, and a Sea Turtle Biologist at Six Senses Kanuhura in Lhaviyani Atoll. These partnerships are crucial for financially supporting the work we do here in Naifaru, but also in helping us expand our reach across the Maldives. It allows us to share our story with more international visitors and contribute further sustainability efforts within the Maldives' luxury tourism industry.

Partnership with Six Senses Kanuhura

In April 2024, we welcomed Athif, AMC's Sea Turtle Biologist based at Six Senses Kanuhura. This partnership primarily focuses on sea turtle research and guest engagement activities such as guided snorkels and educational presentations about turtles and other marine life.



Above: Athif, AMC's Sea Turtle Biologist conducting a nest excavation at our partner resort, Six Senses Kanuhura.

MOU with the Olive Ridley Project

Athif also collaborates closely with the Olive Ridley Project (ORP), which leads the national turtle photo sea identification and nesting database in the Maldives. While ORP manages the central database, Athif is responsible for collecting, organizing, and submitting turtle photo ID data and nesting reports from Lhaviyani Atoll, contributing directly to their ongoing research, monitoring, and conservation efforts. His role ensures that sightings and nesting activity from the region are properly documented, helping to build a clearer picture of turtle populations and movement patterns across the Maldives.



Above: Athif, with the former turtle biologist, Maria from the Olive Ridley Project

Research Expedition with ORP and the EPA



Above: Athif, releasing back a hawksbill sea turtle

As part of this collaboration with ORP, Athif represented AMC while he joined the Sea Turtle Research Expedition, organized by the Environmental Protection Agency (EPA) in collaboration with ORP.

Samples from at least six hawksbill sea turtles at each of the four visited atolls were collected. This involved freediving to capture and gather tissue and microbial samples, along with collecting data on the benthic habitats where the turtles were located.

The research aimed to enhance our understanding of sea turtle health and population genetics, contributing valuable data to support ongoing conservation efforts.

Veterinary Training at Olive Ridley Project

As part of our ongoing partnership with the Olive Ridley Project, from July 26th to August 3rd, Dr. Daniela attended ORP's Rehabilitation Facility at Coco Palm Dhuni Kolhu for training.

During her time there, she participated in patient husbandry, as well as check-ups and treatments. She also received online lectures from Dr. Poliak on anaesthesia, analgesia, physical examination, buoyancy syndrome, and therapeutics. Additionally, she underwent hands-on training with Dr. Mariana and nurse Tristan on diet management, radiographs, blood work, and other related topics.



Above: Tristan, Dr. Daniela and Dr. Mariana at the ORP Marine Turtle Rescue Centre in Baa Atoll

Partnership with Amilla Maldives

In June 2024, we welcomed Rafha to the team as AMC's Marine Biologist based at Amilla Maldives in Baa Atoll, Rafha leads sea turtle population research through photo-ID and nesting studies, while also monitoring other marine megafauna in the area. Her work is especially significant given Amilla's proximity to Hanifaru Bay, located within the Baa Atoll UNESCO Biosphere Reserve—a designation awarded in 2011 in recognition of the area's outstanding biodiversity and the need for its protection through sustainable management. In addition to her marine research, Rafha also conducts terrestrial biodiversity monitoring, including surveys of the white-tailed tropicbird, and complements all activities with guest engagement and education.

Read more about the work of our Resort Marine Biologists on pages 68-87.



Above: Rafha, AMC's Marine Biologist carrying out a nest excavation at our partner resort, Amilla Maldives.

Grants Completed

The Asia Foundation's CSO Strengthening Project

At the end of 2023, AMC was awarded a grant of USD 6,000 from The Asia Foundation in Maldives through their CSO Strengthening Project. With this support, we successfully implemented the 'Lhaviyani Atoll Climate Change Awareness Project', which ran from January - August 2024 and had two main components:

- 1. The Climate Activists Program a series of climate change awareness sessions conducted in local schools on Naifaru and Hinnavaru. In total. 10 sessions were held at Lh. Atoll Education reaching 60 Center. sessions students. and 3 at Madhrasathul Ifthithaah, reaching 30 students. This amounted to students benefiting across all sessions, with many participating in multiple classes. You can read more about these sessions in the Community Outreach chapter on page 41.
- 2.The Lhaviyani Climate Change Symposium a two-day symposium that brought together stakeholders from island councils, women's development committees, schools, and universities to discuss climate change impacts in Lhaviyani Atoll and explore local solutions. More details are shared in the Community Outreach chapter on page 48.

Overall, this project facilitated dialogue around, and strengthened community knowledge on climate change across different age groups and sectors, laying the foundation for more collaborative action in the atoll.

Allied's Community Fund

In December 2023, AMC was awarded MVR 50,000 from Allied Insurance Company Maldives' *Community Fund* to implement our "Let's Keep Naifaru Plastic Free!" Project.

With these funds and the support of Naifaru Council, we were able to place community bins in various locations around Naifaru, including Velaa Beach and Sunset Beach, which are both very popular sites here on our small island.



Above: AMC staff with newly implemented Community Bins.

Next to the bins we also signposted information about the effects of waste on marine life. This is a great step towards tackling waste mismanagement, helping reduce marine debris at its source by providing more places for people to discard their rubbish while out enjoying public spaces.

We hope that with these bins in place we will see less trash being littered on our beaches, and in turn, a less polluted marine environment!

Oceanic Society Global Cleanup

In May 2025, Naifaru Juvenile was selected to take part in the Oceanic Society's 2024 Global Ocean Cleanup event, being awarded with a grant of USD 1,500 to lead a clean-up project and participate in an art competition. This recognition came in light of our ongoing cleanup initiatives. We were delighted to receive this support, as addressing waste mismanagement on Naifaru remains a core part of our mission. Further details of this initiative can be found in the Protecting Naifaru and Surroundings chapter on page 62.

GEF Small Grants Programme

At the end of 2021, Naifaru Juvenile was awarded a grant of USD \$50,000 from the Global Envrionment Facility/ Small Grants Program (GEF/SPG) implemented by the United Nations Development Program (UNDP).

This grant facilitated the launch of a twoyear project titled "Floating Turtle Rehabilitation Centre & Youth Outreach Attraction", which aimed to expand the physical boundaries of AMC by building the first-ever Floating Marine Centre (FMC) in the Maldives. The facility consists of six floating net cages that allow us to keep sea turtles in the ocean without fully releasing them.

The FMC was designed to give injured sea turtles a higher quality of life while in captivity and support their rehabilitation by offering a more natural and spacious environment where they can dive deeper and experience ocean conditions. It is particularly valuable for turtles in the final stages of recovery, as they can build strength and practice swimming against waves and currents, better preparing them for release after long periods of treatment in confined tanks.



Above: Areial photo of the Floating Marine Centre, located just outside AMC.

The FMC has been operational since March 2023 and has quickly become an invaluable tool in our rehabilitation work.

In 2024, a total of six turtles were placed in the FMC. Of these, two long-term patients were temporarily transferred on several occasions to allow for thorough cleaning of their tanks, while the remaining four were pre-release patients preparing for life back in the wild.

Kamana (50_2023) and Redhan (51_2023) were each released from the FMC after spending two weeks there. Ufaa (18_2024) was released after one week, and in the case of Hiccup (01_2023), his release required a total of 56 days split into two attempts, before he was successfully released from the FMC.



Above: Ufa being released from the Floating Marine Centre.

In addition to establishing the FMC, the GEF Small Grants Programme also supported a range of awareness and education activities, which we continued throughout 2024.

This included several community outreach and capacity-building initiatives such as the Marine School Holiday Program, as well as the continuation of our Atoll Ecologists Program, conducted in local schools across Lhaviyani.

Both of the aforementioned initiatives are detailed further in the Community Outreach chapter (page 41 and 43 respectively).

Another key component of the grant was the expansion of our Local Marine Biology Intern Training Program, which provides with Maldivian youth hands-on experience in sea turtle husbandry and marine conservation. This not only offers valuable skills and career pathways in the field, but also imparts life skills that are valuable outside marine science too. Our long-term vision is for AMC to be led predominantly by Maldivian nationals, taking ownership as ocean guardians and environmental stewards. This program is an important step toward that goal.

In 2024, we welcomed two new interns including Mohamed Naisam Nashid, who later went on to secure a Divernaster role at our partner resort, Amilla Maldives. We also welcomed Aishath Janaan, who joined AMC in September 2024!

Additionally, the grant allowed us to expand on our waste-management efforts, such as Dive Against Debris sessions, alongside volunteer-led and community beach clean-ups. Further details of these activities are available in the Protecting Naifaru & Surroundings chapter (page 57).

2024 marked the conclusion of this grant, and we are proud to have successfully delivered such a significant project. Looking ahead, we are committed to continuing these efforts and building on this momentum, even beyond the grant period.

Turtle Adoptions

Here at AMC, we rely heavily on funding from outside sources. This includes our adoption packages for the turtles in our care. Currently, we have four turtle patients up for adoption. The yearly adoption package costs \$65 and the adoptive parent receives an adoption certificate with their turtle's backstory, a sea turtle species fact sheet, our monthly newsletter, along with photos and videos of the turtle they adopt each month. This year we received a total of 102 adoptions, raising more than \$7,000 for our centre which will go towards supporting the turtles' wellbeing.





Above: Resident Green Sea Turtle patient, Hope.

Most of our turtle adoptions come from resort guests who visit the centre, showing just how important these visits are for AMC. However, in December 2024, we began a partnership with Maldives Islamic Bank, who kindly offered to sponsor 50% of sea turtle adoptions for local children attending their Bingaa Festival event on the 20th December. Sixteen local children adopted turtles through this initiative, significantly increasing local participation in our adoption program—a growth we hope to expand further.

Sea Turtle patient, 7 feeding on a piece of tuna.



Admissions

Sea Turtle Admission Data

In 2024, our centre admitted a total of 23 sea turtles, comprising a range of age groups and species.

Among the admissions, we received one juvenile olive ridley, two juvenile hawksbills, three adult olive ridleys, two adult hawksbills, and and 15 green sea turtle hatchlings (Figure 2).

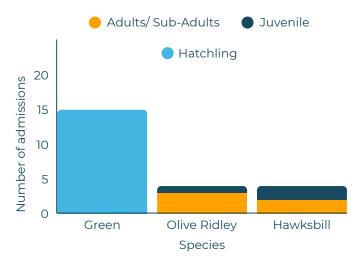


Figure 2. Admission data from 2024.



Above: Ufaa during her admission.

Hatchlings



Above: green sea turtle hatchling victim of illegal pet trade

100% of hatchling admissions were green sea turtles. Healthy hatchlings were released on the same day they arrived. However, those previously kept in freshwater must first be acclimated to saltwater before release.

Of the hatchlings admitted, 11 had been kept in saltwater, while only three had been kept in freshwater, requiring salt water therapy before release.

Reason for Admission

Of the 15 green sea turtle hatchlings we received, six had been kept as pets as part of the illegal pet trade and were surrendered to our centre.

The other nine hatchlings were admitted as a result of habitat destruction, having fallen into a pit on a construction site whilst crawling to the sea after hatching.

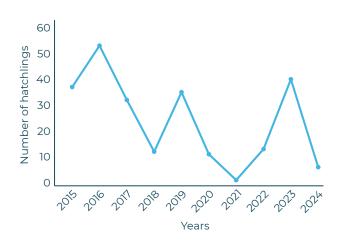


Figure 3. Hatchlings admitted due to illegal pet trade over the years.

Gladly, we noticed a decrease in the number of hatchlings admitted to our centre as victims of the illegal pet trade in 2024. This represents one of the lowest figures since 2015, second only to 2021, when overall admissions were lower, likely due to the COVID-19 pandemic (Figure 3). We believe our outreach efforts played a role in reducing this activity over time, and we hope that these numbers continue to decline, eventually reaching zero.



Above: Green sea turtle hatchling being measured during admission

Interestingly, habitat destruction emerged as the leading cause of hatchlings admissions in 2024, a trend not commonly seen in previous years. This year, the majority of hatchling admissions were a product of them struggling to enter the sea due to coastal development.

If we ignore hatchling admissions, entanglement remains the most common and ongoing challenge for juvenile and adult turtles (Figure 4).

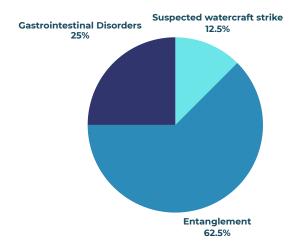


Figure 4. Reasons for admission of juveniles and adults during 2024.

Four olive ridley sea turtles (three adults and one juvenile) and one juvenile hawksbill were brought to our centre following entanglement incidents in 2024. Most of these cases were caused by ghost nets, but also cement bags and ropes.

The majority of our entanglement patients are olive ridleys, a trend that has remained consistent over the years. It is believed that many of them originate from India and Sri Lanka, in contrast to hawksbills and green sea turtles, which nest locally in the Maldives.

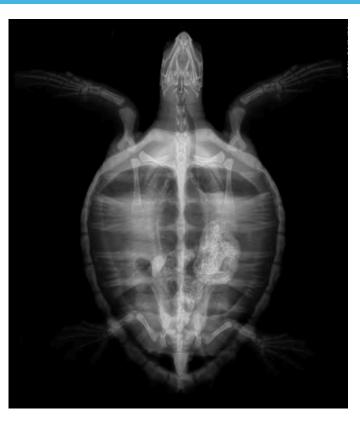
Due to their pelagic behaviour, they are likely becoming entangled in the open ocean and drift into the Maldives by ocean currents during the northeast monsoon.



Above: Our first entanglement case of 2024 "Saimaa" during her rescue.

In addition to the entanglement cases, we received two patients presenting generalized weakness—both hawksbills (one subadult and one juvenile). Upon physical examination, it was determined that their poor health was due to gastrointestinal impaction.

After receiving proper care and successfully passing feces, both individuals were found to have ingested structures resembling bones from terrestrial animals, likely birds.



Above: X-ray of our patient "Kanbili." It is possible to observe radiopaque (white) content in his gastrointestinal tract. Only very dense objects, such as bone or metal, appear like this on X-rays. In this case, a large clump of bones was causing the obstruction.

This alteration in the feeding habits of hawksbill sea turtles may result from a decline in the availability of their natural diet, forcing them to consume alternative items that their gastrointestinal tract is not adapted to digest. Additionally, in one case, small pieces of plastic were found in the faeces, another factor contributing to the impaction.

The final cause of admission for juveniles and adults was a suspected watercraft strike. One subadult hawksbill presented severe carapace fractures, most likely resulting from a collision.

Releases

Of the 23 turtles admitted in 2024, 19 of these were released, resulting in an 83% release rate. Three turtles that were admitted in 2023, were also released in 2024, totalling 22 turtles released throughout the year!

Kamana

Kamana, an adult female olive ridley, was our first release of the year. She was admitted in December 2023 after being found floating near Hurawalhi Resort. Kamana had entanglement wounds thankfully not severe—but her main were buoyancy syndrome. anorexia, and quiet mentation.

Once X-rays confirmed there were no abnormal air pockets in her body cavity (pneumocoelom), our veterinarian began external targeted weight therapy (ETWT), which successfully resolved her buoyancy issues.



Above: Kamana resting on top of her enrichment palm frond.

During her stay, our team introduced enrichment methods encourage diving. Just two weeks after completing ETWT, she was trialled at our Floating Marine Centre (FMC), where she swam in natural currents, rested at depths over 5 meters, and showed great behavioural improvement.

On March 4th, after a couple weeks of progress, Kamana was successfully released from the FMC.



Above: Kamana after being released from the

Redhan

The second of our patients who got the chance to return home was Redhan, another female olive ridley turtle. She was rescued in December 2023 after more than 30 minutes of searching in the area where she was reported floating. Fortunately, our team found her just in time, as she was drifting away with a strong ocean current.

Once safely on the boat, we discovered damage to her carapace, likely from a boat strike. After her wounds fully healed, we began targeted external weight therapy (TEWT) to address her buoyancy issues. X-rays also revealed the presence of pneumocoelom (free air in the body cavity), which required a coelomocentesis performed by our veterinarian. After the procedure, her buoyancy gradually improved.



Above: Redhan being the first one to try our new tank.

Redhan quickly regained her diving abilities, although she wasn't resting on the bottom and was exhibiting pacing behaviour in the tank. Once she graduated from ETWT, we transferred her to the FMC with the hope of helping her settle. To our delight, just three days later she was calmly resting at 5 meters!

After two successful weeks in the FMC, she was given the all-clear by our veterinarian and released on May 7th, 2024.



Above: Redhan about to be release back into the ocean.

Mushi

Mushi, a sub-adult Olive Ridley turtle was released from a boat in June 2024 towards the outside of Lhaviyani Atoll.



Above: Mushi's wounds at admission after removing the estrangulating plastic.

Mushi arrived at our centre in April 2024, after she was found floating by staff from Velaa Private Island in Noonu Atoll. She was entangled in plastic cement bags.

Upon admission, her left front flipper had a deep entanglement wound. A piece of plastic cement bag was embedded in her tissues, causing circulation problems in the affected flipper.



Above: Mushi about to be released.

Despite the severity of the injury, the flipper healed remarkably well. Mushi began using it fully again and showed excellent swimming abilities. Her wounds were closely monitored until they had healed enough for her to return to her ocean home. She was released on the 1st of June from a boat between Hinnavaru and Komandoo.

Ufaa

Ufaa, a subadult hawksbill arrived at our centre in April, after she was found floating and unresponsive by staff from Cora Cora Resort in Raa Atoll. Her condition remained critical during the first few weeks, and she was under close supervision and care. When she passed faeces for the first time, we noticed fragments that appeared to be bones of avian origin.

Ufaa required tube feeding for a while but gradually began to regain her appetite. We used several enrichment techniques with her, and she responded very well. Before her release, Ufaa was moved to one of our newest large tanks, where she could swim freely and exhibit natural foraging behaviours during feeding.



Above: Ufaa about to be released from the FMC.

Thanks to her excellent progress, we transferred her to the FMC to observe her response to waves, currents, and other ocean conditions. During her time there, Ufaa showed us she was ready to return to the wild, and on June 30th, she was released.

Hiccup

Hiccup, an adult male olive ridley, returned to the ocean in August—18 months after being admitted due to a suspected boat strike. He had a fracture on his nuchal scute and a deep wound on his head, which caused neurological issues, including tremors and seizure episodes.



Above: Hiccup's first swim outside the FMC.

His recovery was a long journey. He underwent three surgical procedures, one of which involved placing a feeding tube via esophagostomy (inserting it directly into the oesophagus through an incision in the neck). After some time, he began eating on his own, but he continued to struggle with buoyancy syndrome—a true roller coaster for him. One day he would dive effortlessly; the next, he couldn't leave the surface.

Hiccup was trialled in the FMC twice, as he seemed to be improving his diving abilities, and we hoped that time in the ocean environment would help him gain confidence. Sadly, after the first attempt, we had to bring him back. However, after a few more months with the ETWT (External Targeted Weight Therapy), he showed incredible improvement, and we decided to give the FMC another try. This time he was consistently diving down for his food, and after a couple weeks, he finally started to rest at the bottom.

Due to Hiccup's long rehabilitation journey, his release on August 9th was particularly special for our team. When he was placed outside the FMC, he turned around in confusion—but eventually, he remembered his roots and swam out into the ocean, diving deep into the blue.

Ummeedhu

Our first admission of the second semester was a juvenile olive ridley rescued in South Ari Atoll, a victim of entanglement.

She had wounds on all her flipper and sadly, her front right one was so severely affected that it required amputation. In addition, her body condition wasn't ideal.

This didn't stop Ummee at all, she healed remarkably well and swam around her tank as if nothing had ever happened!

Once her amputation wound had fully healed and she gained some weight, Ummeedhu was ready to return to the ocean. Ummee was released at Velaa Beach, right in front of our centre the 13th of September.

Above: Ummeedhu being released.

Kanbili

Kanbili, a juvenile Hawksbill turtle, was rescued by a local fisherman who found her floating and almost unresponsive in Lhaviyani atoll. Upon arrival, X-rays confirmed an intestinal impaction. Our veterinarian treated with subcutaneous fluids and laxatives, and monitored her progress with follow-up X-rays every other day after she began passing feces.

It only took a couple of days for her to defecate for the first time, and the contents were quite unusual. The material resembled chicken bones—she may have scavenged a dead seabird floating at sea, but we can't rule out the possibility that these were chicken bones discarded into the ocean.

A few days later, she also passed some pieces of plastic and additional "bony" material.

It took over a month for her to completely eliminate all the foreign objects from her digestive tract. By that time, she had already become an active turtle with strong swimming abilities, a healthy appetite, and normal behavior. As soon as her X-rays were completely clear, she was deemed ready for release. Kanbili was released at Velaa beach on September 13th following Ummeedhu.



Above: Kanbili on her way. to the ocean.

Hadhiyaa

Hadhiyaa, another olive ridley victim of entanglement, was admitted in February. Upon arrival, she was already missing her front left flipper and was struggling with buoyancy. She received wound care to support the healing of her injuries, and thanks to our new X-ray machine, which arrived shortly after her admission, our veterinarian was able to confirm the

cause of her buoyancy syndrome: a lung tear that was allowing air to escape into her body cavity (coelom).

We had to be patient and give her lungs time to heal. Once the tear began to close, the free air in her coelom gradually decreased, and she slowly regained her diving abilities. After eight months under our care, she was released from Velaa Beach on November 6th, 2024.



Above: Hadhiyaa being released.

Her admission and release were extra special. Hadhiyaa means "gift"—we chose that name because she arrived on one of our intern's birthdays. Coincidentally, her release also happened to fall on the birthday of one of our team members.

Loabi

Our last release of the year was Loabi, a juvenile hawksbill turtle rescued from Naifaru's harbour after being found entangled in a rope which was tied around his neck and was attached to a floating piece of plastic. He was rescued by the dive instructor at our partner dive centre AQUA Dive & Water Sports, while she was with a group of our volunteers waiting for the boat to go on a dive.

Thankfully, the rope hadn't caused a deep wound, and the swelling from the entanglement resolved quickly.

Fortunately, after just over two months in our care, he was ready to return to the ocean. Loabi was released, by the same person who rescue him, on November 18th at Sunset Beach.



Above: Loabi being released by his rescuer.

Hatchlings

A total of 13 green sea turtle hatchlings/post-hatchlings were released in 2024.

The first release was a group of nine individuals found by construction workers trapped in a coastal excavation hole at Palm Beach Island Resort & Spa. Reportedly, a turtle nest had hatched about 5–6 days earlier. We suspect the hatchlings were on their way to the ocean when they fell into the hole. After a health check confirmed they were all healthy, the turtles were released that same day, on February 14th, at Velaa Beach.



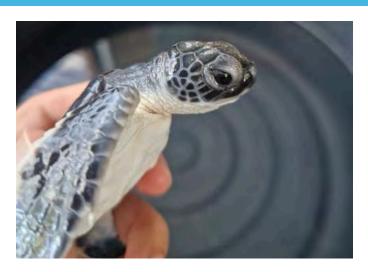
Above: Hatchlings brought by Palm Beach Island Resort & Spa in F.

Later, we received a pair of hatchlings that were victims of the illegal pet trade. Fortunately, they had only been kept in captivity overnight, and we were able to release them the next day, once again from Velaa Beach in front of our centre.



Above: Hatchlings admitted and released in March getting weighed and measured.

Later in the year, we admitted a one-month-old green sea turtle named Toothless, who was also a victim of the illegal pet trade—he had been received as a gift. On arrival, he was slightly overweight, and he was released the following day at the same location as the previous releases.



Above: Toothless during his admission.

hatchling/post-hatchling Our final release was a three-month-old green sea turtle named Magoo that had been kept in freshwater for a month. Because of this, the turtle required saltwater therapy, which involves gradual exposure to before salinity beina released. Fortunately, about week after а admission, the turtle had completed the therapy and was ready to be released from Velaa Beach.



Above: Magoo inside the container she was kept for the first months of her life before arriving to our facilities.

Of the 15 hatchlings and post-hatchlings we received in 2024, 13 were successfully released—a promising percentage overall. However, it's important to note that nine of these turtles were not victims of the illegal pet trade but rather of habitat destruction and received assistance opportunely. Additionally, only individual had been kept in freshwater long-term. While our release rate was high, we must remember that the longterm survival of these turtles is still uncertain. Spending their first days or even months in captivity can impact their ability to adapt, navigate, and thrive once they are back in the ocean.

Atoll Marine Conservation Centre recognizes the importance of community outreach and environmental education on the threats faced by this endangered species. Our goal is not simply to release all the hatchlings we admit—true success will come when there are no hatchlings that need rescuing at all.



Above: Two hatchlings making her way to the ocean after their release at Velaa beach.

Transfers

In 2024, two sea turtles that were brought to AMC were transferred to an other facility.

Saimaa

Saimaa was found entangled by guests at Senses Kanuhura. The resort's Sustainability Department coordinated with our partners at the Olive Ridley Project (ORP) to arrange her transport to their facility. However, due to the difficulty arranging immediate of transportation for a turtle of her size, Saimaa was first brought to our centre, where she received initial first aid. Two days later, she was transferred to ORP's facility at Coco Palm. Upon arrival at ORP, Saimaa underwent a comprehensive health assessment. She had suffered a partial amputation of her right front flipper, as well as additional traumatic injuries to her carapace, right hind flipper, and right eye. She was underweight, anaemic—likely due to the traumatic loss of her flipper—and suffering from a serious blood infection.



Above: Saimaa in her tank at Olive Ridley Project in Baa.

Biscuit

Biscuit, a juvenile olive ridley sea turtle, was transferred to us from the Olive Ridley Project in February 2022. Likely a victim of ghost net entanglement, Biscuit tragically lost three of his flippers, leaving him with only his left front flipper. Due to this severe impairment, returning to the ocean was not a viable option.

Shortly after his arrival, our veterinarian initiated the process to transfer Biscuit to the "Dubai Aquarium & Underwater Zoo". This facility offers a larger tank environment where Biscuit can live surrounded by other animals like fish, creating a habitat closer to his natural surroundings.



Above: Biscuit during his time at AMC.

After over two years of meticulous planning and coordination, Biscuit was successfully transferred on July 17 of this year.

The transfer was carried out under the necessary EPA (EPA/2023/PS-SP/16) and CITES export permits. Prior to transport, a faecal sample was sent to the Central Veterinary Research Laboratory (CVRL) in Dubai for *Salmonella* spp. (EPA/2024/PS-SP/06) testing, which returned negative results.



Above: Biscuit getting a last check up and some fluids before his trip.

Biscuit travelled via Emirates cargo, accompanied by one of our marine biologists Lorraine, and Kanma our cofounder.



Above: Biscuit in his quarantine tank during December 2024..

As of the end of this year, Biscuit remains in quarantine while the exhibit he will join undergoes remodeling. In December, Daniela our veterinarian visited him and confirmed that he is thriving in his new environment.



Above: Aquarium tank that will be Biscuit's future home.

Deceased turtles

In 2024, we unfortunately lost a total of three patients—an example of the devastating consequences of the humanrelated threats sea turtles face in the Maldives.

Faru

Our first admission of the year was Faru, a sub-adult hawksbill turtle rescued after a suspected boat strike. On arrival, she was missing her front left flipper, and the left margin of her plastron was fractured between the inframarginal and the underside of the marginal scutes, exposing the coelomic cavity. She was also missing the keratin from two marginal scutes, leaving the underlying dermal bone exposed.

Due to the severity of her injuries, she passed away the same day she was admitted.



Above: Faru during her admission.

Pringles

Pringles a green sea turtle arrived in January being approximately 2 months old. We were told he was in captivity just for a couple days but it did not appear that way. His carapace was curved inwards, which means he was suffering from lordosis already, it was so severe that when trying to dive down he kept doing back flips. Three days after his admission he sadly passed away.



Above: Pringles during his admission.

Vegemite

Vegemite, another green turtle hatchling, was surrendered in May 2024 in a severely weakened and malnourished state. Despite our efforts to provide care, he passed away the following day.



Above: Vegemite during his admission,.

TURTLE RESCUE & REHABILITATION

Current Patients

We ended 2024 with four sea turtles under our care. All four are long-term patients, and unfortunately the chances of them returning to the ocean are low. However, here at AMC, we continue doing our best to give them every opportunity for recovery and guarantee their welfare while they reside in our centre.

Our team works daily to ensure they live in a clean and safe environment enriched with elements they can interact with. They receive constant veterinary care: regular health assessments, individually formulated diets, and treatments when necessary.

Tom

Tom, our longest resident, is an adult male olive ridley who arrived in 2018 after a suspected ghost net entanglement. He is a double front flipper amputee and suffers from chronic buoyancy syndrome.

Despite various treatments over the years, he has not regained the ability to dive. However, with the arrival of our x-ray machine this year, we gained new insight into his lung condition and restarted him on External Targeted Weight Therapy (ETWT). We also revised his enrichment schedule and now use feedina techniques that encourage diving almost dailv.



Above: Tom with an enrichment feeding device.

Though progress has been slow, we remain patient. Tom has been unable to dive for at least six years, and his condition has gradually worsened.

A highlight of 2024 was his time at our Floating Marine Centre, where experienced ocean conditions—waves, currents, and other species—in a safe, semi-controlled setting.

We remain hopeful that 2025 will bring more improvement or at least stabilize his condition. Even modest diving ability would greatly enhance his quality of life, even if release remains unlikely.

TURTLE RESCUE & REHABILITATION

Olga

Another long-term resident at AMC is Olga, an adult female olive ridley and entanglement victim. She is missing her left front flipper and suffers from an even more severe case of buoyancy syndrome than Tom. Olga is also undergoing External Targeted Weight Therapy (ETWT), and we use enrichment-based feeding techniques to encourage diving.

Toward the end of the year, a volunteer designed a custom feeding device just for her. A ladder-shaped structure with different levels she has to reach down to access her food. Since its introduction, Olga has shown steady progress in reaching lower levels. Her strong food motivation works in our favour, helping stimulate diving attempts.



Above: Olga using her tank's brush.

Olga especially enjoys using the brushes we attach to her tank to scratch her carapace and likes to spend her time looking through the windows.



Above: Olga enjoying her tank's window.

While her buoyancy issues remain, her resilience is clear—she makes regular attempts to dive even without food as an incentive.

Hope

Hope is a juvenile green sea turtle who arrived at our centre in 2020 as a hatchling, rescued from the illegal pet trade. She suffers from severe lordosis—a spinal malformation likely caused by improper handling during her early development. Despite this, Hope continues to thrive with a lively and curious personality.

She eagerly feeds on fresh seagrass provided daily in a plastic structure designed to mimic a natural bed. For enrichment feedin, we use coconuts to hide food to make it more challenging for her to access, and also offer weekly live

TURTLE RESCUE & REHABILITATION

crabs for her to hunt, and provide seafood ice blocks. We also rotate various enrichment items in her tank, including palm fronds, brushes, cuttlebone, PVC squares, and buoys.



Above: Lateral photo of Hope showing the severity of her lordosis.

Thanks to increased releases in the second half of the year, Hope was able to enjoy one of our largest tanks all to herself. This space includes windows she loves and extra room for enrichment features like a tunnel.

Hope is a reminder of the consequences of keeping sea turtle hatchlings as pets. Even though she can dive, her swimming abilities are impaired; she struggles in even the slightest current and gets stuck easily, making her unfit for life in the ocean. However, she shows no signs of discomfort in the water and remains in otherwise good health. Her resilience and vitality continue to inspire us every day.



Above: Hope enjoying the tunnel in her tank.

Cora

Lastly, we have Cora, a male olive ridley and another victim of entanglement. Like Tom, he is a double front flipper amputee. He arrived at our centre in 2022, and since then, we've tried various techniques to him help overcome his buoyancy syndrome.



Above: Cora in his tank with his ETWT weight.

TURTLE RESCUE & REHABILITATION

This year, Cora also spent time at our Floating Marine Centre (FMC) to give him the opportunity to experience the ocean in a semi-controlled environment. In his case, the goal was not only to work on buoyancy but also to encourage him to be more active, as he tends to gain weight more easily than the others.

He began External Targeted Weight Therapy (ETWT) this year, and although there hasn't been any clear improvement yet, we've observed that he now sleeps lower in the water and sometimes slightly tilted to the right, which could indicate subtle progress.



Above: Cora in his tank.

As with all turtles with buoyancy syndrome, enrichment feeding is a key part of his treatment, alongside ETWT.. With Cora, one of our most effective strategies has been lowering the water level in his tank and scattering food across the bottom. This setup allows him to reach the food for the bottom, but not without several attempts to dive down to get it.

Like our other long-term olive ridley residents, Cora is otherwise healthy. He has always had a calm and easy-going personality—very patient, except for when food is involved!



Above: Cora enjoying his seafood ice block.

Although the chances of returning to the ocean for these turtles are low, their stories fuel our commitment to marine conservation, rehabilitation, and education. Each one reminds us of the urgent need to protect sea turtles and their habitats from human threats. The AMC team remains dedicated to ensuring the well-being of our long-term patients and sharing their stories to raise awareness—so that future generations of sea turtles can thrive safely in the wild, where they belong.

GOAL 2: COMMUNITY OUTREACH AND EDUCATION



School Outreach

Atoll Ecologists Program

2024, we continued our Atoll Ecologists Program with students at Lh. Atoll Education Center on Hinnavaru (Naifaru's closest neighbouring inhabited island). We conducted a total of eight marine science lessons at this school, reaching 38 students in total.

Above: Lh. Atoll Education Centre students during an Atoll Ecologists session.

We hope these sessions will have a longlasting, positive impact by directly educating the local inhabitants and future generations which will benefit from the preservation of their marine environment.

Climate Activists Program

As part of a grant-funded project from The Asia Foundation in Maldives. AMC carried out thirteen climate awareness

sessions at two local schools in Lhaviyani.

The sessions were interactive covered the basics of climate change what it is and how it's caused. Students explored the specific threats that climate change poses to the Maldives' marine habitats, wildlife, and communities. The lessons also introduced conservation and climate-related career pathways. encouraging students to see themselves as future change-makers.





Above: Lh. Atoll Education Centre students during a Climate Activists Session.

Faadhippolhu Interschool **Education Fair**

On August 10th, AMC joined the Faadhippolhu Interschool Education Fair in Naifaru at Madhrasathul Ifthithaah. Of the four schools in Lhaviyani Atoll three joined this friendly competition including Grade 5 students from Madhrasathul Ifthithaah. Ιh. Atoll School from Kurendhoo, and Lh. Atoll Education Centre from Hinnavaru. uSdents displayed art projects such as paintings and sculptures, inventions made from recycled materials and practical items such as lamps and game.

The Atoll Council invited AMC to have an educational booth. which received around 200 visitors.

Our Marine Biology Intern Anum, also gave a speech about plastic pollution and Marine Biologist Lorraine gave a plastic awareness presentation.





Above and left: AMC's educational stall at the Faadhippolhu Interschool Education Fair.

Marine School Holiday Program

In 2024, we hosted two successful Marine School Holiday Programs for local school children ages 6-10, teaching them about the marine environment. The first miniprogram lasted four days during the End of First-Term holiday in October and welcomed 29 participants. The second, was a larger six-day program held over the two-week Second Term Mid-Break in December, and hosted 25 children.

These programs provide an excellent opportunity to raise awareness about sea turtle conservation and allowed us to emphasise the importance of why sea turtles cannot, and should not be kept as pets.









Above: Photos from the October 2024 Marine School Holiday Camp.









Above: Photos from the December 2024 Marine School Holiday Camp.

Activities included interactive presentations, worksheets such as turtle crossword puzzles and word searches, quizzes, fish ID bingo, beach cleans, poster making, ocean-themed crafts, and active games that combine education with physical exercise to foster enthusiasm and engagement.

Hosting the program at our centre also allows children to meet our turtle patients, learn their stories, and understand their rehabilitation needs.

Additional activities included practical introductions to coral restoration techniques using miniature coral frames, simulated turtle rescue scenarios to demonstrate how to safely respond to an injured turtle, and turtle ID games to teach how marine biologists identify and track turtles using facial scutes and photo ID.

Captain Fanplastic

In 2023, AMC formed a partnership with SoapboxSA on their 'Captain Fanplastic' initiative to conduct 15 'Plastic Pirate Module' sessions in primary schools across the Maldives. The module begins with an interactive storytelling of 'The Legend of Captain Fanplastic' storybook, followed by a crafting session where children make eye-patches out of ghost nets and plastic bottle caps. This shows children how they can extend the life of products by reusing or repurposing them into something fun and useful. We then head out for a gamified beach clean to encourage positive behaviour changes.





Above: Hulhudhuffaaru Students during a Captain Fanplastic session



Above: Hulhudhuffaaru Students during a Captain Fanplastic session

In 2024, we carried out four Plastic Pirate Module sessions, two of which were carried out with grade four and five students at schools in Raa Atoll. These included 49 students from Hulhudhuffaaru School, and 81 students from Dhuvaafaru Primary School.





Above: Dhuvaafaru Primary Students during a Captain Fanplastic session

Live Streams

In 2024, we continued our partnership with Bumble Green Studios, a children's book company based in the United Kingdom, to conduct three live streaming sessions to school classes in the U.K.

Additionally, in November 2024, our Veterinarian conducted a series of four virtual lessons with Year 5 students from a school in Dubai. This collaboration was facilitated through a former volunteer who works as a teacher at the school. The sessions complemented the students' Eco-Literacy module, focusing on sea turtle biology and conservation.

During these livestreams, we introduce the work of AMC, share insights on turtle rescue and rehabilitation, and give a live tour of our centre, including a meet-and-greet with our turtle patients. The livestreaming sessions enable students to ask questions in real time, and reduce barriers to ocean-learning for those that would otherwise never get to visit our centre.



Above: Livestream session with school students.

We look forward to expanding similar opportunities to other schools in the future through our international connections.

School Visits



Above: Lh. Atoll Education Centre students during their visit to AMC.

On the 31st July 2024, we welcomed 50 six students from Lh. Atoll arade Education Centre on Hinnavaru to AMC! Over the course of the afternoon our Marine Biologist led a presentation on basic sea turtle biology, their importance as keystone species, and the threats sea turtles face due to human impacts. We also discussed long term and short-term solutions to these issues before having a tour of our centre, where students were introduced to each of our turtle patients and their backstories. The students were also shown a sea turtle documentary before heading to the beach to create sand turtle sculptures.

Resort Outreach

Guest Education

Nearby resorts such as Atmosphere Kanifushi Maldives, Kuredu Island Resort Spa and Komandoo Maldives. regularly bring guests to our marine centre. Throughout their visit, our marine team deliver a presentation detailing the threats that sea turtles face. importance of sea turtles to the marine environment, how people can reduce their environmental footprint and sea turtle rehabilitation efforts the Maldives.



Above: Resort guests receiving AMC presentation.

The presentation is followed by a tour of the centre to meet our turtle patients, where guests get the chance to see first hand how humans are impacting the lives of sea turtles in the Maldives. This helps spread awareness about endangered species to a global audience, as resort guests visit from countries all over the world.



Above: Resort guests during a guided tour of the centre, December 2024.

Sea Turtle Rescue & Response Training

In 2024, AMC conducted five sea turtle response training sessions at different resorts including Cora Cora Maldives in Raa Atoll, Velaa Private Island in Noonu, Kuredu Island Resort in Lhaviyani, and two separate sessions conducted by AMC's Sea Turtle Biologist at Six Senses Kanuhura. Staff members from a range of departments were present at each session, which include a presentation and practical demonstration of safe turtle rescue procedures.



Above: Sea turtle response training at Kuredu

Talks & Events

Plastic Aa Nulaa

In April, AMC attended the 'Plastic Aa Nulaa' event in Male, hosted by Fushifaru Resort and the Muni Foundation. An estimated 100 people were present.



Above: Marine Biologist, Lorraine, presenting at the Plastic Aa Nulaa event.

Marine Biologist Lorraine, was invited as a keynote speaker and delivered a presentation on the 'Problems with Plastic Pollution and Sea Turtles', which highlighted the importance of raising awareness about single-use plastics and their impact on the marine environment and marine wildlife.

Marine Biology Intern, Audha, interacted visitors to our information stall, which included educational activities relating to waste management in the Maldives and the impact of ghost nets on sea turtles.



Above: Marine Biology Intern, Audha, at AMC's education stall at the Plastic Aa Nulaa event.

MMRI Symposium

In July 2024, AMC attended the fifth Maldives Marine Science annual Symposium, held by the Maldives Marine Research Institute at Maldives National University. We were incredibly pleased to have been represented at this event, which gathers marine researchers from across the country each year. The provides fantastic symposium а opportunity to learn about the latest marine research conducted Maldives and network with other marine conservation organizations and researchers.



Above: AMC staff at the MMRI Symposium.

climate-related

speakers

Lhaviyani Climate Change Symposium

With funding from The Asia Foundation's CSO Strengthening Project, AMC hosted the Lhaviyani Climate Change Symposium on the 5th and 6th June 2024

All Lhaviyani Island Councils were invited, along with Women Development Committees, Schools and NGOs, to discuss climate change threats and solutions in Lhaviyani Atoll.



Above: Ifthithaah school students during capacity building workshops.



Above: Ifthithaah school students presenting on MPA's in Lhaviyani Atoll.

Energy; Maldives National University; the Environmental Protection Agency; and Save Maldives. Additionally, insightful capacity-building sessions were held on protected area governance in environmentally significant areas of Lhaviyani Atoll. 47 attendees were present over the two days.

The event fostered open, dynamic, and

meaningful discussions on a range of

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Above: Group photo with Lhaviyani Climate Change Symposium participants.

Such events are vital for bringing together key stakeholders to address pressing environmental challenges within and across our atoll. Additionally the discussions were largely held in Dhivehi, the local language, ensuring inclusivity and accessibility for all participants.

We are deeply grateful to everyone who took part and contributed to the success of this symposium. Looking ahead, we hope to continue hosting this event in future years, building on these conversations to create lasting momentum for real change.

Lhaviyani Turtle Festival

In 2024, we were excited to host the 7th annual Lhaviyani Turtle Festival, in collaboration with Naifaru Juvenile and our title sponsor Six Senses Kanuhura.

As of 2023, this is now a two-day event, with the Atoll Marine Symposium taking place on the first day, and the official festival taking place on the second day. We bring together NGO's, schools, council members, locals resort guests and staff to connect people with marine conservation in Lhaviyani.



The 2nd Atoll Marine Symposium built on the success of its debut in 2023, offering a platform for knowledge-sharing among stakeholders. The theme this year was 'Tides of Change - Our Ocean's Future' and featured expert-led presentations from 11 keynote speakers, followed by thought-provoking panel discussions on climate change and marine megafauna.



Above: Panel discussion during the 2nd Atoll Marine Symposium.

On festival day, we welcomed our record number of schools, including three from Lhaviyani, two from Raa, Baa, and Malé, and one school from Noonu! 11 different organisations held marine awareness stalls and both schools and locals participated in a range of fun competitions that kept the energy lively!

Participants from across the two-day event included representatives from the Ministry of Climate Change, Environment and Energy; Addu Nature Park; Clean Maldives: Small Island Geographic Society; Manta Trust; Reefscapers; Maldives Whale Shark Research Program; the Olive Ridley Project; Six Senses Kanuhura; Velaa Coral Project; the Miyaru Program; and ProDivers.



Above: School students participating in the sand sculpture competition.

Vaavoshi Festival

On the 23rd November, AMC was delighted to attend the Olive Ridley Project's 'Vaavoshi Festival' on the island of Kendhikulhudhoo, also known as 'the Mangrove Island' in Noonu Atoll.

Vaavoshi is the Dhivehi name for olive ridley turtles, and the event was a fantastic celebration of sea turtle conservation in the Maldives.



Above: AMC's stall at Vaavoshi Festival.



Above: AMC staff & volunteers at Vaavoshi Festival.

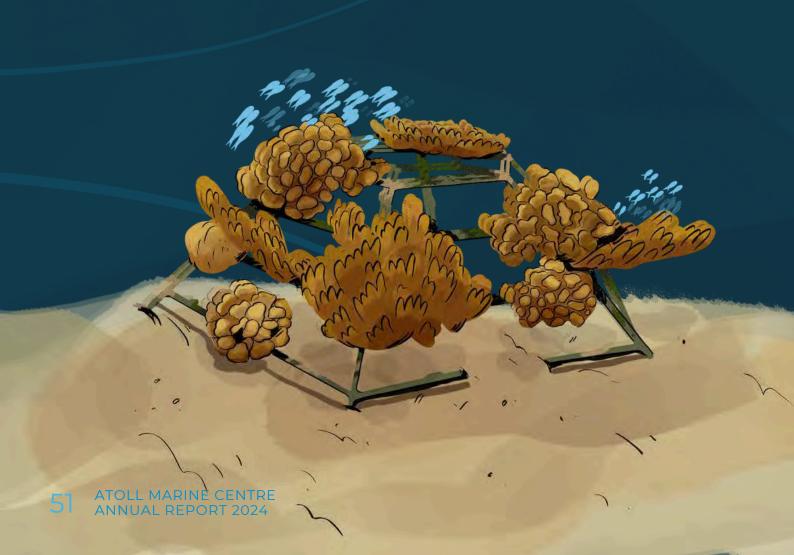




Above: AMC staff in their Vaavoshi parade outfits.

AMC and our team of volunteers all got the chance to explore the beautiful mangroves of Kendhikulhudhoo during the morning. In the afternoon, we opened the AMC stall which featured a range of fun games and activities teaching local children about all things sea turtles. We then joined the Vaavoshi parade in our marine-themed costumes, made from recycled materials, with the help of our fantastic volunteers during the previous week.

GOAL 3: CORAL RESTORATION



Coral reefs are vital habitats for sea turtles and countless other marine species. Turtles depend on coral reefs for resting, foraging, and even keeping themselves clean. For this reason, it is crucial to take a holistic approach to turtle conservation—one that recognises the importance of protecting entire marine ecosystems, including critical habitats.

Naifaru is fortunate to have a beautiful house reef, easily accessible from Velaa Beach, just outside AMC. However, like many reefs in the Maldives, it faces pressures from climate change and coral bleaching, as well as localised threats such as boat anchor damage, marine pollution, and sedimentation. Certain areas of the reef have been noticeably degraded as a result.

To help address this on a local scale and sustain the health of our house reef, AMC runs a small-scale coral restoration programme. We have a coral garden consisting of artificial rebar frames where we attach "fragments of opportunity" - broken coral pieces that would otherwise struggle to survive. By securing these fragments to the frames with cable ties, cleaning the structures to remove sediment and algal overgrowth, and monitoring their progress — we give these corals a better chance at survival.

Over time, these frames not only help restore coral cover but also provide shelter and habitat space for reef organisms, contributing to the resilience of the wider reef ecosystem.

Expanding the Coral Garden

During 2024 we attached over 150 new coral fragments to our frames, collected by AMC staff and volunteers from the surrounding house reef in Naifaru, and the house reef on Veyvah, Naifaru's nearest uninhabited island.

Most of the coral fragments in our garden belong to three common genera: Porites, Acropora, and Pocillopora.

Additionally, we deployed 12 new frames into our existing garden, increasing our total frame count to 27!



Above: Staff at AMC with a coral frame ready to be deployed.



Above: AMC staff planting fraaments opportunity onto a coral frame

Once a coral fragment is attached to a hard structure (such as the rebar frame), the polyps begin to grow and multiply through asexual reproduction. Over time, the coral colony begins to encrust the zip tie that was used to secure it, and attachment eventually the point becomes completely invisible.



Above: Example of a coral fragment where the coral polyps have started to grow over the zip tie which was used to secure the fragment to the frame.

In 2024, we observed this process in several of our newly planted corals always an encouraging sign. It shows that have successfully the fragments established, are continuing to grow, thereby populating the frame contributing to a healthier, thriving coral garden.

In addition to fragments of opportunity that we actively attach to our frames, the structures themselves also provide an ideal substrate for natural settlement. Coral larvae (baby corals) can attach to the rebar and begin to grow, forming tiny colonies without any human intervention. These naturally settled corals, known as coral recruits, are particularly exciting to see. Each new recruit indicates a recent spawning event in the area and signals that the surrounding reef is still reproducing and has the potential to recover.



Above: A coral recruit on one of our coral frames

Recruits tend to survive better than coral fragments, so this gives us lots of hope for repopulating our frames, particularly after the 2024 bleaching event, and we see remarkable progress in terms of growth for these recruits.





Above: Growth of a coral recruit between March 2024 (top) and December 2024 (bottom).

Data Collection & Monitoring

As important as it is to maintain and replenish the coral frames by planting new fragments, it is equally vital to collect data that allows us to monitor their growth and condition. This helps us evaluate the long-term impact of our coral garden and understand whether our restoration efforts are truly effective.

In 2024, our Marine Biologist and Acting Marine Team Lead, Karen, initiated systematic data collection on the coral garden using an updated, standardised methodology. This approach has now been applied across all frames, enabling us to track coral growth rates and health over time, to ultimately assess the success of our restoration work in a more measurable way.



Above: AMC's Marine Team Lead, Bennath, collecting data on the coral fragments.

Methodology

We begin by collecting monthly overhead photographs of each frame, which provide a clear visual record of how the corals are growing and developing over time. This method is especially valuable during disturbance events, such as coral bleaching, as it allows us to quickly and easily assess change in individual fragments and the frame as a whole.

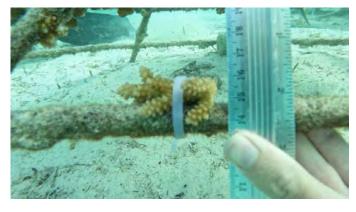
Every time we attach a new fragment to our frames, we take three measurements: length, width, and height. We then use a mathematical formula to calculate the Ecological Volume of the fragment.



Above: Measuring the length of a coral fragment.



Above: Measuring the width of a coral fragment.



Above: Measuring the height of a coral fragment.

While recording these measurements, each coral fragment is assigned a unique ID so we can accurately track its progress over time. We also identify the coral genus, record the percentage of the coral that is alive, and assign the fragment a health score from 1–5, based on signs of bleaching, disease, or mortality.

This data is collected for every fragment on our frames, every six months. In 2024, we began this standardized monitoring, establishing a baseline for all corals across 25 frames that will serve as a reference point for future assessments. Going forward, we will continue this biannual monitoring to evaluate changes in growth, health, and overall reef recovery.



Above: Coral frame within AMC's coral garden.

Bleaching Event Impacts

Unfortunately, our coral frames were heavily impacted by the mass bleaching event that swept across the Maldives in April–May 2024.

This bleaching event was part of the ongoing fourth global mass coral bleaching event, officially confirmed by NOAA in April 2024, which has affected roughly 84% of global reef areas to date.

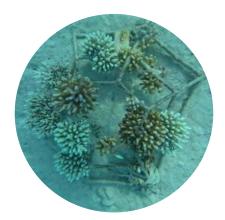
Our overhead photographic records captured alarming levels of mortality across all frames, confirming that the bleaching had taken a serious toll.

At the beginning of the year, our frames were thriving with healthy coral colonies. However, during April–May, many of these corals experienced severe bleaching, and by September, much of the bleached coral had not recovered and had died due to prolonged heat stress. We removed much of the dead coral from the frames, creating space to repopulate them with healthy fragments.

Despite these losses, a number of fragments did survive, which gives us hope. Looking ahead to 2025, we remain optimistic that, with care and persistence, our frames will bounce back to life and continue contributing to reef recovery in Naifaru.



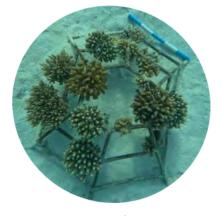
Frame 10, March 2024 (Pre-bleaching event)



Frame 10, May 2024 (During the bleaching event)



Frame 10, September 2024 (After the bleaching event)



Frame 7, March 2024 (Pre-bleaching event)



Frame 7, May 2024 (During the bleaching event)



Frame 7, September 2024 (After the bleaching event)



Beach Cleans

Volunteer Beach Clean-Ups

At AMC, we conduct regular beach cleans with our international volunteers, as part of their afternoon activities, whether that be at different locations around Naifaru, or on nearby uninhabited islands such as Veyvah, Vaavaru, or Dhidhoo.



Above: Uninhabited island beach clean with AMC volunteers.

It is often surprising to volunteers that visit us, just how much litter accumulates on local and uninhabited island beaches. For many, it is a different reality from the pristine image they may have in their minds when they think of the Maldives.

Sadly, like many Small Island Nations, the Maldives struggles with effective waste management, due to lack of available land space, high transportation costs between islands, and limited, or a complete absence of recycling or waste segregation infrastructure.

In 2024, we conducted 39 volunteer-led beach cleans in Naifaru, and 10 uninhabited island beach cleans, totalling almost 50 all together!



Above: Volunteer beach clean taking place.

Beach Surveys

In addition to regular beach cleans, AMC staff and volunteers carry out weekly beach surveys along three permanent transect sites to assess the types of waste found on Velaa Beach.

During 2024, we conducted a total of 50 beach surveys which allow us to monitor litter over time, understand the origins of pollution and how we can combat it more successfully.



Above: Beach survey taking place.





Figure 5. Relative abundance of different types of waste found at three sites on Velaa Beach during beach surveys in 2024.

While the overall composition of waste was fairly consistent between sites (Figure 5), Site 3, located on the seagrass side of the island, was the most heavily impacted by plastic pollution, with plastics accounting for 75.8% of all items collected there, and Site 1 at the boatyard showed a noticeably higher proportion of paper and cardboard.

In all three survey sites, plastic materials made up the largest proportion of waste recorded in 2024, followed by, but far exceeding other categories such as cloth, glass, and ceramic fragments (Figure 5).

Across all sites combined, a total of 2,847 individual plastic items were recorded (Figure 6).

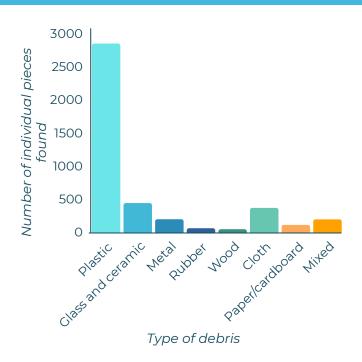


Figure 6. Total number of individual items recorded in each waste category across all three survey sites combined in 2024.

Considering the relatively small areas surveyed, this figure highlights the scale of the issue facing Naifaru. Plastic pollution is not just present, but deeply entrenched in local coastal environments, threatening the health of marine habitats as well as the marine life that depends on them.

These results stress the urgent need for targeted waste reduction, better management strategies, and community-driven solutions to reduce the flow of plastic into our island environment.

Community Beach Cleans

Here at AMC, involving the local community in large-scale beach cleanups is an important activity that makes envrionmental protection a shared responsibility.



The Thirth Call

Above: Photos with Madhrasathul Ifthithaah Scouts during a Community Beach Clean in March 2024.



Above: Photos from International Coastal Clean Up Day with Madhrasathul Ifthithaah Girl Guides.

In 2024, AMC conducted five community council beach clean with events members and students from Madrasathul Ifthithaah, the local school in Naifaru. Across all five events, we brought together 350 community members in total to help clean-up Naifaru's beaches, and we hope to expand this impact in the future with more community involvement.

Some of the highlights included a cleanup of Velaa Beach and Sunset Beach for International Coastal Cleanup Day (21st September) with 106 Girl Guides and Scouts, as well as a clean-up of Naifaru Harbour to Velaa Beach with 102 students from Madrasathul Ifthithaah on December 1st!



Above: Group Photos with 102 Madhrasathul Ifthithaah schools kids for a Community Beach Clean in December 2024.

Parley Maldives Collaboration

In October 2022, we launched an important partnership with Parley Maldives to recycle plastic types 1, 2, and 5—the only form of waste segregation currently available on the island.

With limited waste management infrastructure, all other waste continues to be mixed and openly burned at the island's waste management area.

In 2024, we sent 62 jumbo bags filled with plastic waste to Parley's facility in Malé, where it is processed and recycled into new materials used by global brands such as Adidas!

Each bag weighs 30-40 kg, amounting to an estimated 1,800-2,500 kg of plastic diverted from burning and instead recycled for reuse.



Above: Parley bags filed with recyclable plastic, ready to be sent to Malé for processing.

Clean-Up Events

Clean-Up South Asia Week

The Clean Up South Asia campaign is a new movement driven by passionate vouths across South Asia, aiming to address the issues of waste mismanagement through awareness and community clean-ups.

The hope is that much like World Ocean Day and Earth Day, South Asia Clean-Up Week will become an annual event marked in everyone's calendars.



Above: Volunteer during a harbour beach clean for Clean Up South Asia Week.

AMC was delighted to represent the Maldives in the first instalment of this regional initiative. alongside delegates from Sri Lanka, Nepal, Bhutan, India, and Pakistan, to work towards a cleaner and safer future.



Above: AMC staff with trash collected during a clean up dive for Clean Up South Asia Week.

We conducted various clean-up activities with our volunteers throughout the week, including a litter-pick at Naifaru Harbour, Velaa Beach, a snorkel clean-up on Naifaru's house reef, and a clean-up dive below the local swim track at Velaa beach.



Above: Volunteers during a beach clean for Clean Up South Asia Week.

We also conducted upcycling workshops to transform ghost nets into bracelets and keychains, and an outreach session with local school children to teach them about the issues of waste mismanagement through a miniature 'Captain Fanplastic' session.

Our resort marine biologists also played their part by carrying out snorkel cleanups at their respective resorts.



Above: Local kids participating in a 'treasure hunt' beach clean as part of a minature 'Captain Fanplastic' module for Clean Up South Asia Week.

Global Ocean Clean-Up

Global Ocean Cleanup, organized by the Oceanic Society in partnership with Sea Turtle Week, is a global initiative to combat ocean plastic pollution. AMC was grateful to receive a grant from the Oceanic Society to support this campaign, held on June 15th – 16th.

We collaborated with Cora Cora Maldives, who joined us, bringing 13 staff members from their resort to help with a beach clean-up near Naifaru boatyard.



Above: Group photo with the Cora Cora Resort team..



Above: Cora Cora Resort staff assisting with a clean-up of Velaa Beach.

While this beach clean was taking place, we simultaneously had seven people join a clean-up dive, to remove trash from around our house reef!

Above: Diver's sorting through trash collected during the Global Ocean clean-up dive.

The most common items found included fishing line, sanitary products, cement bags, food wrappers and plastic bottles.

We carefully catalogued all the items from the clean-up event, and cleaned several pieces to use for an art project which was submitted to the Oceanic Society's Art Competition, designed by one of our international volunteers.

They created a 'living wall', consisting of hanging plant pots made from plastic bottles, fishing rope, wood, and plastic bags, all of which were found during the clean-up.





Above: AMC's entry to the Oceanic Society's Art Competition.

PADI Aware Week

PADI Aware week is a 7-day global event (this year running from the 14th - 22nd September), which promotes marine conservation within the dive community. We collaborated with our local dive partners 'Aqua Dive & Water Sports' to host a range of events in celebration of the event, working towards our combined goal of protecting Naifaru's reef ecosystems.



Above: AMC team gearing up for a clean-up dive during PADI Aware Week.

On Tuesday 17th we carried out a cleanup dive along Naifaru's House Reef. A total 54 kg of waste was collected by our team of six divers. In the evening we watched Marine Conservation Documentary 'Seaspiracy' out on Velaa beach under the stars, with locals invited to join if they wished.



Above: AMC staff with trash collected during the PADI Aware Week.

Additionally, on Thursday 19th September, our Coral Restoration instructor and AMC Marine Biologists conducted a coral planting dive, attaching 20 new fragments to our coral frames, as part of the celebrations.



Above: AMC Marine Biologists attaching coral new coral fragments to Frame15 during PADI Aware week.

Underwater Clean-Ups

Snorkel Clean-Ups

In addition to the beach clean-ups, we also run regular snorkel clean-ups with our volunteers as a part of their afternoon activites.

We focus our efforts on Naifaru's house reef, due to the large amount of plastic waste build up around this area, from both local waste dumping and influx of trash due to inflow of ocean currents.



Above: AMC staff and volunteers after a clean-up snorkel.

During 2024, we carried out a total of 28 snorkel clean ups on our reef. From most of these, we were able to sort the debris and collect data on the type of trash found.

Our most common and problematic items include plastic water bottles, fishing line and food wrappers.

A total of 81 plastic items were collected in total over the year, and similarly to the beach survey results, glass and ceramic pieces are also the second most common find after plastic trash (Figure 7).

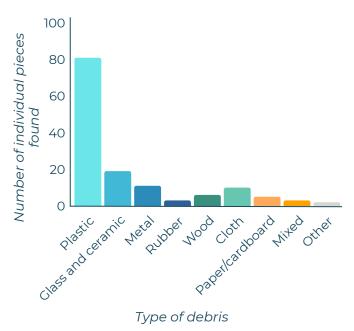


Figure 7. Waste material found on Naifaru House Reef during snorkel clean-ups in 2024.

Dive Against Debris

During the final quarter of the year, wer partnered with Aqua Dive & Watersports to conduct weekly PADI Dive Against Debris sessions. Similarly to snorkel cleanups, we focus our efforts on one particular patch of coral on our house reef at 12-18m depth. Between November and December 2024 we conducted 7 Dive Against Debris sessions, collecting over 239kg of trash from the house reef cumulatively.



Above: Staff recording data on the items collected during a Dive Against Debris session.

Once weighed, the trash is sorted into sections in a similar method to the beach survey. This data is collected for AMC to monitor, but also sent to PADI AWARE to add data to their Maldives Dive Against Debris database.



Above: Staff after a Dive Against Debris, standing next to the trash collected.

Megafauna Sightings

Throughout 2024, every excursion and snorkelling trip conducted by AMC carried a dual purpose: not only to provide enriching marine experiences, but also to systematically record sightings of megafauna species. This long-term monitoring contributes valuable baseline data on the distribution and abundance of large marine wildlife around Lhaviyani Atoll, enhancing our understanding of local biodiversity.



Above: Black blotched stingray, commonly seen in the deeper parts of our house-reef.

Our sightings are naturally influenced by how often we visit certain areas, with more observations coming from sites closer to Naifaru and the nearby uninhabited islands of Veyvah and Vavvaru, which we frequent most. In these western parts of the atoll, we tend to encounter rays, turtles, and dolphins more regularly.

One of the highlights is often the spinner dolphins. It's not unusual for them to join our boat in pods, riding the bow waves and leaping out of the water in spectacular spins on the way to an excursion site — always an unforgettable experience, even for those of us who see it often.

In the northern tip of the atoll, sightings were dominated by sharks (Figure 8)—primarily blacktip reef sharks—and rays, most frequently white-spotted eagle rays.

Recording megafauna sightings is a vital part of our mission to protect Naifaru and its surrounding environment. These observations provide valuable ecological insights into the behaviour and habitat use of different species and help us monitor whether their presence is changing over time.

By monitoring shifts in abundance and distribution, we can better assess ecosystem dynamics and identify priority areas for conservation to support the long-term protection of marine wildlife in Lhaviyani Atoll.

We also contribute our findings to broader research efforts by sharing elasmobranch sighting data and manta ID photographs with the Manta Trust, and submitting turtle identification records to the Olive Ridley Project. Through these collaborations, our observations feed into national datasets that are vital for tracking megafauna across the Maldives. This collective approach strengthens conservation outcomes while supporting organisations that do not have a permanent presence in Lhaviyani Atoll.



Figure 8. Piecharts representing the relative number of sightings of different megafauna groups at different areas around Lhaviyani Atoll.



AMC AT SIX SENSES KANUHURA

Research

In-Water Turtle Surveys

Throughout the year, a dedicated effort was made to monitor the sea turtle population through research dives and snorkel excursions. A total of 10 research dives were conducted, resulting in 39 turtle encounters. Additionally, participation in 101 snorkel boat trips led to a record of 269 individual turtle encounters, bringing the total number of recorded sightings to 308.



Above: our sea turtle biologist, Athif, taking an ID shot of a hawksbill turtle at Kanuhura

New Turtles Identified

Data collection efforts contributed to the identification process, with 47 turtle photo IDs uploaded for analysis to help improve our understanding of their distribution and movements. These findings help enhance conservation efforts and contribute to long-term monitoring of the species.



Above: one of the sea turtles identified at Six Senses Kanuhura

One of the biggest highlights of 2024 was a July snorkel at Kuredu Caves, where a rare mating event between two green sea turtles was witnessed. The female had been sighted at the site before, while the male appeared to be a new individual

AMC AT SIX SENSES KANUHURA

This unexpected encounter made the snorkel truly unforgettable and left a lasting impression on everyone present.



Above: Green Sea Turtles Mating - Photo by Athif

Sea Turtle Nesting Activity

Nesting activity across Six Senses Kanuhura and its surrounding islands was closely monitored, with a total of 24 nesting activities recorded. 6 nests were documented on Six Senses Kanuhura, along with 2 nests on Masleggihuraa and one nest on Jehunuhuraa. In addition, 15 false crawls were observed across the three islands (5 on Kanuhura, 7 on Masleggihuraa, and 3 on Jehunuhuraa).

A standout moment in 2024 took place on May 17th when a hawksbill sea turtle came ashore to nest at Six Senses Kanuhura, marking our first nest of the year.



Above: Sea Turtle Biologist, Athif, with a nesting Hawksbill turtle on Kanuhura

The rare day-time event coincided with Endangered Species Day, coincidentally involving a critically endangered species!

AMC AT SIX SENSES KANUHURA

Guests and hosts observed the turtle from a respectful distance, creating an unforgettable experience that highlighted the importance of ongoing sea turtle conservation on the island.

Of all the 2024 nests, a total of 420 hatchlings successfully emerged, with an average hatching success rate of 86%.



Above: First green sea turtle nesting sighted in 2024

To enhance conservation efforts and guest engagement, 27 nest walks were conducted, offering visitors insights into sea turtle nesting behaviours.

The hatching process was observed during 3 hatching experiences, while 5 nest excavations were performed to assess hatching success and collect valuable data for future conservation efforts.



Above: our sea turtle biologist, Athif, with a Green sea turtle hatchling during a nest excavation

Guest Education

Engaging guests in marine conservation remained a key focus throughout the year, with various educational programs and interactive experiences conducted to raise awareness about sea turtles and their habitat.



Above: our sea turtle biologist, Athif, conducting a sea turtle presentation

AMC AT SIX SENSES KANUHURA

Celebrating World Sea **Turtle Day**

On World Sea Turtle Day, we hosted a special session with the kids' introducing young minds to fascinating world of sea turtles. Through engaging activities, the children explored different species, both globally and in the Maldives.

They were captivated as they learned about sea turtle life and the importance of protecting their habitats. Later, a lively presentation reinforced the significance of conservation efforts, making it a day of and discovery. learning. renewed dedication safeguarding marine to ecosystems.



Above: World Sea Turtle Day Kid's Club Session at Six Senses Kanuhra

Marine Exploration

In addition to these sessions, guests participated actively in marine exploration activities such as guided snorkelling excursions, which play a deeper crucial role in fostering appreciation for marine conservation among international visitors.



Above: AMC's Sea Turtle Biologist, Athif, conducting a guest sea turtle snorkel

Resort Staff Education

In addition to guest engagement, several training sessions were conducted with resort hosts to enhance their knowledge involvement with marine of and conservation.

AMC AT SIX SENSES KANUHURA

These training sessions included:

- Photo ID Training: 35 hosts were trained in sea turtle identification techniques using photo documentation.
- Nesting Training: 57 hosts learned how to monitor and document sea turtle nesting activity.
- Rescue Training: 21 hosts received hands-on training in responding to injured or stranded turtles.
- Orientation Presentation: 43 new hosts attended introductory sessions on marine conservation efforts.
- Educational Stall: 129 hosts engaged with interactive materials at conservation awareness events.

These initiatives have helped equip resort hosts with the necessary skills to support conservation efforts on the island, ensuring better protection for sea turtles and their habitats.

Community Engagement & Education

School Vsits

In 2024, nine school visits were organized to Six Senses Kanuhura were organized, engaging a total of 335 students from various islands.

The visits aim to inspire students, providing valuable knowledge about environmental conservation and career opportunities in the Maldives, while showcasing the diverse roles within the resort's operations. These efforts have contributed to a stronger connection between the local community and marine conservation, inspiring future generations to protect marine life.



Above: AMC's Sea Turtle Biologist, conducting an educational sessions with Lh. Atoll Education Centre students at Six Senses Kanuhura

Other Highlights

On November 24th, Athif represented AMC the Science at for Ocean Accounting Symposium, delivering a presentation on sea turtle research and conservation efforts at Six Kanuhura. The symposium, organized by MCCEE, MNU, and GOAP, provided a platform for discussing ocean research challenges and opportunities, and AMC won a first place prize in the student category!



Turtle Rescues

On 28th July 2024, a juvenile Olive Ridley turtle (*Lepidochelys olivacea*) was found stranded near a guest villa at Amilla Maldives. The turtle, later named Russell, was immediately assessed and found to have sustained severe injuries consistent with ghost gear entanglement.

His left front flipper had been amputated, and the right front flipper showed signs of a partial fracture and healed lacerations.





Above: Russel being transferred to Landa Giraavaru.

Due to capacity limitations at the Atoll Marine Conservation Centre, Russell was promptly transferred to the Four Seasons Landaa Giraavaru Rescue and Rehabilitation Centre for veterinary care.



Above: Russel being transferred to Landa Giraavaru.

According to the team at Four Seasons Landa Giraavaru, Russell continues to experience buoyancy issues and has limited mobility in his right flipper as he recovers from the fracture. Additionally, his stump has not fully healed, with some bone still exposed. However, Russell remains active and has a strong appetite, which are positive signs of recovery. He continues to receive dedicated care under the capable supervision of the veterinary team at Four Seasons. We extend our gratitude to the transport team and excursion guide from Amilla Maldives for their assistance in this rescue!

Megafauna Surveys

Marine megafauna play a vital role in maintaining the health and balance of marine ecosystems through various ecological functions. As large animals, they consume significant amounts of biomass, directly influencing their surrounding environment. Additionally, their excrement introduces essential nutrients that can be transported across ocean ecosystems.

These species also interact with their habitats in mechanical ways, such as through foraging and movement, which can reshape ecosystems in significant ways.

Beyond their ecological importance, megafauna hold substantial cultural, historical, and economic value in the Maldives, where wildlife tourism is among the highest-paying industries.

To enhance our understanding of these charismatic species monitor and population changes over time. we conduct systematic tracking of megafauna populations (Figure 9). This research provides valuable insights into species diversity, abundance, and key habitats, which can inform decisions regarding marine protected areas. In Baa Atoll, our research primarily focuses on sea turtles, rays, and sharks, aiming to support conservation efforts and sustainable marine management.

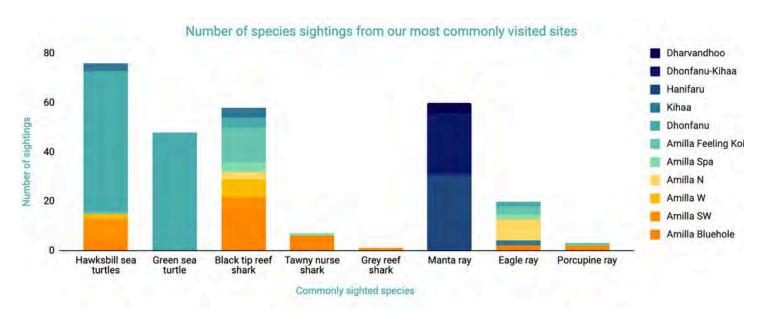


Figure 9. Illustrates the distribution of our most frequently sighted species (Hawksbill turtle (*Eretmochelys imbricata*), Green sea turtles (*Chelonia mydas*), Black tip reef sharks (*Carcharhinus melanopterus*), Tawny nurse sharks (*Nebrius ferrugineus*), Grey reef sharks (*Carcharhinus amblyrhynchos*), Manta rays (*Mobula alfredi*), Eagle rays (*Myliobatidae*), Porcupine rays (*Urogymnus asperrimus*)) across our most visited sites.

Sea Turtles

As shown in Figure 9 and Figure 10, Dhonfanu is a key site for sea turtle observations, with high numbers of both green (Chelonia mydas) and hawksbill (Eretmochelys imbricata) turtles. The house reef at Dhonfanu is heavily degraded, with minimal live coral cover, proliferation to the corallimorphs (Corallimorpharia) that cover much of the hard coral rubble. This abundance likely attracts hawksbill turtles, known to feed on corallimorphs. Additionally, Dhonfanu features seagrass meadow on its opposite side, where green sea turtles are often seen feeding before returning to the reef to rest.



Above: Hawksbill turtle sighted at Dhonfanu

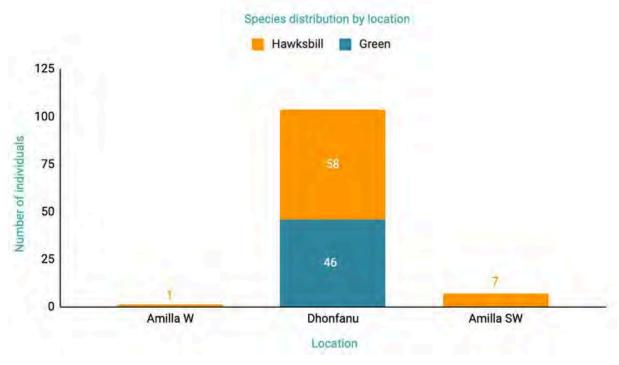


Figure 10. Compares Green sea turtle and Hawksbill turtle population recorded at highly visited sites Amilla SW (Amilla South West), Dhonfanu and Amilla W (Amilla W).



Figure 11. Sea turtle photo ID submissions from July-December.

16 NEW INDIVIDUALS!

A total of 123 turtle sightings were submitted from surveys by our marine biologist and contributions from our excursion and sustainability teams at Amilla Maldives. With 51 submissions during Quarter 3 (July, August, and September) and 72 submissions during Quarter 4 (October, November, and December) (Figure 11).

The majority of the recorded population were juvenile hawksbill (63) and green sea turtles (10) and lastly 5 adult hawksbill turtles (Figure 12).

These findings are consistent with past Photo ID surveys in the Maldives that covered 4 atolls, and similarly reported a prevailing population of juvenile hawksbill turtles followed by juvenile green sea turtles (Hudgins et al. 2023).

The high occurrence of young individuals could be a sign of a recovering population, as well as an indication that these sites provide sufficient foraging opportunities and safety for juvenile populations.

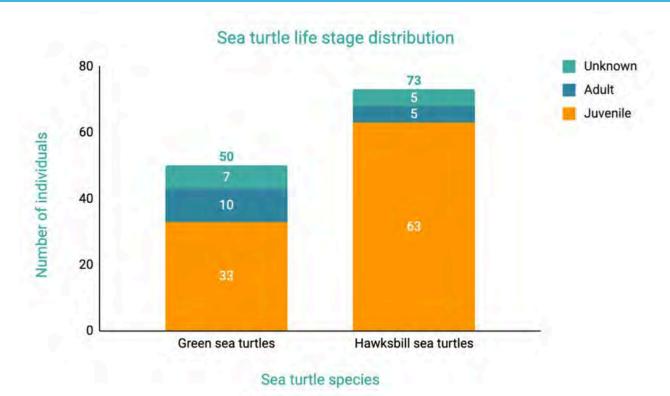


Figure 12. Distribution of recorded populations by life stage.

Alternatively, these results could suggested that our most visited locations are non-preferable for adults. Additionally, it is more likely that adult turtles of both species spend a greater proportion of their time in the open ocean where they are less likely to be photographed.

Hudgins JA, Hudgins EJ, Köhnk S, Riyad EM, Stelfox MR (2023) 'A brighter future? Stable and growing sea turtle populations in the Republic of Maldives'. PLoS ONE, 18(4), doi: 10.1371/journal.pone.0283973

Sharks

Most of our shark sightings are blacktip reef sharks (*Carcharhinus melanopterus*), which are vulnerable due to the degradation of their shallow reef habitats, essential for foraging and reproduction.

The area beneath the 'Feeling Koi' overwater restaurant at Amilla Maldives consistently records the highest number of blacktip reef sharks (Figure 9).

The shaded area under the restaurant attracts schools of fish, providing ample food for both adult and juvenile sharks. The shallow waters also offer protection from larger predators, making it an ideal nursery habitat.

Additionally, we have recorded sightings of 7 tawny nurse sharks (*Nebrius ferrugineus*), 2 lemon sharks (*Negaprion brevirostris*), 2 grey reef sharks (*Carcharhinus amblyrhynchos*), and 2 whale sharks (*Rhincodon typus*) during manta season between Dhonfanu and Kihaa.



Above: Whaleshark sighted in August 2024.

Rays

The most commonly sighted species were manta rays, with 61 individual sightings recorded both inside and outside Hanifaru Bay during the manta season, which coincides with peak plankton density in the water. These mantas were observed exhibiting various group feeding behaviours as they took advantage of the plankton-rich waters. The season experienced some unusual fluctuations, such as a 2 week period with no sightings, but ended on a high note with the return of mantas to Hanifaru Bay.

Spotted eagle rays (Aetobatus narinari) were the second most frequently sighted species, with 21 sightings, particularly around the Amilla Maldives (Figure 1). Stingrays, including the porcupine (Urogymnus asperrimus) and cowtail rays (Pastinachus sephen), were observed less frequently, likely due to the lack of significant lagoon areas in Amilla Maldives, which are preferred by stingrays for foraging.

Sea Turtle Nesting Data

Between July - December 2024, Amilla Maldives received two nests on the island, both laid by the same female Hawksbill! There were notable differences between the two nests in terms of location, environmental conditions, and success rates.



Above: Hawksbill hatchling making its way to the ocean.

Nest #1

The first nest was laid on November 7, 2024, and emerged on January 16, 2025, after an incubation period of 70 days.

Located near the beach within a vegetated area, the nest faced several environmental challenges. When the nest was laid during the Hulhangu (NE) monsoon, the tide was low. However, by the time the nest was ready to hatch, the monsoon had shifted to the Iruvai (SW) monsoon, and the nest was inundated by waves for about two hours each day for a week. This posed a significant concern, as prolonged submersion could result in 100% hatchling mortality.

Although we missed the initial eruption of hatchlings, we observed the remaining hatchlings emerging throughout the day. These hatchlings appeared noticeably lethargic, likely due to the flooding of the nest after it had opened. The waves repeatedly covered the nest, forcing the hatchlings to dig through the sand to find a way out. Despite these challenges, we observed 9 straggler hatchlings successfully making their way to the sea!

Nest #2

The second nest was laid on November 21, 2024, and emerged on January 31, 2025, after an incubation period of 71 days. Located near the tree line, close to Nest #1 but much further inland, this nest was laid in dark soil.

This may have created different environmental conditions, such as variations in temperature and moisture. Thanks to the vigilance of our security team, we were able to witness the emergence of 50-60 hatchlings. The turtles made their way safely to the sea without any disruptions.

The second nest was laid on November 21, 2024, and emerged on January 31, 2025, after an incubation period of 71 days. Located near the tree line, close to Nest #1 but much further inland, this nest was laid in dark soil, which may have created different environmental conditions, such as variations in temperature and moisture.



Above: Female Hawksbill laying her second nest on Amilla.

Thanks to the vigilance of our security team, we were able to witness the emergence of 50-60 hatchlings. The turtles made their way safely to the sea without any disruptions.

These hatchlings were noticeably more energetic compared to those from the previous nest. Over the next 48 hours, no additional straggler hatchlings were observed leaving the nest.



Above: Hawksbill hatchling emerging from Amilla's second nest.

We sincerely thank the nest watch and security teams at Amilla Maldives for dedicating their time, allowing us to witness this special moment!

Excavation Results

The excavation results revealed varying success rates between the two nests. Nest 1 nest achieved an impressive success rate of 89.7%, with 120 out of 127 eggs hatching successfully and 114 hatchlings reaching the sea. Only a small number of underdeveloped eggs were found, and one hatchling that had pipped unfortunately did not survive (Figure 13).



Above: Rafha carrying out a nest excavation.



Above:

In contrast, Nest 2 exhibited a lower success rate, (80 out of 116 eggs hatching) with a success rate of 68.9%. Developmental issues appear to have contributed to this outcome, as 33 embryos were underdeveloped, and 3 ceased development at stage 4 despite showing no signs of infection or malformation.

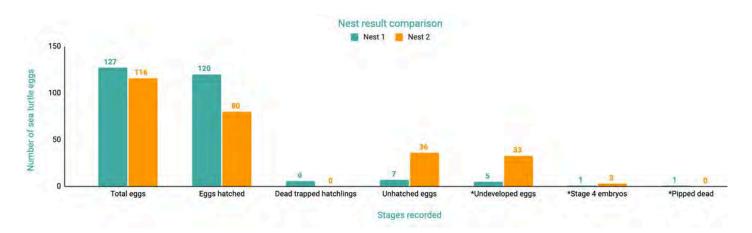


Figure 13. Comparison of nest success between Nest 1 and Nest 2 laid by the same Hawksbill sea turtle.

These findings suggest that genetic factors or environmental conditions may have influenced the nest's overall success.

White-tailed Tropicbird Surveys

Despite the Maldives being home to 207 protected bird species, seabird research within the country remains limited.

Seabirds play a crucial role in maintaining the health of island ecosystems. By transporting large quantities of nutrients from the open ocean to islands through their excrement, seabirds significantly enhance island productivity. These nutrients benefit both terrestrial vegetation and surrounding coral reefs.

Studies have shown that fish communities on reefs adjacent to seabird-populated islands exhibit 48% greater biomass (Graham et al., 2018).



Furthermore, seabird presence is associated with increased coral growth rates and improved reef resilience, particularly in areas free from invasive rats (Benkwitt et al., 2023).

Graham NA, Wilson SK, Carr P, Hoey AS, Jennings S and MacNeil MA (2018) 'Seabirds enhance coral reef productivity and functioning in the absence of invasive rats', *Nature*, 559(7713):250-253, doi: 10.1038/s41586-018-0202-3. Epub 2018 Jul 11.

Benkwitt C, Angelo CD, Dunn RE, Gunn RL, Healing S, Mardones ML, Wiedenmann J, Wilson SK and Graham NA (2023) 'Seabirds boost coral reef resilience', *Science Advances*, 9(49):eadj0390, doi: 10.1126/sciadv.adj0390

At Amilla Maldives, we are fortunate to have a nesting population of White-tailed tropicbirds, one of only three tropicbird species globally. These birds are easily recognisable by their white plumage, distinctive black markings around their eyes and wings, and their long, white tail feathers.



Above: White-tailed Tropic Bird in its nest with 2 week-old chick.

Breeding & Nesting

White-tailed tropic birds spend the majority of their time at sea, returning to land only to nest. They are the smallest of the three tropicbird species and reach sexual maturity at around four years of age. These birds display strong site fidelity, often returning to the same nesting islands and even the same nesting sites year after year.



Above: Adult white tailed tropic bird feeding its chick.

In the Maldives, where there are no natural predators, they prefer to nest on the ground, commonly under Banyan trees, Indian Almond trees, and Screw Pine trees.

The nesting process of the white-tailed tropic bird (*Phaethon lepturus*) spans approximately four months. Eggs typically hatch after six weeks, and chicks take about 11 weeks to develop into fledglings ready to leave the nest.

Each breeding pair lays only one egg per nesting attempt. Occasionally, nests may be abandoned, and territorial disputes between individuals can occur.



Above: Adult white tailed tropic bird in nest.

The tail streamers are most notable during courtship displays, where pairs perform synchronised flight patterns, demonstrating strength and stamina to potential mates.

Currently, there is no published research on White-tailed Tropicbirds in the Maldives. However, Amilla's Sustainability Manager, Zoe Cox, is leading the first baseline study on this species in the country, with plans to publish her findings soon. Zoe and Rafha conduct weekly surveys to monitor all known nesting sites around the island.

During each survey, we collect data on nest activity, chick development stages, and general behavioural observations. These efforts aim to enhance our understanding of this understudied species and inform future conservation actions.

Over the past 6 months, we have had 16 successful nests that have had chicks fledge (Figure 14). 18 potential nests where adults have occupied nesting sites but have both laid or not laid and 6 unsuccessful nests where eggs have been broken or where hatchlings had died before fledging. We also had 1 unassessed nest as we were not able to observe the development of the nest weekly.

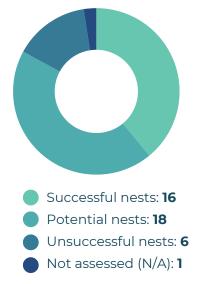


Figure 14. Illustrates the nesting data collected during July-December.

Over the next year, we plan to continue our weekly surveys and begin a tagging program for individual birds. Tagging will allow us to confirm returning individuals and track their movements across the region, offering valuable insight into their migration and breeding patterns.

Guest Education

The tourism sector remains one of the most lucrative industries in the Maldives, with 2024 marking a record year as the country welcomed over 2 million visitors.

While many tourists are drawn to the Maldives for its stunning scenery and pristine ocean views, a significant number visit specifically to experience the country's charismatic marine wildlife and vibrant coral reefs.

To promote responsible behaviour and raise awareness of critical environmental issues, we offer presentations on topics like coral bleaching and sea turtle conservation. These sessions deepen guest understanding of marine threats and how they can help.

Each week at our guest cocktail party, we host a marine biology stall where visitors can ask about marine life they have seen, learn about sea turtle identification, adoption, and explore AMC's broader conservation work.

We also lead guided snorkelling excursions, where we offer a presentation about marine life followed by a snorkel to experience them first hand.

For children, we run weekly interactive lessons that foster early respect for marine conservation.

Through these activities, we aim to inspire guests to adopt sustainable lifestyles and advocate for high environmental standards wherever they travel.

At AMC, one of our key objectives is the protection and conservation of Naifaru and its surrounding marine ecosystems. A fundamental part of this goal involves raising awareness among staff and visitors, ensuring they understand how to interact responsibly with marine wildlife minimize their environmental education impact. Through and engagement activities, we aim to encourage positive behavioral changes that support marine conservation both in the Maldives and beyond.



Above: Rafha delivering educational presentation to resort guests at Amilla Maldives.

526 EDUCATIONAL INTERACTIONS WITH GUESTS

Resort Staff Education

During staff orientations at, we provide training on Amilla Maldives' sustainability practices, including the role of AMC in marine wildlife rescue and rehabilitation, research initiatives such as sea turtle identification and megafauna surveys, coral frame projects and spreading awareness to guests.

We also conduct specialized training for sessions various resort teams. coverina codes \circ f conduct for interactions, turtle megafauna sea nesting monitoring and protection and AMC's conservation work.

EDUCATIONAL INTERACTIONS WITH STAFF



Above: Rafha delivering educational presentation to resort staff at Amilla Maldives.

Additionally, the presence of 2 turtle nests on the island created opportunities for staff engagement, where we involved team members in nest watch duties and excavations, providing experiences that deepened their understanding of turtle conservation.

Reef Cleans

To do our part in removing the trash we can from our oceans, we organize monthly reef cleans around the island. These efforts help reducing pollution and fostering a sense of responsibility for preserving our environment.

From July to December we have collected 1402m of fishing line, rubber belt, metal pipe and rods.

Furthermore, we have collected a large variety of plastic (food packaging, toys) and metal products (cans, brackets, sheets) as well as other miscellaneous items.



Above: Amilla Maldives staff after a snorkel cleanup.

CONCLUSION

As we close the chapter on 2024, we reflect with gratitude on another year of growth and positive change. This year's successes—big and small—would not possible without have been the unwavering dedication of our team, the generosity of our supporters, and the ongoing collaboration with our partners and community. Whether through time, expertise, or financial support, each contribution has played a vital role in helping us protect and care for the sea turtles of the Maldives. We are especially proud of the progress we've made in rehabilitation both outcomes and education efforts. Our data continues to contribute to the wider body of conservation knowledge, and our release numbers remind us that recovery is possible when we work together.



Above: Ufaa being retrieved from the FMC to be released.



Above: Biscuit, one of AMC's past turtle patients

As a small, locally managed NGO, we know that our strength lies in the people who believe in what we do. Trust and support empowers us to keep growing—not just in numbers, but in impact.

Looking ahead to 2025, we are excited to continue expanding our centre and veterinary facilities, with the goal of caring for more patients and providing the highest standard of treatment. With continued support, we remain committed to protecting these incredible animals and inspiring future generations to do the same.

Here's to another year of sea turtle rehabilitation, community outreach, nd coral restoration, and protecting Naifaru and its surrondings.