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Sea turtles have existed on Earth for over 120 million years and currently there are seven species left in the world. These incredible animals grace the waters of all the world's oceans except the Arctic.

Oceans play a critical role in sustaining human life by providing essential resources such as food, freshwater, and oxygen. Therefore, preserving and protecting our oceans is crucial for the survival of our species.

As "keystone" species, sea turtles play a vital role in maintaining the health of the ocean, including protecting fish stocks, keeping coral reefs healthy, and preventing sea grass meadows from overgrowing and dying.

However, sea turtles face many threats to their survival.

ORP IS ON A MISSION TO PROTECT SEA TURTLES AND THEIR HABITATS THROUGH RESCUE AND REHABILITATION, SCIENTIFIC RESEARCH, AND EDUCATION AND OUTREACH.

Olive Ridley Project, is a registered charity: 1165905 England & Wales CR/04/2022 Maldives

OUR WORK



Sea Turtle Rescue & Rehabilitation
We treat injured sea turtles rescued
in the Maldives at our Marine Turtle
Rescue Centre, which has a fully
equipped veterinary clinic and a
resident veterinary team.



Environmental Education

Education is a powerful tool to
increase awareness, engage people
and stimulate action. We educate
school children, communities, divers,
fishermen, tourists, resort staff,
biologists, and the general public, in
person and <u>online</u>. We also offer
<u>volunteer</u> and internship programs.



Scientific Research

We conduct research about sea turtle populations, distribution, health and threats to improve scientific knowledge and inform sea turtle conservation policy.



Collaboration & Community Outreach
To create long lasting change, we
ensure that our conservation
initiatives are practised from groundup. We therefore collaborate with
affected industries, communities,
governments, local and International
NGOs, in order to apply research to
practice.

BY THE NUMBERS

Since each project's inception



7,144

Sea turtles identified



215

Turtle patients admitted



Turtle patients

released

Turtle patients deceased

4981

Rehabilitated olive ridley turtles satellite tagged

686 2

Sites w/sea turtles sighted



Sea turtle sightings recorded in the Indian Ocean



197 Volunteers hosted at the Rescue Centre



Sea Turtle Guardian Programme Graduates





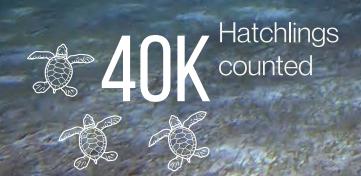


Publications

58K Square metres of ghost net repurposed













Innovative regenerative medicine treatment for wound healing introduced at the MTRC.

READ MORE ON PAGE 7



A new paper published on sea turtle population trends in the Maldives showing the usefulness of Photo-ID.

READ MORE ON PAGE 9



Turtle Workshop programme started with Beach Management Units in Kenya facilitates community involvement. READ MORE ON PAGE 10 We have just completed another eventful quarter, bidding farewell to some of our valued team members as they embarked on exciting opportunities. On the brighter side, we were thrilled to extend a warm welcome to a new group of biologists, interns, and students who joined our team!

In Kenya, we expanded our in-water monitoring efforts along both the north and south the coast in cooperation with our project partners. In the Watamu area, extensive snorkel surveys were conducted together with collaborators from Bahari Hai to develop monitoring protocols in the unique and stunning Mida Creek and the adjacent Marine National Park. We are aiming to find out more about how sea turtles use these species-rich habitats at this river mouth and reef area.

Additionally, Project Coordinator Leah acquired her remote piloting license which will enable us to continue our sea turtle drone monitoring program after the initial pilot study conducted in 2022.

Lastly, students Stacy and Vincent from Kenyatta University joined the team for their practical experience placement in June. Stay tuned for more on their research projects in the coming months!

In the Maldives, the second quarter was a very successful one for our photo-ID programme, as a paper on the population structure and trends of sea turtles in the country was published.

Additionally, the team recorded a high number of turtle encounters and even discovered a new hawksbill turtle hotspot in Laamu Atoll. New sea turtle biologists Sarah in Noonu and Maria in Lhaviyani, as well as a Masters student Amy in Laamu, arrived during the last quarter and dove right into their monitoring tasks focusing on photo-ID and behaviour research.

Our veterinary team received a smattering of new ones including olive ridleys, hawksbill, and even a green turtle! Besides entanglements, the admissions included weakened, floating, and stranded turtles. Our new veterinary nurse, Tristan, took over the baton from Lauren, and is now well settled in with the team at the Rescue Centre.

Meanwhile, over in Oman, the last three months brought an unexpected green turtle hatching event along with a bycatch incident. Even more surprising was the discovery of one of our previously identified turtles amongst the bycatch! Thankfully, the turtle sustained no injuries and was successfully released.

Moving on to Pakistan, our team was featured prominently in a short documentary commissioned by the US consulate and published in June. It highlights the many aspects of our work in the country, from observing turtles in-water and removing ghost nets to repurposing the nets as part of our circular economy project.

Across the globe in Seychelles, the hawksbill nesting season came to an end in April, which gave our sea turtle biologist time to work on data analysis, more in-water monitoring, and exciting sea turtle learning and outreach sessions with locals and visitors alike.

The second quarter of the year was filled to the brim with exciting new and ongoing education and outreach campaigns. Besides our annual celebrations for World Turtle Day, Sea Turtle Week, and World Sea Turtle Day online and in the field, we also joined local communities in cultural festivals, cleanup activities, and knowledge exchange meetings online and in person.

We are especially excited about our work with communities across our locations. In Kenya, we provided sea turtle conservation training to local stakeholders with the support of the Kenya Wildlife Service. In the Maldives, we conducted the first part of a community tour in Raa Atoll and launched a multi-stakeholder beach monitoring and protection programme on Laamu's Gaadhoo Island, one of the most important nesting sites in the country. The programme is a joint venture with the Environmental Protection Agency of Maldives, Laamu Atoll Council, Laamu Fonadhoo Council, and AgroNational Cooperation (AgroNat - the island leaseholder).

Continue reading for more details on these stories and more.



Over the past few months, the Rescue Centre has been bustling with activity and changes. We welcomed new members, both turtle, and human, and trialled exciting therapies in our brand-new clinic. Thanks to the popularity of our <u>Visiting</u> <u>Veterinarian Programme</u>, we hosted six brilliant veterinary surgeons from four different countries.

The last few months also saw a change in the weather. With the monsoon season slowly creeping in, we observed an expected drop in rescue cases. Despite this, we admitted eight sea turtle patients and bid a happy farewell to three as they returned home to the ocean.

At the end of May, we welcomed Tristan Neto, our new Veterinary Nurse, who took over from Lauren Valentine. Lauren, our first-ever veterinary nurse, spent a year contributing her skills to our practice. We are grateful for her work and although we are sad to see her go, we look forward to witnessing the position evolve with Tristan, who has already taken to the task with much gusto.



LAUREN VALENTINE I'm so proud of what I have achieved in this past year at the Rescue Centre. Being the first nurse came with a lot of pressure, but I feel my role contributed immensely to the Rescue Centre. I have learnt so much about sea turtles, and plan to further my learning, so that I can continue to help conserve them.

TRISTAN NETO - VETERINARY NURSE

Tristan was born in South Africa but moved to Brighton in the UK at a young age. She completed her degree with first-class honours in Veterinary Nursing in 2020, which included an elective module in exotics species. Since qualifying, she has been working within practices with an extensive exotic caseload and later moved to an exotics-only referral hospital.

Whilst working as an exotics referral nurse, Tristan gained experience with a large variety of species. Here she dealt with complex anaesthetics, medical nursing cases, and critical care nursing. Tristan is working towards a Diploma in Veterinary Nursing in Zoological and Exotic Species. Having already completed the avian module, she is now focusing on the reptile unit. On top of this, she is a certified marine mammal medic.

SHARING OUR KNOWLEDGE WITH THE WORLD

In June, we hosted our first – and long overdue – school visit for the year at the Rescue Centre.

Nineteen children of ages 4 to 19, from Baa Family and Children Service Centre in Eydafushi, spent the morning learning about sea turtles with us.

Read more about it on Page 12.

Limb Salvaging Protocol











Dr Max taking the audience through the sea turtle limb saving protocol followed at the Rescue Centre

In June, we extended our educational efforts to our digital audience by organising an online talk titled 'The World of Sea Turtle Medicine.' Veterinary programme Officer, Dr. Claire began the session with an introduction to ORP's rescue and rehabilitation efforts. Following that, Lead Veterinary Surgeon, Dr. Max engaged the 76 enthusiastic attendees, taking them through the fundamentals of sea turtle veterinary care, covering essential practices and procedures. The response from the participants was remarkable, with active participation through questions and requests for session recordings. Encouraged by the event's success, we have exciting plans to conduct more sea turtle veterinary sciencethemed digital events in the future, with an aim to benefit the global veterinary community.

NEW THERAPY TO TREAT ENTANGLEMENT INJURIES - REGENERATIVE MEDICINE

Zeliya, an adult female olive ridley sea turtle, became the first sea turtle in the Maldives and the first olive ridley in the world to receive a form of regenerative medicine called Platelet Rich Plasma (PRP). Regenerative medicine is an exciting new medical modality that our veterinary team recently started using this quarter.

WHAT IS PLATELET RICH PLASMA AND HOW DOES IT WORK?

PRP uses components of the patient's blood to create therapies that treat laceration injuries and wounds from the most frequently seen reason for admittance at the Rescue Centre - entanglement in ghost gear.

We draw a small amount of blood and process it in a specialised way that was developed by our veterinary surgeons specifically for sea turtles. This blood processing allows us to isolate particular cellular components – called platelets – and 'activate' them with biochemical compounds so that their healing properties are significantly enhanced.

After drawing a small amount of blood from Zeliya and activating it, we injected her platelets back into her wounds in a painless and simple procedure. This process creates a localised healing environment at the site of injury that accelerates recovery and repair of damaged tissue. Overall, Platelet Rich Plasma therapy can cut healing time in half compared to conventional treatment modalities.



Dr. Max administering Zeliya's first Platelet Rich Plasma treatment

WHY IS REGENERATIVE MEDICINE IMPORTANT AND WHY DO WE USE IT?

Our patients have an incredible ability to heal themselves. Regenerative medicine captures the most potent components of that ability and modifies it to maximise repair in minimal time. The source of regenerative therapy comes from our patients themselves, so no external drug or device is required to achieve the desired outcome.

We use regenerative medical techniques - Platelet Rich Plasma and Stem Cell Therapy - to craft precision-based therapies that have no side effects and heal our patients more quickly. This means that they can be returned back to their ocean homes sooner.

ZELIYA BEFORE AND AFTER TREATMENT WITH PRP



Before Platelet Rich Plasma Therapy: Zeliya's injuries



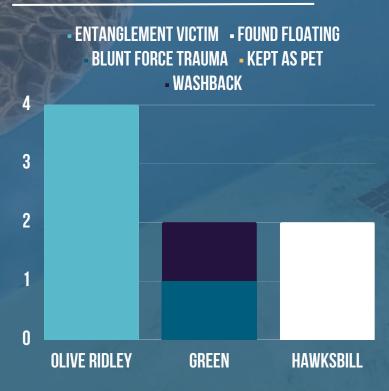
Six weeks after Platelet Rich Plasma Therapy: Zeliya's injuries



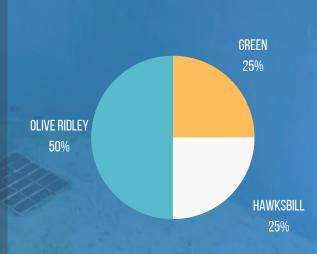
OUR TURTLE PATIENTS



REASON FOR ADMITTANCE (NEW)



PATIENTS BY SPECIES (NEW)



NEW PATIENTS ADMITTED

Thiki, a juvenile hawksbill, was admitted on 2nd April after being found floating and unable to dive by staff at Constance Moofushi Resort in South Ari Atoll. Thiki was released on 11th April.

Handhu, a sub-adult olive ridley, was admitted on 18th April, having been found entangled in a ghost net by the dive team at Nakai Dhiggiri Resort in Vaayu Atoll.

Aluvi, a juvenile hawksbill, was admitted on 22nd April, having been found floating and extremely weak by the boat crew from our partner resort, Six Senses Laamu. She passed away on 8th May from acute kidney failure.

Zeliya, a sub-adult olive ridley, was admitted on 22nd April, having been found entangled in a ghost net by the staff at Hilton Maldives Amingiri Resort & Spa in North Malé Atoll.

Hudumaa, a sub-adult female olive ridley, was admitted on 24th April after being found entangled in a ghost net by the staff of JA Manafaru Maldives resort in Haa Alifu Atoll. Hudumaa had lost three flippers due to the entanglement, was very malnourished, and, unfortunately, did not survive her injuries. She passed away on 25th April despite our best efforts.

CM12-3, a green hatchling was admitted on 8th May, having washed up on Coco Palm Dhuni Kolhu's beach. The hatchling was kept under observation overnight and released the next day.

Niyami, an adult male olive ridley, was admitted on 15th June after being rescued from a ghost net by the staff of Niyama Private Islands Maldives in Dhaalu Atoll.

Nautica, a sub-adult green turtle, was transferred to us from another rescue centre on 2nd June, after failing to respond to initial treatment. He had suffered severe trauma to his carapace and had been found unresponsive and floating in North Malé Atoll. Unfortunately, he passed away the following day after a night of intensive care at the Rescue Centre.

RELEASED PATIENTS

Thiki 11 April
CM12-3 9 May
Zuhura 16 June

DECEASED PATIENTS

Aluvi 8 May **Hudumaa** 25 April **Nautica** 3 May

NEW CLINIC



The new clinic at the Marine Turtle Rescue Centre

In June we were finally able to move into our brand new clinic! Our purposely built-in clinic gives us double the space and comes equipped with a laboratory/office room and a separate surgery room. We have also doubled our door width, which makes it much safer for our patients to be moved in and out of the clinic without any risk of trauma.

The move gave us the perfect opportunity to conduct our stock take and helped us update all our required consumables and equipment. We will soon be receiving a shipment to refurbish the clinical equipment, the details of which we will share with you in the next report.

We are very grateful to our partner resort Coco Palm Dhuni Kolhu for supporting our Rescue Centre and providing us with this new enhanced space, which is already enabling us to improve our patient care.



How do we know whether conservation efforts are effective? The basis for this evaluation lies in the analysis of population trends. To analyse population trends, we need an assessment of the number of individuals found in a specific region.

Finding out how many sea turtles there are in a region requires a method to identify individual sea turtles. This is where we use Photo Identification (Photo-ID), a non-invasive method that recognises individual sea turtles based on their facial scales. Photo-ID is used to study all life stages and sexes of sea turtles, in water, and on land.

In the Maldives, we mostly see sea turtles foraging and resting in reef and lagoon areas, while occasionally we also see mating attempts.

DID YOU KNOW?

The pattern of scales on sea turtles' face remains stable throughout their life. It can be compared to a human fingerprint! Although the colour pattern of a sea turtle changes from a uniform colour in hatchlings to a lighter and more patterned appearance in adults, the facial scales will always remain the same.

We established Maldive's sea turtle Photo-ID database in 2013, with the help of many dedicated citizen scientists and resident marine biologists. Since 2017, ORP team members in the field have been able to regularly collect data to grow our knowledge of sea turtles.

Thanks to this crucial data, we published a scientific paper in April 2023, analysing the abundance, distribution, and population trends for both hawksbill and green turtles on selected reefs in the Maldives. We applied statistical models to our Photo-ID data of nearly four years (pre-dating the COVID-19 pandemic) from ten sites across four atolls. This study, one of the first of its kind in the Maldives, provides an empirical estimation for sea turtle population trends while also accounting for differences in survey effort and detectability dynamics.



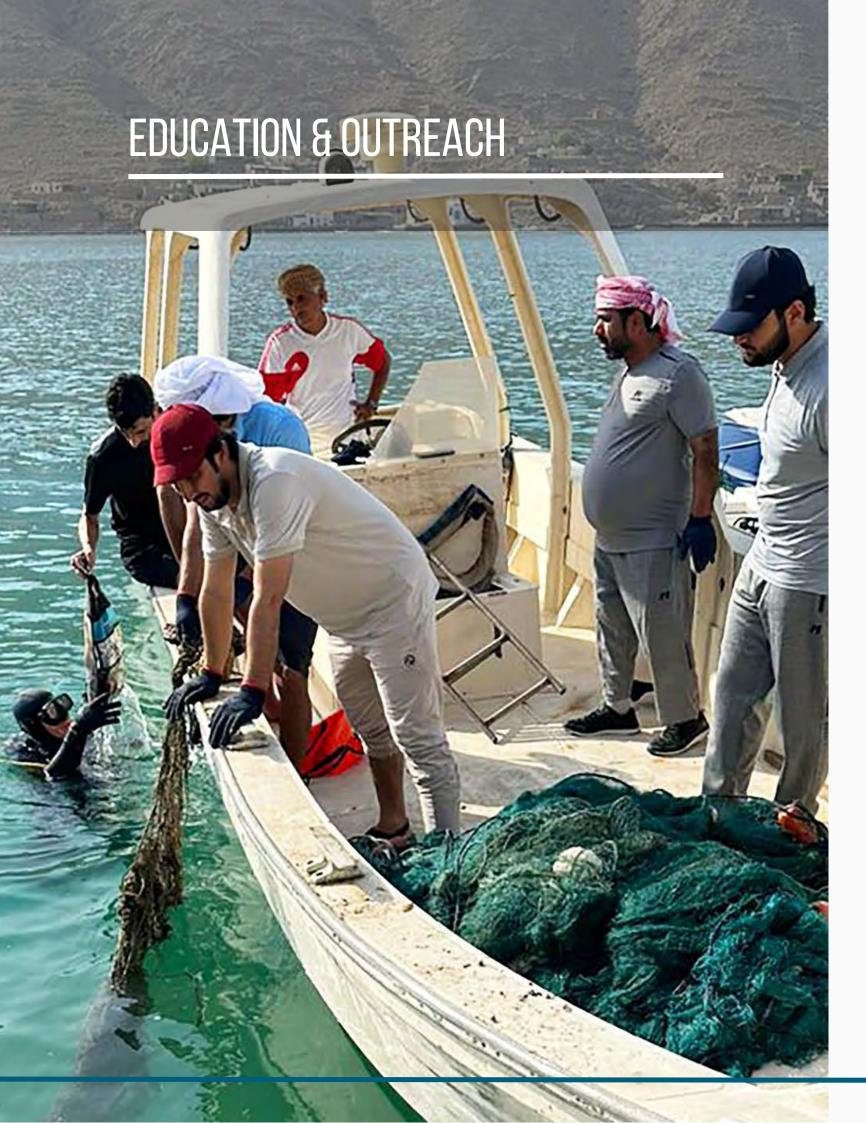
ORP Sea Turtle Biologist, Olivia, taking Photo-ID of a hawksbill turtle resting on a reef in Raa Atoll

Our analysis showed that the majority of sea turtles observed were juveniles. No individual included in this analysis was spotted in more than one atoll, which reveals how loyal sea turtles can be to certain reefs and how small their so-called "home ranges" are.

Our study also suggests that populations of both hawksbill and green species are stable and/or increasing in abundance over the study period. We observed differences in abundance at some reefs, coinciding with the monsoon seasons, which might be correlated to a difference in average water temperature between the seasons. Hawksbills are known to seek out deeper waters to avoid high water temperatures. This matches an increase in hawksbill sightings we observed on deeper dive sites in Laamu during the Southwest Monsoon.

While our analysis provides a glimmer of hope that sea turtle populations in the Maldives are following an upward trend, we still have to be cautious with this interpretation as not all populations analysed were stable, and our study period covers a relatively short time for such long-lived species.

Overall, it highlights the importance and value of long-term data collection, with a cost-effective method of utilising citizen scientists in collecting data points for effective monitoring of sea turtles populations.



April, May, and June have been busy months in the world of education and outreach! In addition to our ongoing projects and regular educational activities, we celebrated World Turtle Day on May 23rd, Sea Turtle Week from 12th to 16th June, and World Sea Turtle Day on June 16th (see next page).

We also conducted a two-week community tour in Raa Atoll in the Maldives, teamed up with the Environmental Authority of Oman for an ocean cleanup project in May (see page 20), conducted several workshops for Beach Management Units (see page 14), and organised the Global Ocean Clean-Up in Kenya (see next page), attended several festivals, and organised three webinars!



Sea Turtle Nest Monitoring Workshop

World Turtle Day is observed on 23rd May every year to celebrate and protect turtles, tortoises, and their disappearing habitats around the world. (not to be confused with World Sea Turtle Day, which focuses only on sea turtles). This year, Olive Ridley Project - Maldives, marked the day by hosting an online Nesting Workshop for local councils, NGOs, resort operators, and marine biologists.

The workshop focused on how to protect nests across the country and best practices for sea turtle nesting and hatching interactions. We also discussed how the attendees could collect nesting data under necessary research permits and help us better understand sea turtle nesting in the country. We are happy to report that we signed up several new data contributors after the webinar.

Over 50 people joined the webinar live and a further 1,200 people watched the livestream!

Festivals can serve as great educational settings, attracting people who may not wish to take part in the more formal context of a seminar or workshop. They are also inclusive of all groups in a community, across all age groups, and offer a fun and interactive environment as compared to a traditional educational setting.

For this reason, we often take part in and organise educational and community festivals. In June, we had a great time participating in the Little Big Festival on Kudafari Island in Noonu Atoll in the Maldives and Diani Turtle Festival in Kenya (see page 13).

The Little Big Festival is a cultural environmental festival, organised entirely by the community of N.Kudafari Island. It brings together various environmental NGOs and local-led small businesses to engage school children and the island community through presentations, drama skits, and stall activities.



Swift, Sea Turtle Biologist Intern in Noonu Atoll (front right), and Risha, Education & Outreach Officer (middle right) gifting Chief Guest Minister of Environment, Climate Change and Technology, Her Excellency Ms. Aminath Shauna (middle left) a ghost net bracelet

Over 200 people visited ORP's stall to play our sea turtle trivia quiz and learned how to make colourful ghost net bracelets using discarded ghost gear. Even the Chief Guest of the event, Minister of Environment, Climate Change and Technology Her Excellency Ms. Aminath Shauna, visited our stall to learn more about ORP's work in the Maldives, where we had the chance to gift her a ghost net bracelet.

In June, ORP arranged a two-day sea turtle field trip for 19 children from Baa Family and Children Service Centre in Eydhafushi.

The children, aged between 4 and 17, first visited the Marine Turtle Rescue Centre on the 2nd of June. Our veterinary team gave them a full tour and an introduction to our current patients and the work we do at the Rescue Centre. The children observed patient feeding and trialed mock-up X-rays, as well as checked blood smears under the microscope.

After the clinic tour, ORP's Sea Turtle Biologist in Baa Atoll, Afrah Sathaar, familiarised the visitors with ORP and our work, giving a presentation on sea turtle biology. This was followed by an informative seminar on sea turtle medicine by the veterinary team. The day ended with the children observing a green sea turtle nest and learning how to safely observe a hatching event.

We would like to thank Coco Palm Dhuni Kolhu for the excellent hospitality and care provided to the children during their visit. The Maldivian buffet prepared for lunch by the chef's team was the cherry on the cake; the children mentioned numerous times how delicious the food was!



ORP sea turtle biologist Afrah teaching one of the children to snorkel

Two weeks later, the same group of children visited Amilla Maldives Resort and Residences in Baa Atoll for another full-day experience. The morning started with an introduction to snorkelling, led by Afrah, the resident marine biologist and excursion guides from Amilla.

The children were also given an introduction to scuba diving and water sports by Dive Butler International. In the afternoon, the programme continued with a presentation on the threats that sea turtles face and a talk on the sustainability of marine life.



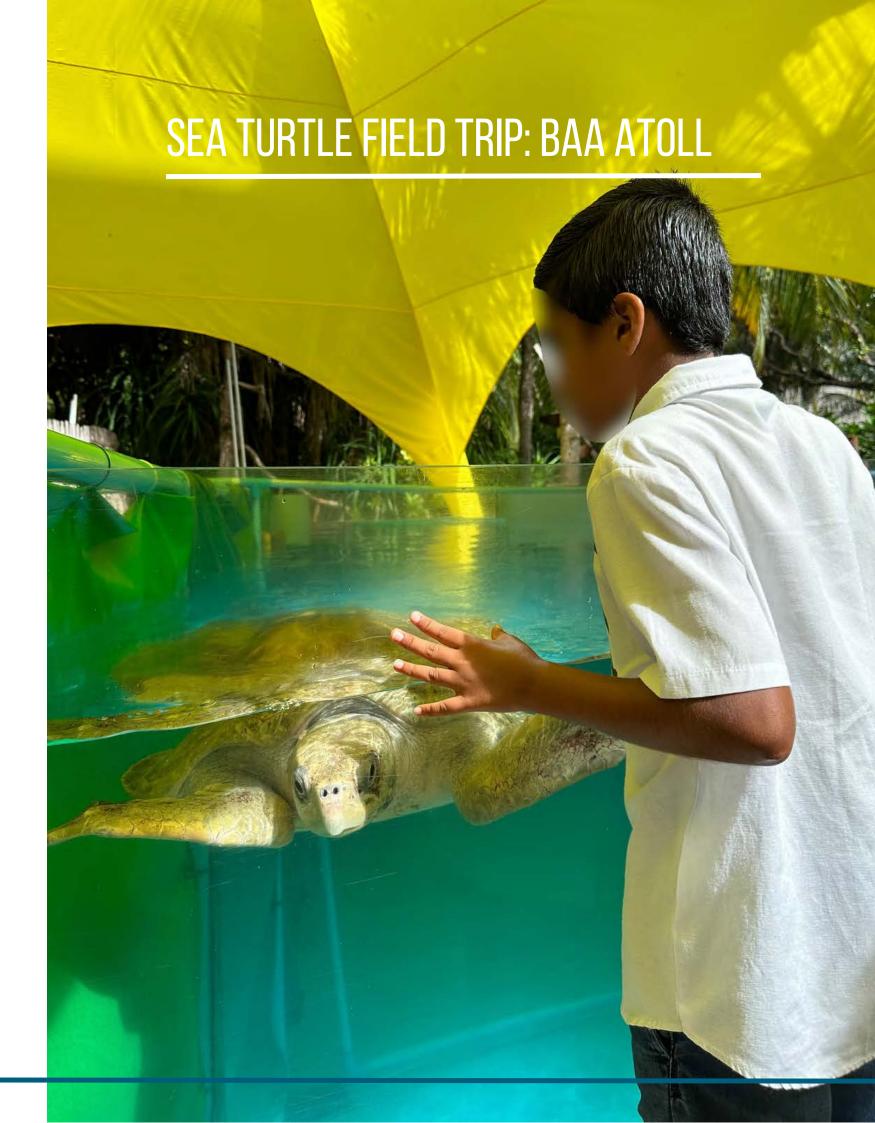
The Baa Family and Children Service Centre Eydhafushi visitors with the Amilla team and ORP biologist, Afrah

Amilla kindly gifted the children with reusable water bottles and backpacks as a departing gift. It was a busy but heartfelt event, where every member of Amilla staff played their role in making sure that every child was attended to and enjoyed every minute of the trip.

We are writing to express our heartfelt gratitude and appreciation for organising an incredible educational and recreational field trip for the children living in B. Amaan Veshi. The collaborative efforts of the much-dedicated sea turtle conservation NGO, Olive Ridley Project (ORP), and Amilla Maldives Resort and Residences must have left a lasting impact on the children's lives.

ORP's diligence towards instilling environmental awareness in young minds will undoubtedly help our community to foster future generations who will prioritise safeguarding the environment. We hope your valuable lessons inspired the children to be active participants in this journey to preserve our environment.

AMINATH AMANI ANWAR, PROGRAMME OFFICER
B. FAMILY AND CHILDREN SERVICE CENTRE





World Sea Turtle Day (WSTD) on June 16th every year is, of course, our favourite day of the year! This year we celebrated in various ways over several days to mark the occasion:

- We participated in Sea Turtle Week on social media in the week leading up to WSTD with each day of the week focusing on a different species of sea turtle
- We hosted an international webinar on the topic "Community in Sea Turtle Conservation"
- There were interactive educational sessions with school children and tourists in Seychelles and in the Maldives
- We took part in festivals and beach clean-ups
- We even won an art competition! (With a little help).

GLOBAL OCEAN CLEANUP

We were one of eight organisations worldwide to be awarded a grant from the Oceanic Society to organise and host a Global Ocean Cleanup event in celebration of World Sea Turtle Day. Our Community Education & Outreach Officer in Kenya, Juma Gwerenya, successfully mobilised over 100 participants to clean a 3 km stretch of the Diani-Chale Marine National Reserve. Together we collected over 7,000 pieces of rubbish, weighing over 200 kg.



Global Ocean Cleanup in event in Diani, Kenya

We also teamed up with Polycap, a local artist, to create an art piece (pictured on the left) with the trash collected from the cleanup. The piece was presented at the Global Ocean Clean-Up Art Competition and we are happy to announce that it won us the Judge's Choice Award and \$500 prize money!

COMMUNITY IN SEA TURTLE CONSERVATION

The "Community in Sea Turtle Conservation" webinar brought together speakers from Kenya, India, and the Philippines, as they shared their experiences and stories on locally powered participative sea turtle conservation.

The keynote speech, delivered by Dr. Karthik Shanker, shed light upon conservation imperialism through knowledge, space, and resources, and how often we overlook the fact that human beings are part of nature and that everything is interconnected.

Mr. Kahindi Changawa Galo from Kenya spoke about empowering fishermen to mitigate sea turtle bycatch in Watamu, Kenya, Dr. AA Yaptinchay from the Philippines highlighted community-led marine turtle conservation initiatives in the Philippines, and Muralidharan M. from India talked about what marine and sea turtle conservation means to different people.



Community in Sea Turtle Conservation host Dan (middle) and speakers

A lot of interesting questions were raised by the participants, followed by in-depth discussions. The thought-provoking insights gained from this webinar confirm that a participative community-led approach to conservation is the way forward.

30 participants joined the webinar live, and a further 781 people watched the live stream on Facebook. It is now available to <u>watch on</u> YouTube.

One of our objectives in Kenya is to work with local communities in building grassroots conservation practices that are both equitable and sustainable in the long term. To this end, we often utilise existing institutions and systems to reach out to local stakeholders.

One such institution is the Beach Management Units in Kenya. To ensure the participation of resource users in the management of local fisheries and other marine resources, the Kenyan government developed National Beach Management Unit (BMU) Guidelines that have been implemented since 2005.

Beach Management Units (BMUs) are essentially community-based organisations or committees that are responsible for the management and governance of coastal areas, including beaches and nearshore marine resources. These units are typically composed of local fisherfolk and community members who collaborate with government agencies, conservation organisations, and other stakeholders to ensure sustainable use and conservation of marine resources.



Project Coordinator, Leah, conducting a training workshop at Chale-Jeza

Recognising the pivotal role of community involvement and ownership in sea turtle conservation, we conducted workshops with four BMUs in May. These units are located along the south coast of Kenya (Chale-Jeza, Mwaembe, Munje, and Funzi), and through these training sessions, we successfully engaged with 60 self-selected fisherfolk.

The workshops led by our team covered topics including a comprehensive introduction to sea turtles, the role of sea turtles in the ecosystem, the need for sea turtle conservation efforts, and bycatch mitigation. The sessions culminated with presentations by officials from Kenya Wildlife Service highlighting Kenyan wildlife laws and policies about endangered species, including sea turtles. The participation of the Kenya Wildlife Service was crucial as it highlighted the importance of fostering future collaborations and efforts between all stakeholders in the region.

Each BMU nominated a selection of men, women, and youth who were eager to be a part of the programme. All individuals enjoyed the sessions so much that they requested for more in the future, and we are happy to oblige!

We also set up a new hotline (+254 702 903 501) for reporting sea turtle-related events, anything from poaching to bycatch and strandings. This enables us to maintain communication with community members and take immediate action for all sea turtle-related incidents.

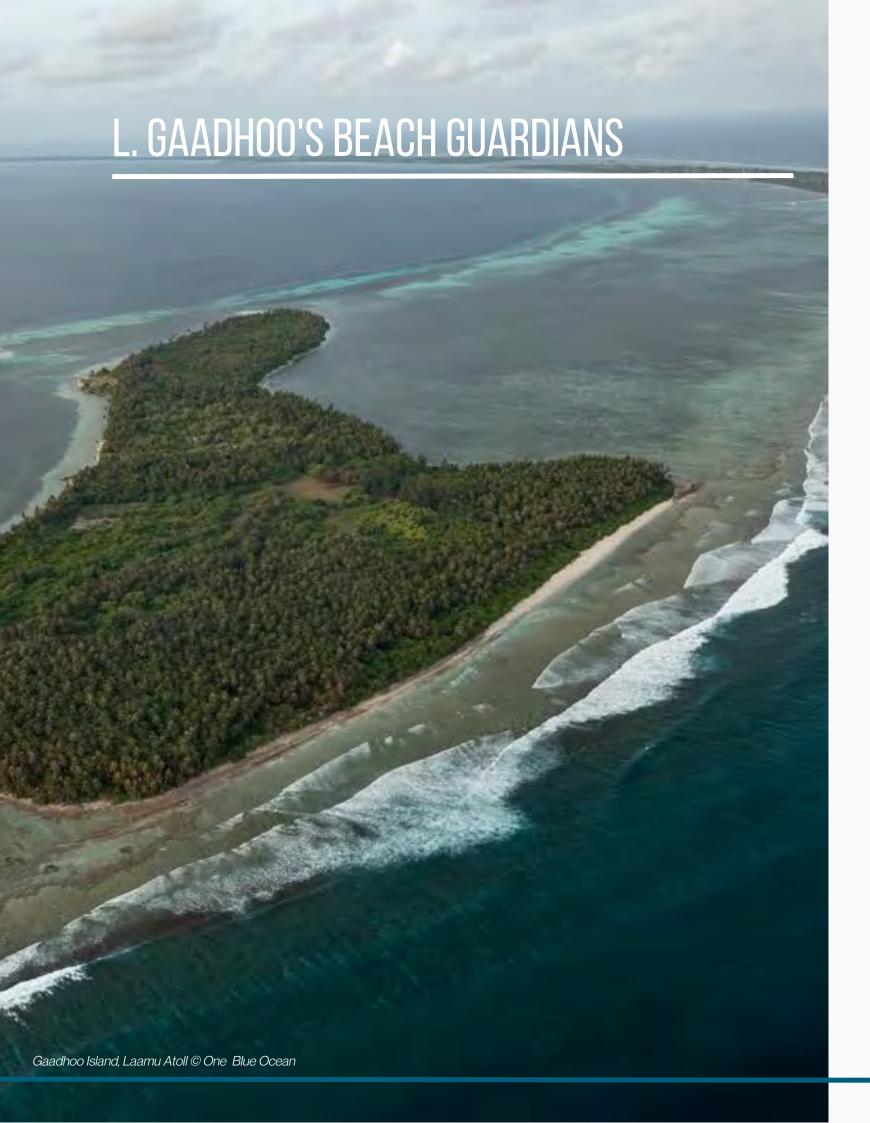


KWS Warden with Funzi BMU

Our future plans involve expanding the program through partnerships with other stakeholders, to offer more workshops and educational materials on sea turtle conservation.

These initial workshops were a great success for our team in Kenya team and have further inspired us to create strong collaborations in pursuit of sea turtle conservation throughout the South Coast.





Gaadhoo Island in Laamu Atoll is one of the most significant green turtle nesting beaches in the Maldives. In 1984, it was estimated that green turtles laid at least 240 nests a year. For generations, the residents of L.Gaadhoo were custodians of the nesting beach: they conducted regular beach patrols to protect it from poachers and harvested a small number of eggs to be distributed among residents.

However, the government imposed an egg harvesting ban on the island in 2006 and the beach patrols ceased. By the time Gaadhoo's residents were relocated to neighbouring Fonadhoo in 2016, the island was subject to uncontrolled poaching.

ORP has been conducting ad-hoc surveys on L.Gaadhoo since 2018. Sadly, we have observed an increase in poaching incidents over the years with a record of 61% of the nests being poached in 2022. However, this year, things have changed!

ORP and the Environmental Protection Agency of Maldives (EPA) have been working on establishing a community-led beach protection and monitoring programme on L.Gaadhoo for several years. In May 2023, key stakeholders in Laamu Atoll signed a historic agreement to monitor and protect the nesting beach on L. Gaadhoo, and, the L.Gaadhoo Beach Guardian Programme was born.

The L. Gaadhoo Beach Guardian Programme is a collaboration between ORP, EPA, Laamu Atoll Council, Laamu Fonadhoo Council, and AgroNational Cooperation (AgroNat - the island leaseholder).

As part of the programme, ORP and the EPA deployed Maldives's first Sea Turtle Ranger, Ibrahim Inaan, in January, to conduct regular beach patrol surveys on L.Gaadhoo to record nesting and poaching activity. In the first six months of monitoring, he has conducted 41 beach patrol surveys and recorded 92 incidents of nesting activity with 42 suspected nests laid.

With consistent beach monitoring and the permanent presence of AgroNat staff on the island, poaching activity has decreased significantly: only one nest poached out of five incidents of poaching activity was recorded.

Inaan's role also includes community engagement with education and awareness activities in the L.Gan and L. Fonadhoo.

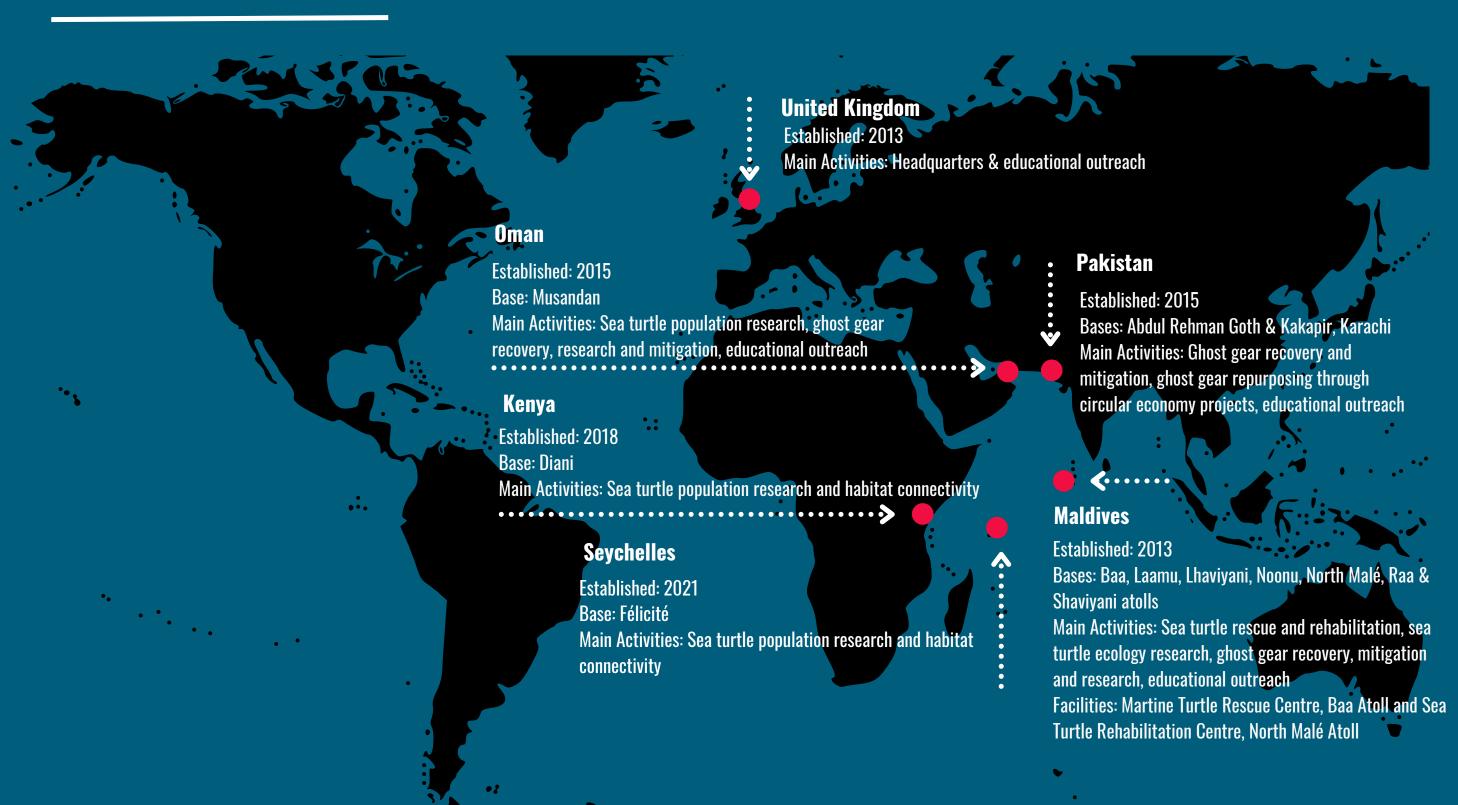


Sea Turtle Ranger, Inaan, inspecting a hatched nest on a Gaadhoo Island, Laamu Atoll

The sea turtle ranger deployment is only the first part of a wider initiative for sea turtle conservation in Laamu Atoll. ORP and EPA have held several discussions with Laamu NGOs, schools, councils, and police to identify avenues for community involvement. The stakeholders are members of the Education Taskforce led by ORP and the Poaching Taskforce led by EPA. Based on their recommendation, we have also opened applications for Laamu NGOs to become official partners of the programme.

The project also has the key support of ex-Gaadhoo residents, notably former council president Abdul Azeez, who has helped shape and implement the project. Together, with EPA and Azeez, we have initiated a study of former Gaadhoo residents to document their cultural relationship with sea turtles and how they managed the nesting beach in the past. The information gathered will include their recommendations for the management plan for Gaadhoo's nesting beach, which was designated a protected area in December 2021.

OUR PROJECTS



The southern coast of Kenya hosts abundant biodiversity which is protected through the creation of two reserves that divide the landscape: Diani-Chale Marine Reserve (DCMR), and Kisite-Mpunguti Marine Reserve.



Green sea turtle spotted at Kisite-Mpunguti

While our team has been conducting regular sea turtle monitoring surveys in DCMR since 2018, our recent partnership with local community-based organisation Shimoni Turtle Watch (STW) and the Kenya Wildlife Service (KWS) gave us an opportunity to conduct a two-month pilot study in Kisite-Mpunguti Marine Reserve. Here we conducted about 50 surveys, resulting in almost 100 sea turtle sightings and 14 new confirmed individuals. This joint study helped expand our understanding of sea turtle populations in a new area and also encouraged local participation in sea turtle conservation.

Our collaborative spirit took our Project Manager, Dr. Joana Hancock, to our partner organisation Bahari Hai, located on the north coast of Kenya. Here, she joined the Bahari Hai team in an intensive week of snorkelling surveys and helped establish suitable sea turtle monitoring protocols for two significant sea turtle foraging sites - Mida Creek and the Watamu-Malindi Marine National Park. This collaboration aims to implement inclusive and sustainable conservation efforts by training and engaging members of neighbouring fishing communities in sea turtle monitoring.

In Diani, our Project Coordinator, Leah Mainye, obtained her remote piloting licence, enabling her to fly the drone that we acquired through funds raised from 2022's Giving Tuesday campaign. We are now one step closer to conducting sea turtle monitoring drone surveys and studying foraging sites further from the shore that remains inaccessible through our underwater surveys.



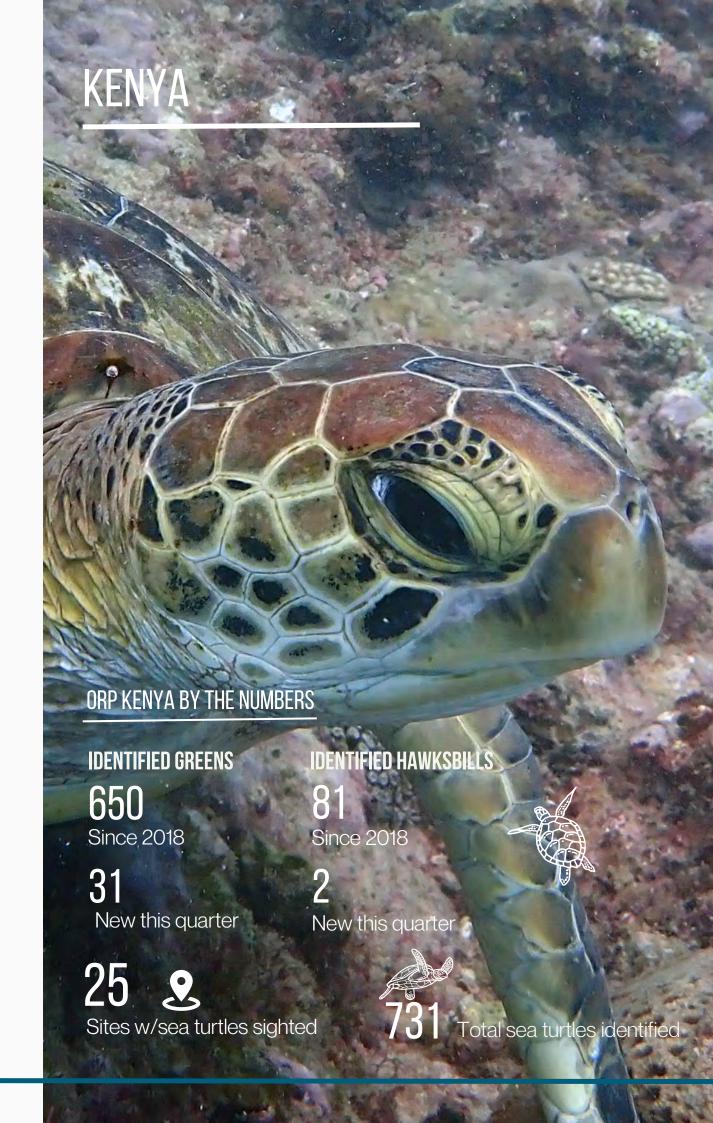
Leah preparing for an aerial survey

Continuing the aerial approach, Leah also participated in the second-ever Kenya Marine Aerial Survey. Last conducted in 1994, Kenya's first marine aerial survey in 29 years covered the entire coastline of Kenya. The survey aims to understand how populations of sea life have thrived or deteriorated. The data on sea turtle sightings and habitats collected from these surveys contribute valuable information to the national marine wildlife census and will help us plan precise protection of key marine habitats. in the areas where they are found.

In June, we welcomed students Stacy Namarome and Vincent Mutethia to join us for a period of 2.5 months as part of a new partnership with Kenyatta University where we offer graduate students an opportunity to gain practical experience in marine conservation. The students have joined our intern Diana (who has been such great help that we have extended her internship for three more months) in assisting us with in-water and drone surveys in Diani.

As per World Sea Turtle Day tradition, we participated in the fourth Diani Sea Turtle Festival organised by our partners, the Conservation Education Society. This event serves as a conservation awareness platform and provides us an opportunity to showcase our work, network with other organisations, and engage with the local community. It is a day when everyone comes together in dedication to sea turtle conservation, and we are proud to be a part of this event.

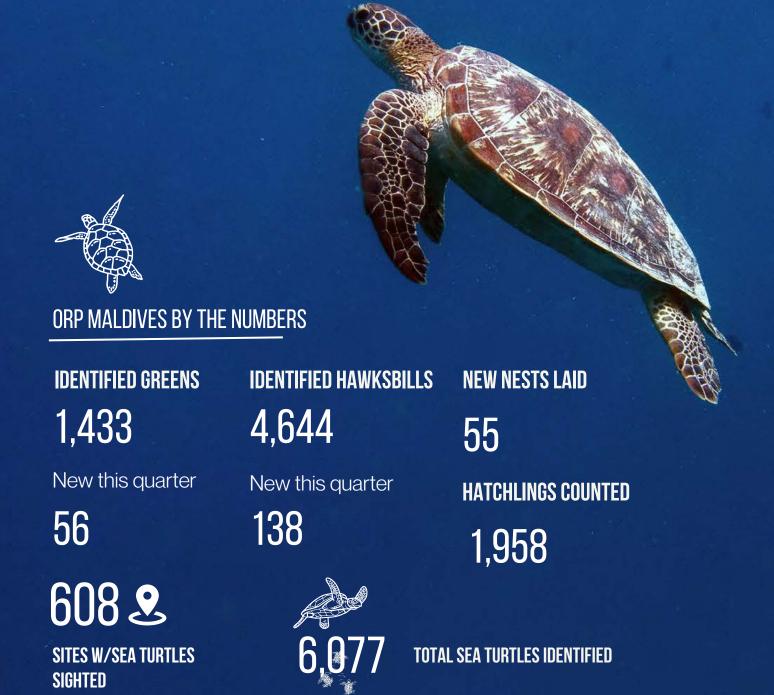
We also got our hands dirty on World Sea Turtle Day by hosting a Global Ocean Cleanup event that saw participation from over 100 individuals. Read more about this on page 13..



MALDIVES

TOTAL IDENTIFIED SEA TURTLES BY ATOLL

Baa	246	862
Laamu	359	605
Lhaviyani	412	344
Noonu	49	106
North Malé	88	949
Raa	4	179
Shaviyani	10	52





Despite the change in the monsoon season bringing occasionally tough field conditions, the last three months were an incredibly productive time for our team in the Maldives - in the water, as well as on land.

We added a whopping 1,300 new sea turtle encounters to our database and registered a total of 194 newly identified turtles. This was made possible due to the amazing support from a community of enthusiastic citizen scientist data contributors, whom we would like to thank for their continuous help and participation. Baa Atoll is now the largest regional database in the Maldives with 1,110 identified individuals!

In April 2023, our team published a paper showcasing the use of our Photo-ID data for population monitoring - see the research highlight on page 10 for further details.

The change in monsoon season also brought an expected drop in reported cases of entangled turtles. We registered only seven entangled olive ridley turtles across the country and a report of an unlucky hawksbill turtle stuck in a net in Vaavu Atoll. Luckily, a great team from The Dive Society came to her rescue right away. They were able to release her after taking a few ID photos - hopefully, they will see her again.



A hawksbill turtle entangled in a piece of ghost net being rescued by Zaya and team from The Dive Society

Despite a low number of reported entanglements, our Rescue Centre team had plenty work on their hands. They said goodbye to veterinary nurse Lauren Valentine and welcomed her replacement Tristan Neto, admitted eight new patients, moved into a new clinic which doubles their space, and implemented exciting treatment methods - you can read all about it on page 8.

DID YOU KNOW?

Sea turtles are not considered social animals, but little is known about their regular interactions in the wild. Recent studies of hawksbill and loggerhead turtles have shown that turtles interact regularly at aggregation sites. Interaction can be aggressive, but can also include non-aggressive inquisitive behaviours such as head touches and simple inspections of each other, indicating a social structure within a group of turtles.

In Baa Atoll, sea turtle biologist Afrah arranged a two-day turtle field trip for 19 children from the Baa Family and Children Service Centre in Eydhafushi. The children first visited the Marine Turtle Rescue Centre to meet our patients and learn about our work there. On the second day Afrah and a team from Amilla Maldives Resorts & Residences introduced them to the resident turtles of Amillla's house reef during a snorkelling session - a memorable experience for all involved!

Over in Laamu Atoll, our team had a record-breaking quarter in terms of sea turtle photo-ID's, with 116 newly identified individuals! This was due to the discovery of a new hawksbill hotspot at Kurethi reef, as well as ORP hosting a master student, resulting in the team spending a lot of hours surveying the atoll's prime turtle spot in Hithadhoo Corner. Amy Feakes, from Imperial College London, is investigating sea turtle behaviour and interactions. Amy will be analysing her observations in the coming weeks to see if certain turtles have a tendency to be seen together and if there are especially sought-after resting spots on the reef.

In Raa Atoll, Sea Turtle Biologist Olivia was joined by ORP's Volunteer and Educational Outreach Officer, Risha, and Assistant Project Manager, Dan, on a community tour through the atoll. The primary objective was to establish effective communication channels with the local islands, as well as exchange knowledge about sea turtles sites at Raa and the threats turtles face, share ORP's current findings, and explore possibilities for future collaboration.

We were able to establish many useful contacts in almost all the islands, and we look forward to completing the second part of the tour later in the year by visiting the remaining seven inhabited islands in Raa. Our project in Oman is based on the Musandam peninsula, with a coastline that harbours beautiful fringing reefs thriving with marine life, including sea turtles. While hawksbills and greens can be spotted in the water, nesting turtles are hard to come by. The Musandam peninsula, characterized by its cliffs, is not considered an ideal nesting ground for sea turtles.



A rare green turtle hatchling at Six Senses Zighy Bay

Therefore, our sea turtle biologist was pleasantly surprised when May brought about an unexpected hatching event on the beach at our partner resort Six Senses Zighy Bay. On 8th May, at approximately 9:30 PM, about 70 green hatchlings emerged from the sand and embarked on their journey to the sea. The guests were made aware of ORP's hatchling code of conduct by our sea turtle biologist as they watched on in awe. It was truly a special moment for everyone present.

Our streak of good fortune continued through the month and we were able to have a productive meeting with the Environment Authority where several important topics were discussed. We emphasised the significance of constructing a rescue and rehabilitation centre in Oman and addressed the pressing issue of ghost gear and the importance of providing awareness training to both authorities and the local community. To meet these goals, action plans were drawn up for the coming weeks.

Firstly, we organised an ocean clean-up initiative in collaboration with the Environment Authority at the end of May. A team of 10 people including our sea turtle biologist journeyed to Haffah, a neighbouring fishermen's village. While some members conducted dives to retrieve debris, others remained on the boat, actively collecting trash. We even encountered a massive net entangled in rocks and

lodged on the seabed. Together, we were successful in removing the net, bringing our total up to an approximate one ton of ghost net recovered during the clean-up.

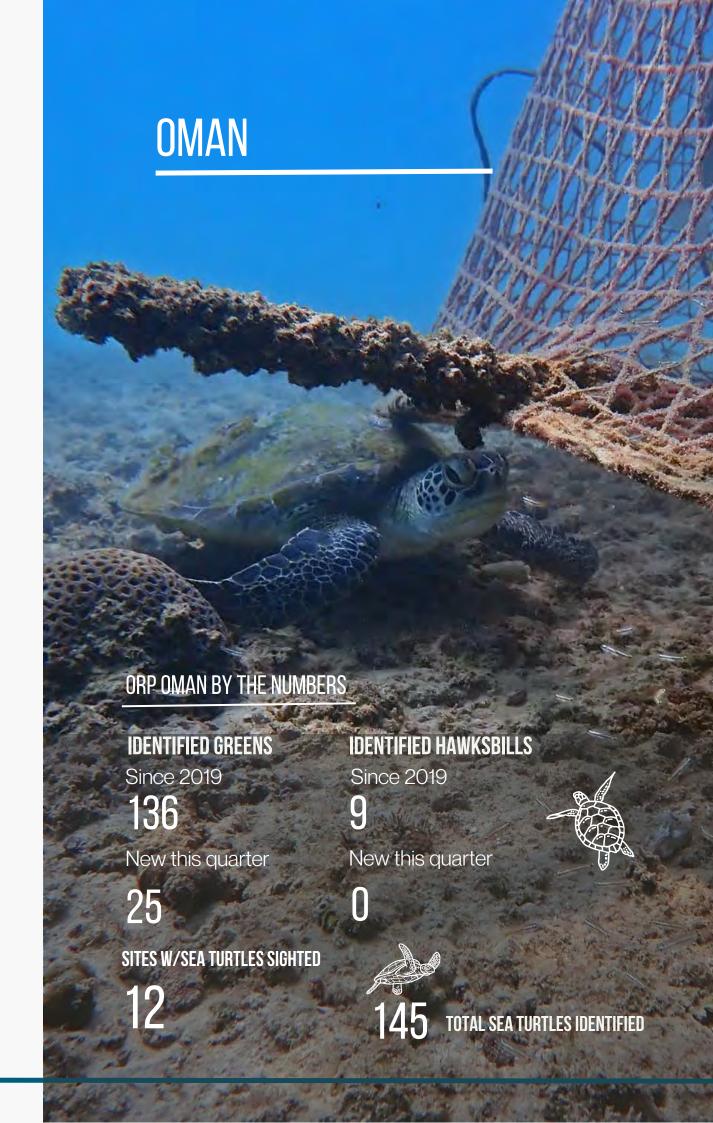


Sea Turtle Biologist Davide giving a presentation

Secondly, ORP Sea Turtle Biologist in Oman, Davide, Panarese, delivered comprehensive training about sea turtles to members of the Environment Authority in June. The session focused on the significance of sea turtles and their indispensable role in maintaining the delicate balance of our oceans. He also shed light on ORP's work and the importance of garnering support from the diving community, as well as increasing efforts in ghost gear clean-ups. These activities play a part in our long-term goal of fostering meaningful relationships with diverse stakeholders, in order to successfully undertake sea turtle conservation practice.

One such stakeholder is the fishing community and an incident highlighted the necessity of collaborating with the group. In June, four green turtles were caught as bycatch in local fishermen's beach seine net. Our sea turtle biologist, was immediately alerted and while assessing the turtles for injuries, he found that the largest one measured an impressive 78 cm in carapace length.

Notably, one of the turtles was already registered in our database as GM004, named 'Amir'. This re-sighting reinforced the significance of monitoring sea turtle populations through the method of Photo-ID. Over time, this data will further our understanding of the local sea turtle population dynamics, and help guide improved marine conservation policies.





With the nesting season concluded, the ORP team in Pakistan busied themselves with conducting boat trips to survey the sea turtle population and ghost gear in the area over the last three months.



Field Coordinator Asif with a recovered ghost net

On one such trip in April, Project Manager Usman and Field Coordinator Asif spotted a huge ghost net entangled on a coral outcrop in the waters near Chana Island. The net was removed by the team and after being taken to the shore, it was weighed in at 12 kgs.

As the holy month of Ramzan came to an end, the team was presented with a wonderful opportunity to set up a stall at a famous Ramzan market called the Karachi Commons. Our ghost leashes attracted a good crowd resulting in the sale of 10 dog leashes which generated 20,000 PKR from the event. The team also had activities at the stall, including a sea turtle Photo-ID game and a visual representation of sea turtle entanglement in ghost gear which received curiosity from visitors. The event was attended by 13,000 people and the team spent a vibrant evening reaching out to the public, talking about ORP's work and creating awareness on sea turtle conservation.

In May, the Pakistan team continued their boat surveys. To their delight, they spotted two greens mating in the waters around Kakapir village on one of their trips. We hope that the female will be able to travel to her natal beach safely in order to lay her nest.

On another survey, near the village of Abdul Rehman Goth, an adult green was sighted swimming on the surface of the water, and a juvenile green foraging underwater. Our activities over time have confirmed that Pakistan's waters are important feeding and resting habitats for sea turtles.

We now look forward to the nesting season to collect data that will aid us in our long-term study of Pakistan's green turtle population.

While sea turtle sightings always bring us joy, we are consistently reminded of the many threats these creatures face. In May, the team once again recovered a ghost net from Hawke's Bay Beach, weighing a whopping 33 kg! Ghost nets on the beach can be just as dangerous as nets underwater, as they can create obstacles in the path of a nesting female and trap hatchlings on the beach or in nests.



Dog leashes made from repurposed ghost gear on sale at the Karachi Commons Ramzan market

This is why we strive to repurpose ghost gear into useful products like dog leashes and bracelets, both of which are slowly gaining popularity. For the first time, the team was invited to set up stalls at two dog meetings. This gave us an opportunity to sell leashes as well as network with many pet owners and famous dog trainers.

Our bracelets too made a big splash with the US Consulate in Karachi. Impressed by our ghost gear product line, the consulate ordered 160 ghost net bracelets – a fantastic achievement! The consulate was particularly happy with the US flag colour-themed bracelets and neat finishing.

Lastly, the US Consulate had earlier selected ORP Pakistan as one of its 'champions' for its climate change campaign and commissioned a short <u>documentary</u> to cover ORP's work. The documentary was shot through December and January and was released on 21st June. We are thankful to have been chosen and given a chance to talk about our work. We do hope that our message on sea turtle and marine conservation resonates with people.

Located in the western Indian Ocean, the Seychelles Archipelago consists of 115 islands, divided into the granitic inner islands and the coralline outer islands. Our conservation efforts are focused on Félicité, one of the inner islands, near the renowned Île Coco Marine Park, which is home to a thriving population of critically endangered hawksbill turtles.

The female hawksbills in Seychelles come ashore to nest from October to March, particularly in daylight – a characteristic feature of the hawksbill population here. We celebrate the end of this nesting season with the successful hatching of our last hawksbill turtle nest on April 12th, which had an impressive hatching success rate of 92%!

With no more nests to monitor, our attention and efforts focused on building partnerships and conducting educational outreach. During the Easter season, our sea turtle biologist organised a special 'egg hunt' for the young guests at our partner resort Six Senses Zil Pasyon. The children not only had a fun time but also learned valuable lessons on identifying true nests from false nest attempts and how to behave around nesting turtles.



World Sea Turtle Day celebrations with La Digue school

In June, we celebrated our favourite time of the year - World Sea Turtle Day! This event extended over two days for us. The first day, 16th June, was dedicated to resort guests, while the second day was a celebration with the children from an eco-school on the neighbouring island of La Digue. Our aim was to provide the children with enjoyable and educational experiences, deepening their understanding of sea turtle conservation. To foster their sense of curiosity and wonder, we shared fascinating facts, such as the incredible diving capabilities of leatherback turtles, which are known to reach depths of 1000 metres.

The activities for the students included identifying sea turtle tracks on the beach, telling one species from another, recognising false crawls and nest attempts, and a fun quiz on beach etiquette when encountering nesting turtles.



A false sea turtle crawl

HOW DO YOU SPOT A FALSE CRAWL?

A false crawl looks like a half-moon (pictured above). This happens when the turtle walks up the beach and returns to the sea without attempting to nest or failing to lay successfully. A true nest (successful nest) will always have a big pile of sand at the back of the body pit. This pile of sand is a result of the female camouflaging her nest after laying eggs.

Meanwhile, our Photo-ID research received attention on a show called '4 Degree Sid' aired by the Seychelles Broadcasting Company on the local TV channel. This media coverage gave us an excellent opportunity to reach out to local citizens, raise awareness about our project and encourage greater submissions of sea turtle Photo-ID.

One of the highlights from the last few months was a visit from our Senior Scientist, Dr. Stephanie Köhnk. During her stay, she familiarised herself with our field location, spent quality time in the water with the resident sea turtles, and worked extensively on reports and partnership proposals with our biologist.

SEYCHELLES



ORP SEYCHELLES BY THE NUMBERS

IDENTIFIED GREENS

Since 2021

9

New this quarter

0

41 8

SITES W/SEA TURTLES
SIGHTED

IDENTIFIED HAWKSBILLS

Since 2021

182

New this quarter

23

NEW NESTS LAID

0

HATCHLINGS COUNTED

287



91 TOTAL SEA TURTLES IDENTIFIED



THE TEAM



DR MARTIN STELFOX FOUNDER & CEO



JANNICKE C HALLUM COO



DR STEPHANIE KÖHNK SENIOR SCIENTIST



DR MAX POLYAK LEAD VETERINARY SURGEON



DR CLAIRE PETROS VETERINARY PROGRAMME OFFICER



JUNHO YU FUNDRAISER



LAUREN KING



ANADYA SINGH CHARITY ADMINISTRATOR COMMUNICATIONS OFFICER



RISHA ALI RASHEED VOLUNTEER & EDUCATION OUTREACH OFFICER



JANE LLOYD DATABASE MANAGER



INDIVIDUAL GIVING ADMINISTRATOR



DR JOANA HANCOCK PROJECT MANAGER KENYA



JENNI CHOMA INFIELD SUPERVISOR KENYA



LEAH MAINYE PROJECT COORDINATOR KENYA



COMMUNITY EDUCATION & OUTREACH OFFICER KENYA



JUMA GWERENYA DIANA KERUBO NYAKUNDI INTERN, KENYA



ALI MKASHA SEA TURTLE MONITORING ASSISTANT KENYA



ISHA AFEEF PROJECT MANAGER MALDIVES



DAN NASHID PROJECT ASSISTANT MALDIVES



IBRAHIM SHAMEEL LIAISON OFFICER MALDIVES



DR MARIANA FRAGOSO RESIDENT VETERINARY SURGEON



LAUREN VALENTINE RESIDENT VETERINARY NURSE



TRISTAN NETO RESIDENT VETERINARY NURSE



AFRAH ABDUL SATHAAR SEA TURTLE BIOLOGIST BAA ATOLL



JULIAN GERVOLINO SEA TURTLE BIOLOGIST



IBRAHIM INAAN SEA TURTLE RANGER LAAMU ATOLL



MARÍA ANTONIA IZURIETA SEA TURTLE BIOLOGIST



SARAH PATMAN SEA TURTLE BIOLOGIST NOONU ATOLL



MARIYAM NIUMA SEA TURTLE BIOLOGIST NORTH MALÉ ATOLL



OLIVIA FORSTER SEA TURTLE BIOLOGIST RAA ATOLL



NEUS SEGURA SEA TURTLE BIOLOGIST SHAVIYANI ATOLL



ASHA AHMED INTERN. MALDIVES



ABDULLA HAMEEDH INTERN, MALDIVES



AMY FEAKES MASTER STUDENT, MALDIVES



USMAN IQBAL PROJECT MANAGER PAKISTAN



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ASIF BALOCH FIELD COORDINATOR PAKISTAN



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DAVIDE PANARESE SEA TURTLE BIOLOGIST OMAN



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DR MINNIE LIDDELL EDUCATOR & AMBASSADOR







RUSHAN BIN ABDUL RAHMAN



BERTOLT LANG IT SPECIALIST



SUSIE GIBSON GRAPHIC DESIGNER



TRUSTEE

CLIONA KIRBY TRUSTEE



JOE RIGBY

RESEARCHER







ANDY TORBET AMBASSADOR



SCIENTIFIC ADVISOR

THANK YOU

We would like to express our gratitude to all our donors, supporters, collaborators, and partners who make our work possible by providing financial and logistical support. We would also like to thank the 15 volunteers who helped us take care of our sea turtle patients at the Marine Turtle Rescue Centre over the first three months of the year. Last but not least, here's a special shout-out to our citizen scientists for their vital Photo-ID data contributions - keep those photos coming! Thank you all - you are turtley awesome!

In May, Honu ran a series of educational posts about sea turtles and hosted a Q&A with our veterinary team to raise awareness about sea turtles and our work. Thank you to honu and their customers for their generous support!



We would like to thank manta reisen and their clients who travelled to the Maldives last year for their generosity!

We would also like to thank the following organisations for awarding us recent grants in support of our work in the Maldives and in Kenya:



The GEF Small Grants 30



VOLUNTEERS



lt was such a unique, memorable, and meaningful experience I got at this special place, accompanied by lovely people who shared so much important knowledge with me, that I think everyone should have. There will always be in me those moments feeding these vulnerable and beautiful creatures, cleaning tanks with good vibes, and most importantly: enjoying and having fun. Thanks to EVERYONE!

Valentino Odasso Precedo



I traveled a lot and I saw lot of nice things in my life, but this experience, everything in my two weeks at this little paradise, tops everything! Really, from start to end full of magical moments. It's not a goodbye, I will definitely come back! ♥

Daniella Stark

PARTNERS & COLLABORATORS



















































































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