

Impact Report 2023





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The Manta Trust

The Manta Trust takes a unique, multifaceted approach to manta and devil ray conservation, which sets us apart from others in the field.

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Ecuador Manta Expedition

Our team of manta scientists, educators, and media experts came to study the world's largest population of oceanic manta rays.

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Events

We attended and hosted multiple events around the globe to increase awareness about manta and devil rays, the threats they face, and how to take action.

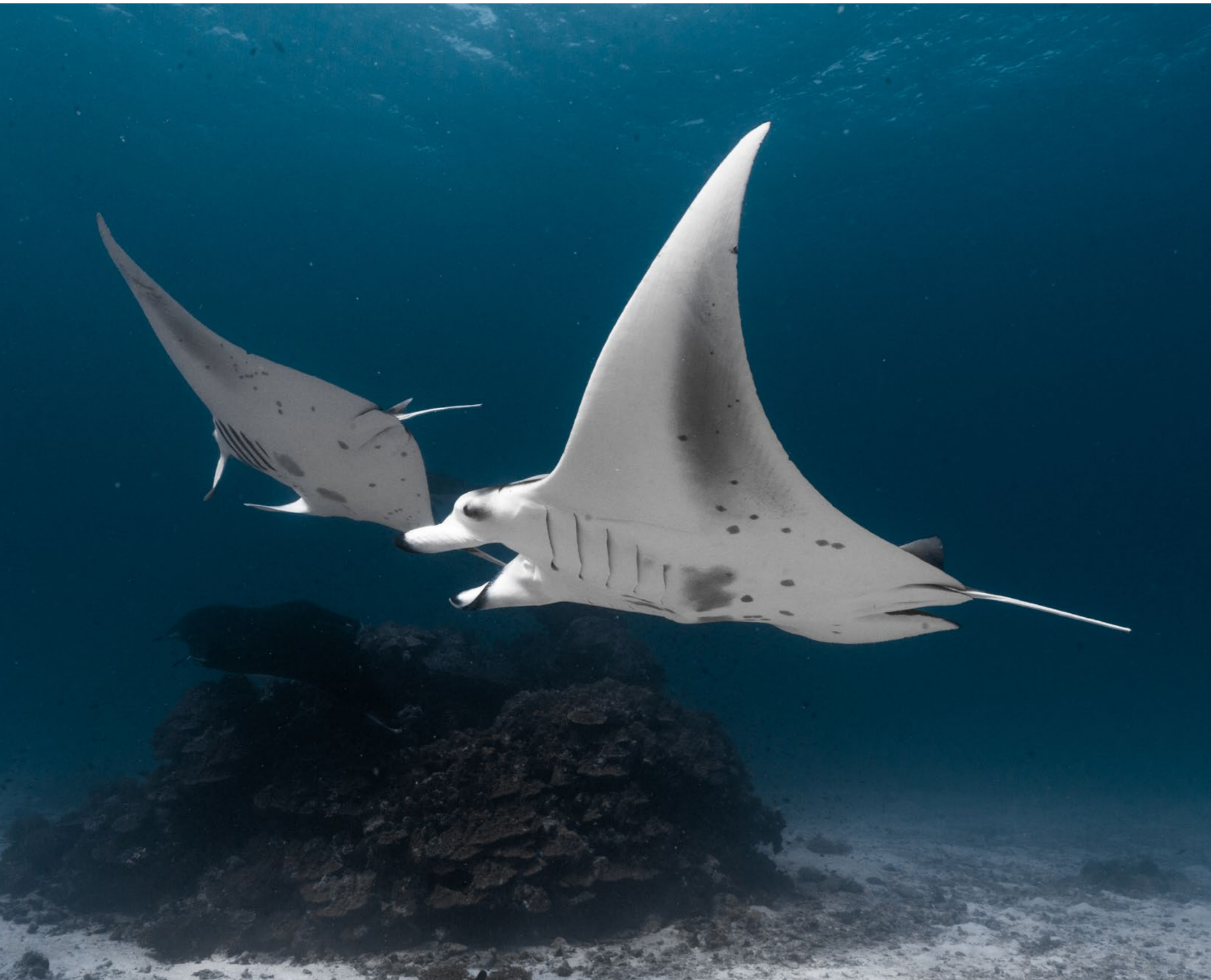
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Peer-Reviewed Publications

Manta Trust core personnel and affiliate project researchers were lead or co-authors on 11 peer-reviewed publications this year.

Introduction and Welcome



The Manta Trust has made significant progress in 2023 by forming impactful partnerships and coalitions with global manta and devil ray initiatives, resulting in positive action on a worldwide scale.

One major accomplishment was the establishment of the Gulf of Guinea Shark & Ray Network, which brought together researchers in West & Central Africa for their first network meeting. This meeting laid the foundation for conservation efforts in the region and saw the development of a shark and ray management strategy that received strong government support. The strategy will now be reviewed, amended, and adopted by governments with coordination from the CMS Secretariat.

Additionally, the Manta Trust played a key role in forming the Atlantic Manta and Devil Ray Coalition, aiming to address knowledge gaps and inform conservation efforts for ray species in the Atlantic Ocean, particularly devil rays. This new research initiative will bring together various individuals and organizations to gain a comprehensive understanding of manta and devil rays in the region, raising awareness about the threats they face.

Collaborative manuscripts related to manta and devil ray fisheries were also worked on in 2023 to support CITES policy work, providing crucial evidence of overfishing gathered by the Manta Trust and collaborating organizations. These manuscripts will strengthen enforcement of international trade regulations and pave the way for stricter CITES regulations.

Through the Education Network, resources and ideas have been exchanged for school sessions, community workshops, and events within the affiliate network. The Manta Trust is proud of its achievements in establishing these partnerships and coalitions, confident in making a lasting impact on the future of manta and devil rays and their habitats. My heartfelt gratitude is extended to all who have supported the mission.

Dr. Guy Stevens
Chief Executive & Co-founder

2023 Highlights

MAY National Geographic featured the Manta Trust's ground-breaking publication about the world's first manta ray pregnancy in the wild, using a contactless underwater ultrasound scanner, in both an online and print article.



APRIL Big Give matched our supporter's donations as part of the Green Match Fund, which raised critical funds for the RahVeshi Programme.



JUNE Team Manta collectively travelled 5,159km as part of our annual Cross The Oceans virtual fitness challenge, to raise funds for our affiliate Peru Mobulid Project, who are working hard to reduce fisheries bycatch of manta and devil rays.

DECEMBER The Atlantic Manta and Devil Ray Coalition was formed, which aims to address knowledge gaps and inform conservation efforts for manta and devil ray species in the Atlantic Ocean.



MARCH Our film 'Inspiring Ocean Guardians' made it to finals of the Smiley Charity Film Awards in London, which helped to raise awareness of our Conservation, Education and Outreach work.



JULY Our team in Laamu celebrated PADI Women's Dive Day by teaching 15 Maldivian women and girls local to Laamu to scuba dive!

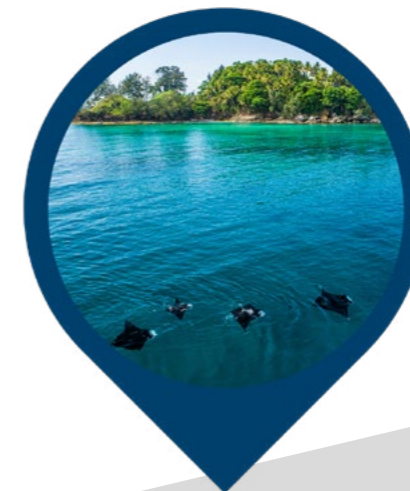
FEBRUARY Our Manta Trust and Manta Expeditions team attended, and gave educational talks, at the Duikvaker Dive Show.



AUGUST Thanks to the generous funding from Carl F. Bucherer, we were able to bring together a team of manta scientists, educators, and media experts on an oceanic manta ray research expedition in Ecuador.



NOVEMBER The Ocean Women Maldives project conducted their first female-focused SSI Swim and Snorkelling Instructor training programme, with over 60 women and girls being taught to swim as a result!



OCTOBER We formed an official affiliation with the Papua New Guinea Manta Project, who aims to better understand the population dynamics of manta and devil rays, and support local capacity building by working hand-in-hand with local NGOs throughout the region.

JANUARY MV-MA-2508 'Lenny', a reef manta ray found entangled in ghost gear in the Maldives was rescued by our team in Makunudhoo Atoll. An educational video was created about the rescue, which received over 160,000 views!



SEPTEMBER We hosted a special film screening event at Plymouth Arts Cinema for World Manta Day, that raised awareness and support for manta rays. The event was a sell-out with over 100 people attending!



JEN SPACAGNA



Education helps to show people the role they can play in the conservation of the ocean and provides people with the knowledge on what impact their actions can have.

Interview with our Education Manager

After volunteering with our affiliate project, the Manta Caribbean Project in Mexico, Jen Spacagna took on the role as Education Manager for the Manta Trust.

What is your role within the Manta Trust core team?

Jen: As Education Manager I develop and deliver education initiatives that help us work towards our strategic objectives. I regularly spend my time working with schools, youth groups and the public, but I also work on programmes for more specific groups such as dive operators. My role often sees me collaborating with colleagues and other organisations to develop programmes that aim to widen future participation in marine careers. I also offer support and guidance to our affiliate network, helping affiliate projects to develop or expand their own educational endeavours.

How did you end up working in mobulid conservation?

Jen: I have a varied work background. I graduated with a Master's degree in Marine Biology in 2012 and I spent time working in a variety of research and environmental education positions, before following my love of teaching to train as a post-16 teacher in 2016. Whilst working in teaching I regularly used my annual leave to spend time volunteering on marine research projects. In 2018 I saw my first manta ray whilst scuba diving and I was hooked! I decided to spend my annual leave the next year volunteering with the Mexico Manta Caribbean Project, a trip that gave me a much more thorough insight into the world of mobulid conservation. When the Education Manager role was advertised with the Manta Trust, I saw a perfect opportunity to combine my love of marine science and teaching and turn this into positive action for mobulid conservation.

What was your highlight of working with the Manta Trust in 2023?

Jen: This is a tricky question, there are so many highlights! I have particularly enjoyed developing our new Ocean Ambassador programme, towards the end of 2023. It was incredible to receive so many inspirational applications from teenagers across the globe and gain an appreciation of how much work so many young people are doing to promote marine conservation. It will be wonderful to see this programme develop over the next year.

How does education work strengthen the goals of Manta Trust's conservation work?

Jen: Education helps to show people the role they can play in the conservation of the ocean and provides people with the knowledge on what impact their actions can have. Education also helps people to understand what positive impacts the oceans have on humans, and why conservation is beneficial to humans. Education can equip people with necessary skills and bring people together to work on shared long-term conservation goals.

What can the public do to get involved in education work, or spread awareness about mobulid conservation?

Jen: One of the greatest things you can do is to use your voice and social media platforms to share information about mobulid conservation. Help us to spread important campaigns or share new findings about manta and devil rays. There are lots of educational resources available on our [Education Portal website](#); we always appreciate people sharing these with anyone they know working in education. Teachers are also always welcome to get in touch to find out more about ways in which we commonly work with educators.



Manta and Devil Rays



Manta rays are some of the largest and most intelligent animals in the sea. Their complex social behaviours set them apart from many other fish, but much of their lives remain a mystery.











Manta and devil rays, known collectively as mobulids, are some of the most beautiful, fascinating and enigmatic creatures in the oceans.


Close relatives of all sharks and rays, these cartilaginous filter feeding fishes range throughout the tropical and sub-tropical oceans of the world. Born into a life of perpetual motion, they can never stop moving as they must keep water flowing over their gills to respire. Their daily and seasonal movements are tuned to the ebb and flow of the ocean currents that breathe life into their world, bearing the planktonic food upon which they depend.

Manta rays are giants of their kind, with the largest individuals reaching seven metres in width and weighing up to two tonnes. Despite their colossal presence, mantas are gentle creatures. They have the largest brain of all fish, and their intelligence and curiosity make encounters with manta rays a truly magical experience. It is little wonder that for many years they have been well known and loved by the scuba diving community. More recently, they have also found mainstream popularity with a wider, global audience, featuring in ground-breaking wildlife

documentaries such as the BBC's Blue Planet II. Their obvious intellect and complex social interactions set manta rays apart from other fishes, but as they have only been scientifically studied in detail for around a decade, much of their life history remains a mystery.

Mobulids first appear in fossil records around 28 million years ago; evolving from bottom dwelling rays, they adapted to life in the water column. They are defined by their specially modified gill plates, which they use to strain zooplankton from the water column. Mobulid rays have a conservative life history strategy; they take a long time to reach sexual maturity, are slow to reproduce, and give birth to a single pup every two to five years following a nine to twelve month pregnancy. This strategy may have served them well for millions of years but unfortunately these traits, paired with their highly migratory nature, now leave mobulids extremely vulnerable to overexploitation by humans.

 <p>Oceanic Manta Ray <i>Mobula birostris</i> IUCN Red List Population Trend ↓ DECREASING</p>	 <p>Reef Manta Ray <i>Mobula alfredi</i> IUCN Red List Population Trend ↓ DECREASING</p>	 <p>Atlantic Manta Ray <i>Mobula cf. birostris</i> Not currently recognised by the IUCN Red List</p>	
 <p>Sicklefin Devil Ray <i>Mobula tarapacana</i> IUCN Red List Population Trend ↓ DECREASING</p>	 <p>Spinetail Devil Ray <i>Mobula mobular</i> IUCN Red List Population Trend ↓ DECREASING</p>	 <p>Bentfin Devil Ray <i>Mobula thurstoni</i> IUCN Red List Population Trend ↓ DECREASING</p>	 <p>Shorthorned Pygmy Devil Ray <i>Mobula kuhlii</i> IUCN Red List Population Trend ↓ DECREASING</p>
 <p>Longhorned Pygmy Devil Ray <i>Mobula eregoodoo</i> IUCN Red List Population Trend ↓ DECREASING</p>	 <p>Munk's Pygmy Devil Ray <i>Mobula munkiana</i> IUCN Red List Population Trend ↓ DECREASING</p>	 <p>Atlantic Pygmy Devil Ray <i>Mobula hypostoma</i> IUCN Red List Population Trend ↓ DECREASING</p>	

Key:  Endangered  Vulnerable

The Manta Trust



Research

By conducting long-term, robust scientific studies, we aim to build the solid foundations upon which governments, NGOs and conservationists can make informed and effective marine management decisions.



Education

As charismatic megafauna, manta rays act as a flagship species, helping to motivate and engage people with the wider message of marine ecosystem conservation. Through this top down approach, the manta ray becomes the catalyst for change, educating people about the solutions needed to ensure the long-term survival of these animals and the underwater world we rely upon.



Collaboration

With a network of 29 projects worldwide, we specialise in collaborating with multiple parties to drive conservation as a collective; from businesses and governments, to individuals and local communities.



Formed in 2011, the Manta Trust is a UK registered charity that coordinates global mobulid research and conservation efforts.

Our Approach

The Manta Trust takes a unique, multifaceted approach to mobulid conservation, which sets us apart from others in the field.

Stronger Together

Our team is comprised of a diverse group of researchers, scientists, conservationists, educators and media experts; working together to share and promote knowledge and expertise.

Our Impact

- Instrumental in helping gain protection for Hanifaru Bay and assisting the creation of the site's management plan.
- Contributed critical data and expertise for the status re-assessment of all mobulid species on the IUCN's Red List of Threatened Species.

- 'Concerted Actions' proposal submitted by the Manta Trust to the CMS CoP12 was accepted.
- Launched a multi-media initiative, "How to Swim with Manta Rays", to support and increase sustainable manta tourism.
- Published "MANTA Secret Life of Devil Rays", the world's first ever book on manta rays.
- Collaborative efforts resulted in the listing of both species of manta under Appendix II of the CITES.
- Similarly, efforts resulted in the later listing of devil rays under Appendix II of the CITES.
- Aided in the successful adoption of all mobulid species under the CMS Appendix I & II.
- Helped gain national protection in regions with some of the world's largest mobulid fisheries including the Maldives, Mexico, Indonesia, Peru, and Thailand.
- Created a Global Strategy & Action Plan outlining what actions need to be taken to ensure the long-term survival of mobulid rays.



Mission

Our mission is to collaborate with affiliates around the world through research, education, and by providing expert advice to drive the policies and practices necessary to conserve manta rays, their relatives, and habitats.



Vision

Our vision is a sustainable future for the oceans, where manta rays and their relatives thrive in healthy, diverse marine ecosystems.

"In the end we will conserve only what we love; we will love only what we understand; and we will understand only what we are taught."

- Baba Dioum



Strategy & Research

The Manta Trust Five-Year Plan

At the end of 2023, we launched our [Five-Year Plan](#); created by the Manta Trust operations team with guidance and input from our global network of scientists, policy experts and educators, and the facilitation of Martin Clark of the Advocacy Hub. This document clearly defines the Manta Trust's role in the near and medium term, in working towards a sustainable future for the oceans, manta and devil rays.

The Plan defines our four key conservation goals which are supported by our governance aims, also outlined in this document. This document will underpin our approach to everything, from recruitment to funding allocation to project management. It will help us to make fast, strategic decisions that best serve our mission and it will enable us to better monitor and report on progress. The Five-Year Plan will be a flexible document that is reviewed annually and adapted as necessary based on our empirical findings and data collected.

As an umbrella organisation, the Manta Trust works to support 29 affiliated projects around the world. The Five-Year Plan will direct our Affiliate Project's efforts, review their progress, and support critical decisions around the distribution of our resources globally. The extent to which a project contributes to the objectives laid out in our Five-Year Plan will be a critical factor in decision making around maintaining current affiliations and forming new ones.





Acoustic Telemetry Research

Mexico

In early 2023 the Proyecto Manta Pacific Mexico team mapped out the short-scale movements of oceanic mantas in Bahía de Banderas, as well as locations with high fishing and boat traffic presence to identify areas of overlap. Manta rays in the bay are vulnerable to human impacts, such as collisions with boats and entanglement in floating fishing gear. Now, the Proyecto Manta Pacific Mexico team are embarking on a three-year project to establish an active community-based monitoring and mitigation network to reduce these threats to oceanic manta rays in the region.



Novel Research Initiatives Around the World



Citizen Science

Global

The creation of Mantabase is in its final stages of development. This open-access platform will allow citizen scientists to submit their manta ray sightings and interact with our manta ray databases. As Mantabase will rely on public engagement, we were happy to find in a recent review that citizen scientist submissions in the Maldives have risen year on year since 2005. In 2023, we had 2000 citizen scientists submit a manta sighting - our highest number yet! This leads us to believe that Mantabase will be well used by the public. The database team has been busy receiving and responding to the high number of public submissions, as well as facilitating the development of Mantabase.

Devil Ray Reproductive Behaviour

Mexico

A new study by the Mobula Conservation Project has documented two previously undescribed reproductive behaviours among devil rays (also known as mobula rays), the "piggyback leaps" and the "courtship vortex", as well as discovering new reproductive grounds of three devil ray species! The study examined the behaviour in spinetail, bentfin, and Munk's devil rays in the southwestern Gulf of California, Mexico, using boat surveys, spotter planes and citizen science observations. Understanding the reproductive behaviour of these species is key for informing conservation efforts. [Read the study here](#), and an article written by Melissa Hobson for [National Geographic here](#).





Egmont Atoll Manta Rays

Chagos

The Chagos Archipelago's no-take marine protected area (MPA) is a refuge for reef manta rays, but illegal fishing poses a substantial threat and any future changes to the MPA could put this geographically isolated population at risk of extinction. To help prioritise current enforcement activity and inform future spatial planning, acoustic telemetry and environmental data was used to monitor the long-term movements and habitat use of 42 reef manta

rays at Egmont Atoll between 2019-2022. [Read the paper here.](#)

The study, published in 2023, helped to demonstrate reef manta ray's reliance on Egmont Atoll when prey resources are limited elsewhere, making it a crucial habitat for this population. Regular IUU (illegal, unreported and unregulated fishing) enforcement patrols are needed, particularly during the southeast monsoon and any future changes to the Chagos MPA should prioritise preserving and enforcing no-take regulations at Egmont Atoll.

This study supported the designation of [Egmont Atoll](#) as an IUCN Shark Important Shark and Ray Area (ISRA). ISRAs serve as a framework for identifying specific three-dimensional habitats that are crucial for elasmobranch species. They are expected to play a pivotal role in shaping the development, planning, and execution of conservation efforts in response to the global crisis faced by elasmobranchs.



Mobulid Genetics Project

Global

A new study led by Emily Humble and Jane Hosegood investigated the genetic differentiation and diversity of manta rays across the globe. Using 173 genetic samples of reef and oceanic manta rays from 12 different countries, we showed evidence for how oceanic manta rays display significantly higher genetic diversity than reef manta rays, and that oceanic manta ray populations display higher connectivity worldwide.

We found that reef manta rays would benefit most from localised management, whilst oceanic manta rays would benefit from a combination of local, regional, and international management. Our findings highlight the potential for fisheries to disrupt population dynamics at both local and global scales with direct relevance for international marine conservation. [Read the paper here.](#)



Atlantic Manta Ray Tagging

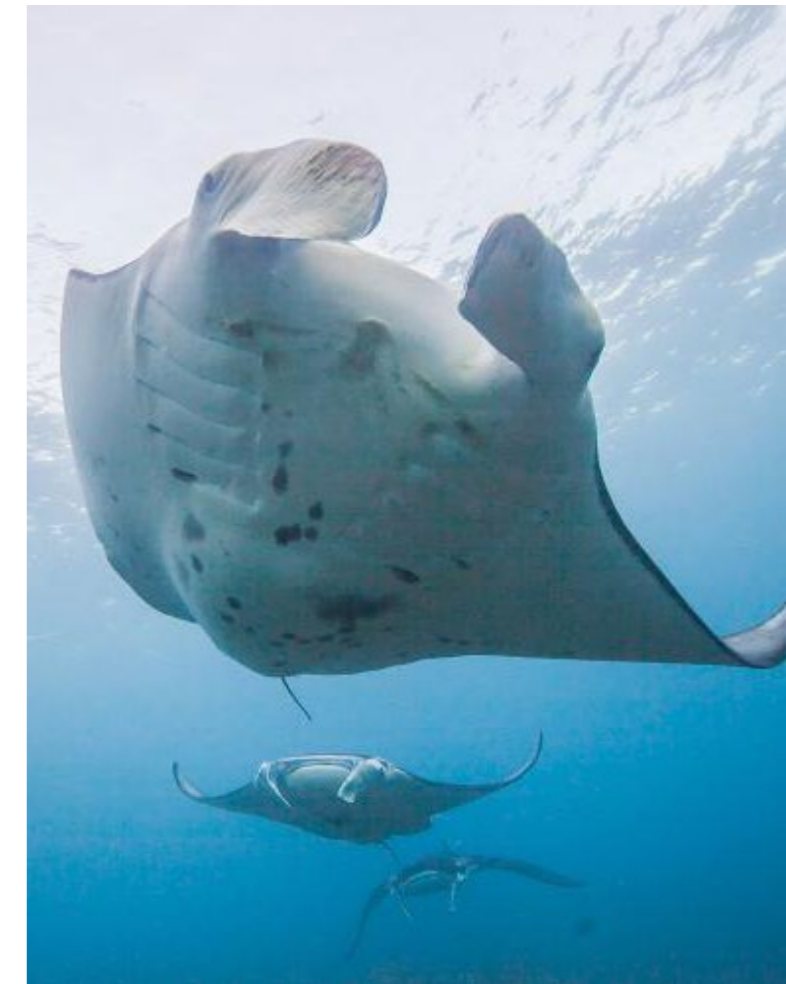
Mexico

Together with the Manta Caribbean Project we started a collaboration with NOAA, the Florida Manta Project, and Oceanos Vivientes to conduct a tagging study on manta rays in the Yucatan Peninsula. The aims are to examine connectivity between the southern Gulf of Mexico (GOM) and the Mexican Caribbean, and the northern GOM and the east coast of the United States (US). Our hypothesis is that adult manta rays are foraging (and perhaps mating) in the southern GOM but migrating to the waters off the southeastern US to pup. In the summer of 2023 a team of researchers from the Manta Trust, NOAA and Oceanos Vivientes visited the Manta Caribbean Project based on Isla Mujeres off the coast of Cancun, to start deploying satellite tags and collecting genetic samples. The team have secured further funding to continue the research in 2024.

Reef Manta Ray Parentage Study

Hawaii

Project Leader Mark Deakos has initiated a parentage study into manta rays of Hawaii. Genetic samples have been obtained from the West Hawaii manta ray population, a distinct population stock in Hawaii. Nearly 100 samples have been collected, which is nearly half the population and sufficient to conduct a parentage analysis examining kinships, reproductive fitness, effective population size, and kin-related social dynamics. [Read the paper here.](#)





Policy & Protection



Global mobulid policy, fisheries, and trade assessment

Overfishing due to targeted and bycatch fisheries remains the greatest immediate threat to manta and devil rays. A key part of our approach to tackling these issues, as described in our new [Five-Year Plan](#), is to identify and address policy gaps and loopholes and we have already made good headway by conducting two global assessments:

Global mobulid gill plate and meat trade reassessment.

We have amassed valuable data to ascertain how effective the current listing of manta and devil ray species on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is at regulating international trade in gill plates. We did this through a combination of quantification of market trade data and official legal/illegal trade data, and the identification of trade without Non-Detrimental Findings (NDFs).

We want to identify the key drivers of the gill plate trade at the level of source, re-export and sink countries (final intended destinations). We have identified countries where there is a mismatch between market data, fisheries

data and legally declared trade, which provides a basis to prioritize conservation efforts and better enforcement of CITES, as well as other multilateral agreements such as the Convention on Migratory Species (CMS), and national level protections, where they exist. This information will also be provided to the CITES Secretariat, Animals and Standing Committees and Parties to help review the current level of trade in these species globally.

Global mobulid fisheries and policy review.

This study brought together a group of experts to review the current state of manta and devil ray fisheries and policy globally. The review highlights major policy and enforcement gaps that are blocking pathways to conservation and provides a clear list of priority recommendations for each fishery's context, building on previous efforts. We also carried out a comprehensive compilation of any existing reports, documents, and data on manta and devil ray fisheries on a global scale, but particularly from countries where we know of or suspect targeted catches and bycatch, such as Sri Lanka, India, Peru, Philippines, Bangladesh, Indonesia, and countries in West & Central Africa. Our report will describe the state of current manta and devil ray fisheries and identify those where there is a strong indication of a population decline.





Gulf of Guinea Elasmobranch Network

There is little data available from the Gulf of Guinea (GoG) region, though it is suspected to be a hotspot for shark and ray (elasmobranch) fisheries. The elasmobranch research community in GoG is relatively small but has conducted some highly relevant research in recent years. Many of the most active elasmobranch researchers in GoG are early career scientists and often indicate feeling isolated and finding it difficult to broaden their network with peers from the region, share lessons learned, or develop collaborative research and conservation projects at a regional scale.

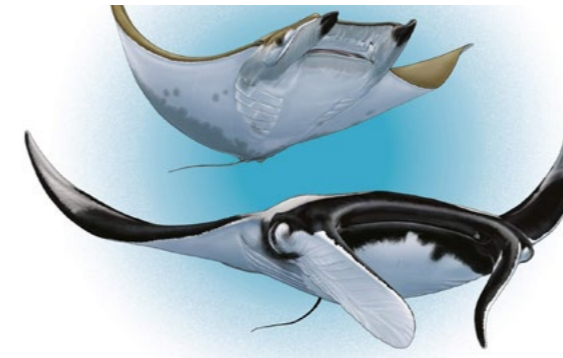
In 2023 the Manta Trust collaborated with the African Marine Mammal Conservation Organisation (AMMCO), one of our Affiliate Projects, to create the Gulf of Guinea Elasmobranch Network, with support from the Convention on Migratory Species (CMS), and the IUCN Shark Specialist Group and Elasmobranch project leader Dr. Rima Jabado.

The first GoG Elasmobranch Network meeting took place in Kribi, Cameroon in June, and was attended by the Manta Trust Fisheries & Policy Manager, representatives from AMMCO and researchers working in Cameroon, Nigeria, Ivory Coast, Benin, Ghana, Angola, São Tomé & Príncipe, Gabon, Democratic Republic of the Congo, Mauritania, and Guinea-Bissau. A joint strategy for the conservation of elasmobranchs in GoG was developed at the workshop, which was then presented to government representatives during a workshop in September. In coordination with the CMS Secretariat, these government representatives will help to finalise this strategy.

To implement the five axes of the Gulf of Guinea Elasmobranch Conservation Strategy, workshop participants reached an agreement that the network would be constituted as a Consortium of organizations, including academic, governmental, and non-governmental, that will work in collaboration towards specific priority actions defined in the strategy. A Memorandum of Understanding will guide this collaboration between multiple parties across the Gulf of Guinea region.

Improved protection for manta & devil rays globally

In 2023 there were several important achievements made for manta and devil ray conservation in policy and legislation, thanks to the efforts of the Manta Trust in collaboration with many passionate individuals and organisations.



ID Guide for Eastern & Central Pacific

We completed the first version of our manta and devil ray ID guide in collaboration with NOAA's Pacific Ocean fisheries. This guide was presented at the Inter-American Tropical Tuna Commission (IATTC) Ecosystems & Bycatch meeting and distributed to IATTC Parties. It was also distributed to fishers and observers onboard NOAA's purse seine and longline fleets in the Eastern and Western Pacific. This guide is expected to help improve data collection and incentivise appropriate live-release practices.



ICCAT Retention Ban

Another major achievement was a new retention ban on manta and devil ray species within the International Commission for the Conservation of Atlantic Tunas (ICCAT), which will ensure manta and devil rays are handled to promote survival. This achievement was spearheaded by the UK Government, with strong support from a group of NGOs including Sharks Advocates International and the Shark Trust. The ICCAT is responsible for managing and conserving tuna and tuna-like species in the Atlantic Ocean and surrounding seas, including managing species caught as bycatch.



SPAW Protocol

During the SPAW COP12 conference in Aruba in October, our proposal successfully advocated for up listing the oceanic manta ray from Annex III to Annex II of the SPAW protocol, in the Wider Caribbean Region. This means the highest level of protection for this species in the region, with strict prohibitions against possession, trade, and any form of destruction or disturbance.

Education & Development



School Outreach and Education

In 2023 we engaged with over 10,000 children in the UK through our school outreach programme. Our education resources received more than 200 downloads from tes.com across the world and we added German to the list of languages (English, French, Spanish) in which our Ocean Education Booklet is available, helping us to widen the reach of these resources.

Through in person presentations at festivals, resorts and community events, our affiliate projects reached over 3,000 people in French Polynesia, the Maldives, Ecuador and Caribbean Islands, raising awareness of manta and devil ray and ocean conservation. We have taken almost 300 children snorkelling and reached over 1,000 students in schools in French Polynesia and the Maldives, where our education programmes are most active. As well as presentations, activities with schools have included beach clean ups, art competitions and a pen-pal exchange programme between British and Maldivian students.

We have developed a new series of science journals for children, called Manta Marvels, designed to be used in schools to help develop children's understanding of scientific methodology, as well as engage children with marine science. [Available to download from our Education Portal](#), children can use these curriculum-linked articles to discover how scientists study manta rays and uncover interesting information about manta ray behaviour.





Ocean Summer School

Poole, UK

In August 2023 we launched Ocean Summer School in the UK, which was a half-day programme for children and young people aged 8-12 or 13-16. Over two days, 56 children (and a handful of parents), joined us to learn more about the ocean. Children explored items such as shark teeth and whale ear bones, experienced the wonder of swimming with manta rays using virtual reality, tried their hand at photo identification, and learnt more about the threats to marine life through games. A quarter of the spaces on this programme were allocated free of charge to families experiencing financial hardship.



STEM in the Park

Crawley, UK

In June we had the pleasure of attending STEM in the Park in Crawley, UK. This event was attended by around 4500 people, many of which were enthusiastic to talk with us and take a virtual dive with manta rays.



Ocean Women

Maldives

Ocean Women's purpose is to make the transformational benefits of the ocean available to all women and girls, all over the world, for years to come. Ocean Women Maldives project co-leaders, Flossy Barraud of the Manta Trust and Aminath Zuna of Salted Ventures Swimmers, conducted their first female-focused SSI Swim and Snorkelling Instructor training programme with seven participants from three islands, on Rasdhoo island, Maldives. Over 10-days, the trainees participated in intensive classroom and theory sessions and in-water training and skills development. Through apprenticeships they introduced over 60 children from Rasdhoo island to swimming lessons. Key to the programme was having mentor and knowledge sharing workshops with local experts. The trainees, who blew us away with their passion and engagement, have now started running monthly learn-to-swim programmes, teaching over 65 women and children in their communities to swim so far.





CARL F. BUCHERER
LUCERNE 1888



Between 2005 and 2018 Proyecto Mantas Ecuador and The Manta Trust identified more than 2,800 individual rays and estimated a total population of more than 22,000 in mainland Ecuador, making this the largest known oceanic manta ray population in the World. This year, thanks to the generous funding from Carl F. Bucherer, we were able to bring together a team of manta scientists, educators, and media experts to study this distinct population, learning more about their population ecology, habitat use and migration behaviour.

We focused our efforts around Isla de La Plata, a key site for oceanic manta rays between July and October, with manta sightings peaking in August and September. Due to the El Niño event unfolding this year in the Eastern Tropical Pacific, the waters around Isla de La Plata were warmer than usual, and while this meant the presence of manta rays was lower compared to other years, it offered us an unprecedented opportunity to examine the impact of this event on the population of manta rays here. This will help us to better understand the environmental conditions that bring manta rays to Isla de la Plata and to assess the potential impact of a warmer climate on this population.

During the expedition, we gave presentations to the local community, including park rangers, naturalist guides and school students, to raise awareness on the importance of their home as a site for these species. Finally, this expedition allowed us to bring together, for the first time, members from our network of affiliate projects from Mexico, Peru, Ecuador and Costa Rica, to share learnings and promote collaboration on manta and devil rays in the Eastern Tropical Pacific region.



200 hours of in-water survey effort



30+ manta rays sighted



28 new manta rays identified



2 ultrasound scans of manta rays



4 manta ray acoustic tags deployed



7 biopsy samples of rays taken



2 acoustic receivers maintained



2 temperature loggers deployed



204 hours of underwater camera deployment



60 community members involved in outreach activities



5 stories documented



7 science presentations to 122 attendees



20 drone surveys



The expedition research boat, supported by Carl F. Bucherer, moored at Isla de La Plata between research dives.



Isla de La Plata

Ecuador



Left: The 'Eyes on the Reef' remote camera was deployed at the cleaning stations of Isla de La Plata, to understand the seasonality and behaviour of the oceanic manta rays (*Mobula birostris*) of Ecuador.

Right: Expedition researchers ready to deploy acoustic tags on oceanic manta rays.



New Initiative: Atlantic Manta & Devil Ray Coalition



We are thrilled to announce the official launch of the [Atlantic Manta and Devil Ray Research Coalition](#), an initiative dedicated to advancing the understanding and conservation of devil and manta rays in the Atlantic Ocean. The coalition is committed to bridging critical knowledge gaps, particularly for devil rays, which have been the least studied to date. Through collaboration with various individuals and organisations, we aim to create a comprehensive picture of manta and devil rays in the Atlantic, while also raising awareness about the environmental and anthropogenic threats faced by these incredible creatures on both regional and global scales.

Our comprehensive approach includes scientific fishing surveys, genetic analyses, photo-ID, satellite tracking, and citizen observations, among other techniques. All research outputs will be publicly accessible, contributing to the global scientific community. Samples will enhance existing collections, and the coalition is dedicated to developing local capacity and inspiring future generations of marine scientists.

We invite researchers, NGOs, governments, and the public to join us in this crucial effort to conserve manta and devil rays in the Atlantic Ocean. If you are an organisation interested in joining the coalition, or have any questions, please get in touch at atlanticmantacoalition@gmail.com!



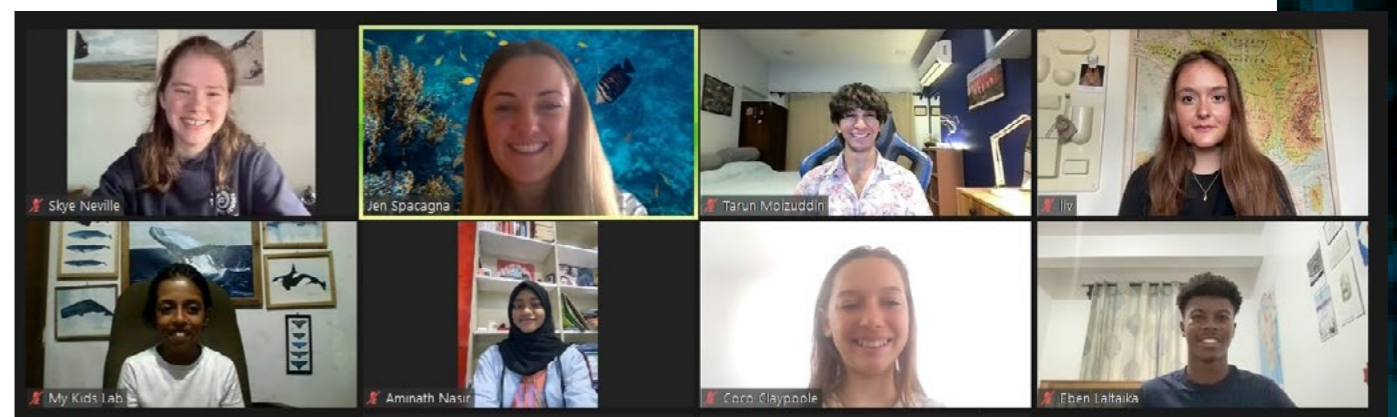


Atlantic Pygmy Devil Rays (*Mobula hypostoma*)
at Isla Mujeres, Quintana Roo, Mexico



New Initiative: Ocean Ambassadors

In November we opened up applications for our new Ocean Ambassador programme. It aims to create a diverse community of young people from across the globe who are enthusiastic about ocean science and conservation. Ocean Ambassadors will have the unique opportunity to connect with marine scientists, engage in eye-opening discussions, and even conduct interviews with experts in marine conservation. We were looking for young people who are motivated to use their creativity and communication skills to help us spread positive messages about the ocean, and we were blown away by the fantastic applications we received from teenagers around the world. We received 172 applications from 31 countries and in early 2024 interviewed and selected 20 Ocean Ambassadors who will work with us over 2024 to develop projects that promote ocean science and conservation, perhaps working with their school or in their local communities.



Events

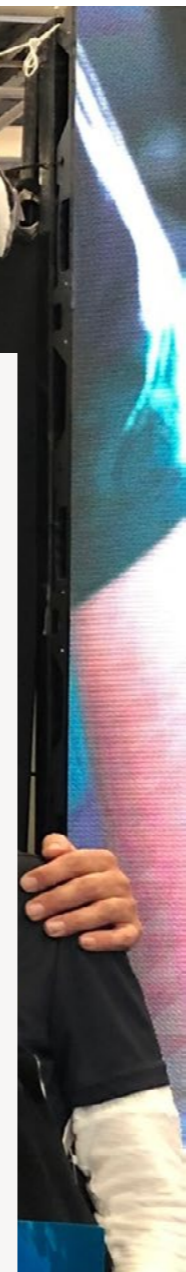


Commercial Events

International Dive Shows and Expos

Global

The Manta Trust Team participated in multiple commercial events throughout 2023, including the Paris Dive Show (Salon de Plongee), the Maldives Marine EXPO/ADEX, the Utrecht Dive Show (Duikvaker), InterDive in Germany, and Dubai Watch Week. During these events, we were lucky to have many ocean enthusiasts visit our booths, who share our passion of research and conservation. We regularly give educational presentations about our research and expeditions on offer, to which we always have an amazing audience. We would like to say a special thank you to our wonderful volunteers from around the world that support us at these events!



Other Events



Global Ocean Biodiversity Initiative

Muscat, Oman

The Global Ocean Biodiversity Initiative (GOBI) is a global alliance focused on preserving marine biodiversity, supporting the Convention on Biological Diversity's efforts to identify important marine areas. In October 2023, The Manta Trust was invited to attend a GOBI workshop in Oman to learn about tools and methods for ecosystem-oriented marine management in the North-West Indian Ocean, and we presented about our conservation work and outreach efforts in the Maldives. Case studies from the region were shared, highlighting successes and challenges. The workshop also covered area-based planning, conservation methodologies, human impacts, and the need for capacity building. Results will be presented at a conference in February 2024 at the 14th Conference of the Parties of the Convention on Migratory Species of Wild Animals.



World Conference on Drowning Prevention

Perth, Australia

The Ocean Women team attended the World Conference on Drowning Prevention in Perth, Australia, presenting their work so far on the instructor training programme and ocean access research. Flossy, project leader, and Zuna, Maldives project co-leader, were able to meet and compare learnings with leaders of other swimming and water connection programmes from across the world including Australia, Taiwan, Bangladesh, Sri Lanka, South Africa, Ghana and more. The team was honoured to be invited by a Māori community from New Zealand to a roundtable with indigenous people to discuss indigenous rights and connections to water, equity, and alternative indigenous ways of knowing and doing swimming programmes.



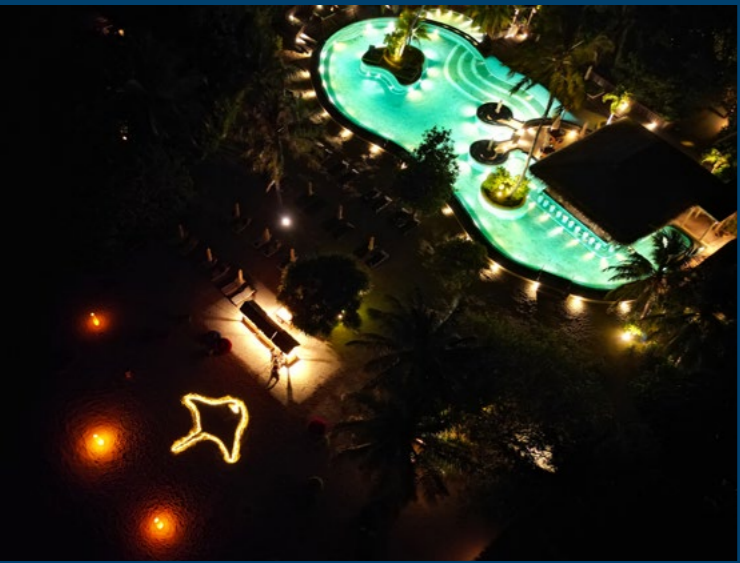
World Ocean Day

London, UK

To celebrate World Ocean Day, we held a number of talks for the public and for schools. We were delighted to be invited to deliver a talk at the National Maritime Museum, London, for their World Ocean Day celebrations. We also teamed up with STEM learning to deliver virtual talks for primary and secondary school students. Overall our World Ocean Day talks reached over 5000 people, showing what great enthusiasm there is to celebrate the ocean.



World Manta Day



World Manta Week

Laamu, Maldives

Our team from the [Maldives Manta Conservation Programme](#) organised a range of educational and outreach events for World Manta Day. The team based in Laamu Atoll decided to expand the celebration into World Manta Week. They kicked off the week at Six Senses Laamu with manta-themed activities such as manta pancake breakfasts, virtual reality experiences, and manta costumes for guests and their children. Guided dives to nearby manta cleaning stations were offered to promote sustainable tourism practices, with a focus on educating divers on how to responsibly interact with these majestic creatures.

A key aspect of their conservation efforts involves community education initiatives on the nearby islands. During World Manta Week, the team visited Hithadhoo School to conduct a special session featuring presentations, face painting, and games.



'A Journey Into Manta Ray Conservation' Film Screening

Plymouth Arts Cinema, UK

The [Manta Trust](#), [Manta Watch New Zealand](#), and [Mobula Conservation](#) hosted a special film screening event at Plymouth Arts Cinema for World Manta Day, that raised awareness and support for manta rays. Through stunning visuals and compelling storytelling, we showed a series of short films that took viewers behind the scenes of the lives of manta ray researchers and taught them about the challenges manta rays face in their conservation journey. Two of the featured films, 'Manta Watch' and 'Munkiana', were also touring throughout global independent cinemas and received great engagement.

The event was a sell-out with over 100 people joining on the night, and we were honoured to have many of our core team, affiliate members, and our Chair Trustee present to participate in a panel discussion and answer great questions from the audience.



Social Media Campaign

Online, Global

The theme of [World Manta Day 2023](#) was tourism, which plays a pivotal role in manta ray conservation. However, it is crucial that manta ray tourism is properly managed, to promote responsible visitor practices and reduce human impacts on their fragile habitats, which if managed sustainably helps to ensure the long-term survival of these magnificent animals.

We ran a week long social media campaign on the theme of tourism, providing our followers with codes of conduct, recommended sustainable tour operators, as well as educating about the threats manta rays face if tourism is unsustainable. The campaign was extremely successful, with over 200,000 views of our educational videos posted through the week.

Affiliate Projects



DR ANNIE MURRAY
Papua New Guinea
Manta Project Founder



Papua New Guinea Manta Project

We are thrilled to introduce our latest affiliate project, the [Papua New Guinea Manta Project](#)! Their aim is to better understand the population dynamics of manta and devil rays throughout the Milne Bay Province and across Papua New Guinea region, in order to support local capacity building by working hand-in-hand with local NGOs throughout the region.

Their current achievements include: conducting ongoing training and field trips with the Sea Women of Melanesia and collaborating with the Coral Sea Foundation to incorporate valuable manta research into their programme. They also conducted a feasibility study in partnership with the Manta Trust and the Conflict Islands Conservation Initiative to increase the knowledge of the manta rays in this remote biodiversity hotspot.

This project was established by project leader, Dr Annie Murray. She aims to learn more about this understudied population of manta rays, building on previous research conducted in the region to answer the many questions regarding their population dynamics and population movements, whilst maintaining a strong focus on supporting local researchers and communities.

Our 29 Affiliate Projects

Our mission is to collaborate with affiliates around the world through research, education, and by providing expert advice to drive the policies and practices necessary to conserve manta rays, their relatives, and habitats.

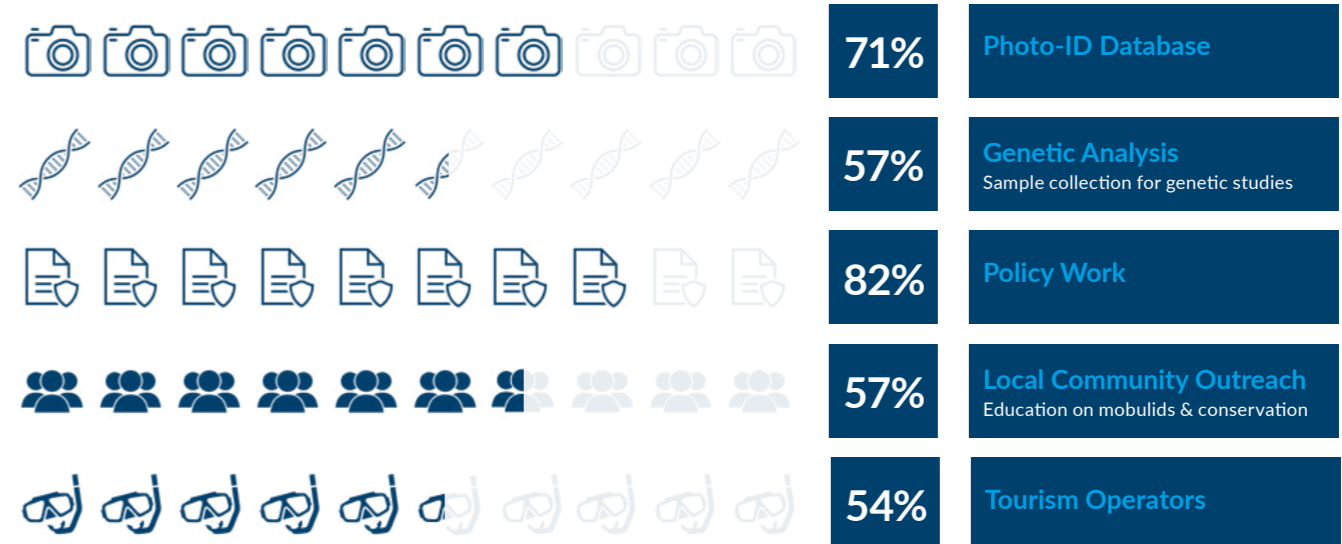
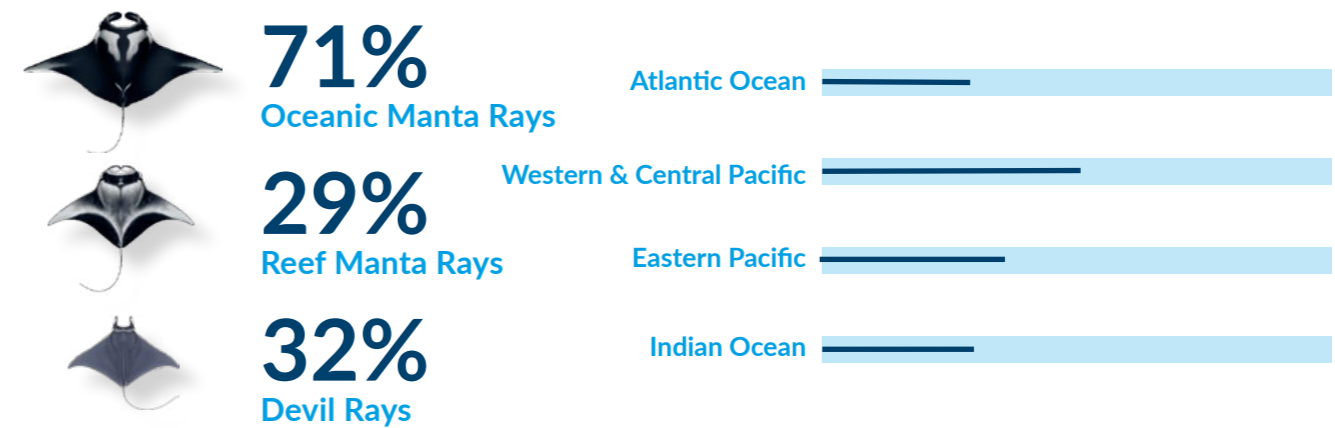


The Affiliate Hub

Founded in 2011, the Manta Trust aims to build a worldwide network of scientists and experts in various fields such as education, advocacy, policy, and media to work together in the conservation of manta rays, their relatives, and habitats. The core operational team coordinates activities, provides guidance, fundraises, and promotes collaboration among affiliate projects.

This year, we introduced an 'Affiliate Hub' on our website for exclusive access by affiliate members and collaborators, where they can access benefits, apply for grants, and find support options such as staff assistance, resources, profile raising, grants, and media support.

Affiliate project focus species, regions and methods





1 Pilot project Launched – Addu Atoll.



2 New research projects designed and launched: Acoustic monitoring and 3D Mapping of cleaning stations.



1 Full Moodhu Madharusaa programme completed in Makunudhoo and 16 introductory education sessions carried out in Baa, Laamu, Addu and Makunudhoo Atolls.



7 MSc student projects supervised, supported, hosted and facilitated in studies designed by the Manta Trust.



43 Applications for Important Shark and Ray Areas (ISRAs) with 37 areas receiving official international recognition as either ISRAs or Areas Of Interest.



6 Festivals and conferences attended. Festivals: Maldives Marine EXPO (ADEX), Addu Coral Festival, and Turtle Festival). Conferences: ISRA Workshop (South Africa), GOBI Conference (Oman), and Maldives Protected and Conserved Areas Forum (Maldives).



Project Bases: Raa, Baa, Lhaviyani, Laamu, Makunudhoo, Addu and Fuvahmulah Atolls.



MALDIVES MANTA CONSERVATION PROGRAMME

The Maldives Manta Conservation Programme (MMCP) made significant progress in the past year, focusing on policy and protection efforts.

These achievements included submitting an application for Marine Protected Area designation in Raa Atoll, an important manta ray nursery area and research location for our Raa Atoll team. A major milestone was the proposal for Important Shark and Ray Areas in the Western Indian Ocean, leading to the recognition of 37 areas. Additionally, we played a key role in the approval of the first Other Effective Area-based Conservation Measures (OECM) and took on the responsibility of leading the Maldives Rays and Skates Red List assessments. We also contributed to the development of protected species management guidelines and a national framework for research and monitoring in the Maldives, while initiating discussions on Wildlife Heritage Areas.

Bases
7

Staff/
Interns
21

Recorded
Reef Mantas
>5,500



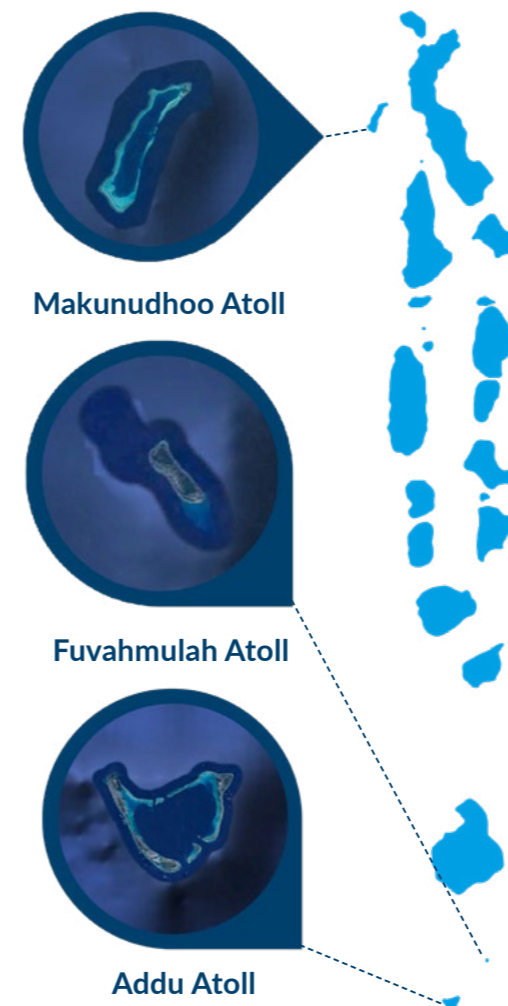


RahVeshi Programme



The RahVeshi Programme is an initiative created by the Maldives Manta Conservation Programme (MMCP) to establish long-term, locally driven research and outreach programmes to protect the natural resources of the Maldives, develop local capacity for conservation in remote parts of the country, and help the Maldives adapt to the climate crisis by improving ecosystem-based resiliency.

The MMCP has been successfully running since 2005 thanks to invaluable partnerships with several luxury resorts which support us financially: providing our personnel with accommodation, salaries, access to the field and to labs, and the vital opportunity to engage tourists with marine issues. However, in 2022 the [RahVeshi Programme](#) was launched to expand the scope of our work and increase our conservation impact by establishing new projects on inhabited islands in remote parts of the country and ensuring that Maldivians play an active role in the design and implementation of these initiatives.



The RahVeshi programme model enables us to prioritise:

- Training, mentorship, resources, paid internships, and job opportunities for Maldivians in marine research, education and conservation.
- Gain consistent access to significant manta ray study sites in remote parts of the archipelago, away from tourism.
- Support grass roots conservation initiatives and help small island communities to advocate against invasive and unsustainable development in their regions.



In 2023 the Programme gained momentum as we ran successful research seasons in Fuvahmulah and Makunudhoo Atolls as well as conducting a pilot project in Addu Atoll. Some highlights include:



Running a [Moodhu Madharusaa](#) course (our Ocean School marine education programme) with 22 15-year old students from Makunudhoo School as well as a 'starter' class for 55 more children which was extremely popular; as a result teachers and parents have requested that the full course be conducted again in 2024.



Confirming 75% of the Makunudhoo Atoll reef manta rays as new individuals to the Maldives database, which equates to 240 out of 323 individuals in Makunudhoo.



Rescuing 'Lenny', a reef manta ray found entangled in ghost gear in Makunudhoo. [Watch a video of the rescue here.](#)



Gaining 55 new oceanic manta ray IDs, bringing the country wide population to nearly 1000, making it the 3rd or 4th biggest oceanic manta ray population in the world.



Collecting 14 tissues samples from live oceanic manta rays in Fuvahmulah and six from oceanic mantas in Sri Lankan fish markets for genetic and stable isotope analysis, to help us learn if this population is at risk from Sri Lankan fisheries.



Deploying five crittercams on oceanic manta rays in Fuvahmulah in collaboration with National Geographic to learn more about their behaviour.



Spearheading the successful listing of Fuvahmulah as an Important Shark and Ray Area, in collaboration with the Maldives Whale Shark Research Programme, MMRO, Nekton Mission, Fuvahmulah Dive School and Pelagic Divers Fuvahmulah.



Attending the 2023 Coral Festival in Addu.

This year the RahVeshi Programme was also able to provide ten paid internships for Maldivians and hired Fauz Fath-Hee as the RahVeshi Programme Coordinator. Fauz, who is from Addu Atoll, has been part of the MMCP team since 2022 and is now working closely with the MMCP Project Leader and Manta Trust core team to oversee the work of all our RahVeshi projects and find new funding opportunities for the Programme.

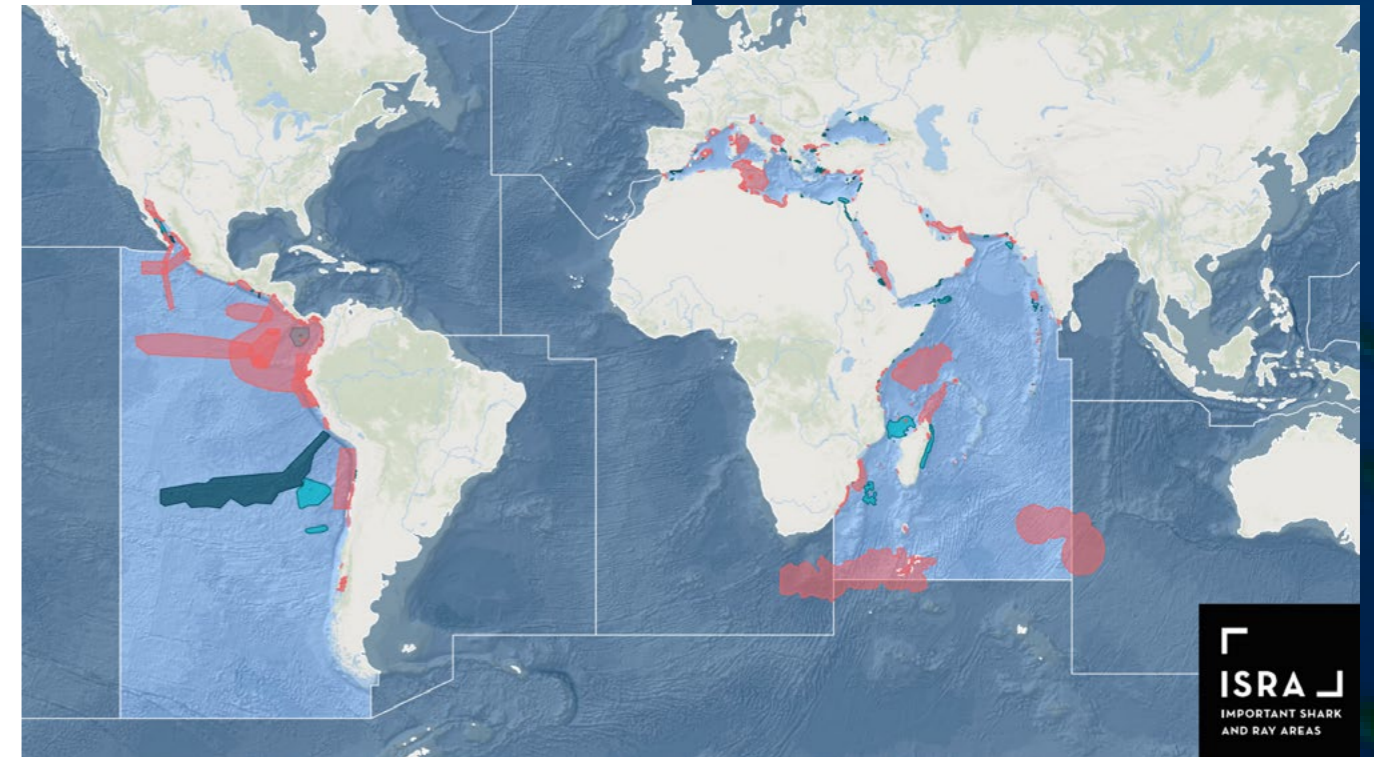
We were extremely grateful to have the support of RahVeshi Programme Principal Supporters, Secret Paradise Maldives and Helin Matkat over 2023. If you are interested in supporting this exciting initiative, [please get in touch.](#)



An oceanic manta ray cruises over the outer reef of Fuvahmulah Atoll, one of the RahVeshi Programme research locations.



A Makunudhoo Atoll community member joins the RahVeshi Programme research team on the boat, to experience a day in the life of a manta researcher.



Important Shark And Ray Areas in the Western Indian Ocean (Maldives)

In September 2023, the MMCP Project Leader was invited to contribute expertise and efforts towards a Workshop in South Africa aligned with the designation of Important Shark and Ray Areas (ISRAs) in the North-West Indian Ocean. The workshop presented the ideal environment for collaborative engagement where scientists, policy representatives, and conservationists collectively discussed and endeavoured to identify areas pertinent to elasmobranch conservation in their respective regions.

We set a high benchmark for ourselves by recognising a need to submit proposals on at least 43 potential areas worthy of this status. The task itself, was a big eye-opener! It highlighted many areas that we consider as important and which require conservation to ensure the future of threatened shark and ray species, but also revealed a gap in available data to evidence our case and validate these as critical locations. What appeared to be a task too complicated or challenging to achieve at first, turned out to be a great success with 37 of the proposed locations now being globally recognised as ISRAs or as Areas of Interest (Aoi) within the Maldives. This was all thanks to the wonderful support and insight we received from local dive guides, marine biologists and fishermen who provided the ecological knowledge and gave context needed to back these proposals. Finally, it was the ISRA team who really provided the excellent support and guidance throughout the entire process and made this achievement possible!

The world is heading towards the 30x30 target and these ISRAs help to really pinpoint key areas for decision-makers to prioritise for the future of sharks and rays. ISRAs help not only to define areas still in need of protection but also for areas which already receive protection, they add weight and highlight how these areas may need to be adapted to accurately reflect the conservation needs of sharks and rays using these sites.

Peer-Reviewed Publications

The Manta Trust core team and affiliate project network has continued to work hard turning years of data collection into peer-reviewed publications which advance science and conservation.



11

Published Papers

Manta Trust core personnel and affiliate project researchers were lead or co-authors on 11 peer-reviewed publications this year.

>15,000

Accesses

Each paper was accessed over 1400 times on average. The number of citations will be a true indication of impact but this will not be known for a while.

Papers to Highlight

Detecting Pregnancy in Reef Manta Rays

In this study, our team made a ground-breaking discovery of the world's first reef manta ray pregnancy in the wild, using a contactless underwater ultrasound scanner. This information is key for conserving the species, which the International Union for Conservation of Nature lists as vulnerable to extinction. This technology allows researchers to examine an animal's internal anatomy while minimizing stress.



Niv Froman, Marie-Aude Genain, Guy M. W. Stevens, Gareth P. Pearce, 2023. Use of underwater contactless ultrasonography to elucidate the internal anatomy and reproductive activity of manta and devil rays (Fam. Mobulidae)

List of peer reviewed publications from 2023

The Manta Trust is committed to breaking down barriers in science communication. One such barrier is the cost of accessing publications. The Manta Trust is committed to making all papers open access where the lead author's primary affiliation is to our charity. This costs between 3-5,000 USD per paper.

Publication title	Journal	Authors
1. Manta and devil ray aggregations: conservation challenges and developments in the field	Frontiers in Marine Science	Marta D. Palacios, Joshua D. Stewart, Donald A. Croll, Melissa R. Cronin, Abel Trejo-Ramírez, Guy M. W. Stevens, Nerea Lezama-Ochoa, Kelly M. Zilliagus, Rogelio González-Armas, Giuseppe Notarbartolo di Sciara, and Felipe Galván-Magaña
2. Use of underwater contactless ultrasonography to elucidate the internal anatomy and reproductive activity of manta and devil rays (Fam. Mobulidae)	Journal of Fish Biology	Niv Froman, Marie-Aude Genain, Guy M. W. Stevens, Gareth P. Pearce
3. Spatial Ecology of the Population of Reef Manta Rays, <i>Mobula alfredi</i> (Krefft, 1868), in New Caledonia Using Satellite Telemetry 1-Horizontal Behaviour	Fishes	Hugo Lassaue, Olivier Chateau, Laurent Wantiez
4. Genomic evidence indicates small island-resident populations and sex-biased behaviors of Hawaiian reef manta rays	BMC Ecology and Evolution	Jonathan L. Whitney, Richard R. Coleman & Mark H. Deakos
5. Occupancy of acoustically tagged oceanic manta rays, <i>Mobula birostris</i> , in Bahía de Banderas, Mexico	Marine Biology	P. Santiago Domínguez-Sánchez, Ana Širović, Iliana A. Fonseca-Ponce, Aldo A. Zavala-Jiménez, Robert D. Rubin, Katherine R. Kumli, James T. Ketchum, Felipe Galván-Magaña, R. J. David Wells & Joshua D. Stewart
6. Intraspecific differences in short- and long-term foraging strategies of reef manta ray (<i>Mobula alfredi</i>) in the Chagos Archipelago	Global Ecology and Conservation	Joanna L. Harris, Clare B. Embling, Genevieve Alexander, David Curnick, Ronan Roche, Niv Froman, Marleen Stuhr, Elaine S. Fileman, Simon Hilbourne, Rebecca Carter, Annie Murray, Jessica Savage, Guy M.W. Stevens
7. Insight into manta ray behaviour using animal-borne Crittercams	Behaviour	Nicole Pelletier, Anna M. Knochel, Joshua D. Stewart, Niv Froman, Taylor Smith, Greg Marshall, Kyler Abernathy, Julie Hawkins, Guy M.W. Stevens
8. Population structure of endangered spinetail devil ray (<i>Mobula mobular</i>) in the Lesser Sunda Seascape, Indonesia, revealed using microsatellite and mitochondrial DNA	Aquatic Sciences	Muhammad Danie Al Malik, Mochamad Iqbal Herwata Putra, Edy Topan, Ni Luh Astria Yusmalinda, Ni Putu Dian Pertiwi, Yuliana Fitri Syamsuni, Ni Kadek Dita Cahyani, Enex Yuni Artiningsih, Sarah Lewis, Lumban Nauli Lumban Toruan, Muhammad Ghozaly Salim, Firmansyah Tawang, Faqih Akbar Alghozali, Derta Prabuning & Andrianus Sembiring
9. Using Citizen Science to Infer Characteristics and Habitat Use of Reef Manta Rays (<i>Mobula Alfredi</i>) in New Caledonia	Marine Biology	Hugo Lassaue, Olivier Chateau, Laurent Wantiez
10. Reproductive behavior, seasonality, and distribution of three devil ray species (<i>Mobula mobular</i> , <i>M. thurstoni</i> , and <i>M. munkiana</i>) in the Southern Gulf of California, Mexico	Marine Biology	Marta D. Palacios, Abel Trejo-Ramírez, Sidharta Velázquez-Hernández, Scarlett A. K. Huesca-Mayorga, Joshua D. Stewart, Melissa R. Cronin, Nerea Lezama-Ochoa, Kelly M. Zilliagus, Rogelio González-Armas, Felipe Galván-Magaña & Donald A. Croll
11. Comparative population genomics of manta rays has global implications for management	Molecular Ecology	Emily Humble, Jane Hosegood, Gary Carvalho, Mark de Bruyn, Simon Creer, Guy M. W. Stevens, Amelia Armstrong, Ramon Bonfil, Mark Deakos, Daniel Fernando, Niv Froman, Lauren R. Peel, Stephen Pollett, Alessandro Ponzio, Joshua D. Stewart, Sabine Wintner, Rob Ogden



Online Articles

The Manta Trust team and affiliate network were featured in multiple magazines, newspapers, and online articles, such as The Guardian, Forbes, National Geographic, BBC Wildlife, and Scuba Diver Mag.



On Television

The Manta Trust research and conservation efforts were showcased in several high-end productions throughout 2023, including a feature-length documentary filmed by ARTE (airing in 2024), and on news outlets Yahoo, ABC News, and 7 News Australia.



Our Own Media

We have shared inspiring manta and devil ray research and conservation stories throughout the year through impactful media campaigns and disseminated essential publication data through insightful infographics. The media and communications team also created multiple educational videos, including 'RahVeshi Programme' which showcased the Manta Trust's latest initiative in the Maldives, and a video about a [manta ray entanglement and rescue in Makunudhoo Atoll](#) which got over 160,000 views across our social media platforms. [A series of 5 educational videos](#) from the Ecuador Manta Expedition were filmed and produced, resulting in over 65,000 views across our channels.

In the Media



The ARTE team interviewing Baa Atoll project manager Elspeth Strike as part of their feature length documentary, about manta ray research in the Maldives. The theme was 'women in marine conservation'.



'The world's first ultrasounds of wild manta rays reveal a troubling truth'

National Geographic featured the Manta Trust's ground-breaking discovery of the world's first manta ray pregnancy in the wild using a contactless underwater ultrasound scanner, [in both an online and print article](#).



'The Maldives are 99% water, so why can almost no teenagers swim?'

Despite being surrounded by water, many young people in the Maldives, particularly girls, do not know how to swim due to factors such as a loss of connections to a traditional lifestyle that was more closely tied to the sea, and social stereotypes. [An article in The Guardian](#) promoted our 'Ocean Women Project' and highlighted the importance of providing women the chance to connect to the ocean.



Social Media Following

Our social media following grew to 140,000 people, which significantly increased the reach of our research and conservation news.

Smiley Charity Film Awards

Our film 'Inspiring Ocean Guardians' which was filmed by Simon Hilbourne during our far north Maldives expedition in 2022, made it to finals of the Smiley Charity Film Awards in London. The star studded evening showcased many amazing UK charities and helped to raise awareness of our Conservation, Education and Outreach work.

Big Syn International Film Festival

Two of our in-house films ('Inspiring Ocean Guardians' by Simon Hilbourne and 'Mantas of Makunudhoo' by Jasmine Corbett) were nominated as finalists for the 2023 Big Syn International Film Festival, the world's biggest sustainability film festival led by OSCAR, BAFTA and EMMY award-winning celebrities and leaders from sustainability, policy and media. Our films were awarded a Special Mention Award at the gala awards ceremony at the Curzon Mayfair, London in November.



Students

Over the years, the Manta Trust has supported a number of students pursuing a research career in mobulid ecology, fisheries and conservation. The support provided by the charity has come in the form of financial support, access to, and support in field locations, as well as mentoring and academic support.



2023 External Supervision

9 PhD students

We have provided continual support and supervision for a number of doctoral candidates.

7 MSc students

Through long-term collaborations with Universities, we have supported a number of masters thesis projects.

Ocean Giants Programme



Collaboration

We have continued to work in collaboration with the University of Plymouth School of Biological and Marine Sciences to run the [Ocean Giants Programme for Conservationist Development](#) (OGP), having designed a new and improved curriculum for it. In May 2023, six new Apprentices were selected to take part in the programme and have been paired up with three partner NGOs: The Manta Caribbean Project, LAMAVE and Sea Search.

The Programme

The students are spending their first year on the OGP building a relationship with their Partner NGO remotely, whilst undertaking training on charity operations (fundraising, media and communications, strategy) with the Manta Trust, before carrying out an in-situ placement with their Partner NGO during their second year.

Students of 2023

2023 presented a record year of research students around the world, that began, continued, or completed a doctorate, masters or bachelor of science or conservation through the Manta Trust.

Student	Project Title	University
PhDs		
1. Niv Froman	The reproductive ecology of the manta ray: life history factors limiting population growth.	University of Cambridge
2. Rachel Newsome	Activity and energetics of reef manta rays (<i>Mobula alfredi</i>) in contrasting seascapes.	Murdoch University
3. Joanna Harris	Investigating the movement and foraging ecology of reef manta rays (<i>Mobula alfredi</i>) in the British Indian Ocean Territory (BIOT).	University of Plymouth
4. Ana Sobral	Filling the gap: study of the ecology of data-poor pelagic elasmobranchs in oceanic islands in the Atlantic.	University of the Azores
5. Betty Laglbauer	Mobulid ray feeding ecology and sensory biology.	University of the Azores
6. Calvin Beale	Movement ecology of oceanic manta rays (<i>Mobula birostris</i>).	Murdoch University
7. Hannah Moloney	Oceanographic drivers of manta ray feeding ecology and behaviour.	University of Sunshine Coast
8. Flossy Barraud	Exploring women's access to the ocean.	University of Plymouth
9. Jessica Haines	The importance of a key aggregation site for juvenile reef manta rays (<i>Mobula alfredi</i>) in the Maldives, and the impacts of tourism activities at this location.	University of Exeter
MSc		
1. Tess McCormack	Understanding the species richness of cleaning stations and ecological role of cleaning symbioses in Laamu Atoll, Maldives, using data from Remote Underwater Video (RUV) surveys.	University of Exeter
2. Benjamin Guilford-Pearce	Cleaning to Conservation: Remote Underwater Photographs Reveal Environmental Drivers and Resighting Patterns of <i>Mobula alfredi</i> in Laamu Atoll, Maldives.	University of Exeter
3. Francesca Waters	Assessing elasmobranch populations at Hurawalhi Island Resort (Maldives).	University of Plymouth
4. Nina Cristiano	Population demographics, habitat use and regional movements of reef manta rays (<i>Mobula alfredi</i>) in Makunudhoo, Maldives and implications for management.	University of Plymouth
5. Eszter Tripa	Attitude and local ecological knowledge of fishermen with reference to mobulid conservation, Addu Atoll, Maldives.	Heriot Watt University
6. Beth Faulkner	Detecting physiological changes in the reef manta ray (<i>Mobula alfredi</i>) using skin mucus as indicators of sexual maturity and mating activity.	University of Plymouth
7. Kaitlyn Zerr	Eyes on the Reef: Using remote cameras to reveal the hidden habits of marine megafauna in a newly designated UNESCO Biosphere Reserve.	University of Victoria



Left: Hithadhoo School students, in Laamu Atoll Maldives, were taken for a snorkel session with the Manta Trust team.

Right: Ecuador expedition researcher ready to measure oceanic manta rays using the stereo-video-photogrammetry device.

Financial Report

We are very grateful to all the grant giving bodies, sponsors, and donors who continue to provide a lifeline for the Manta Trust and vicariously for our global network of research and conservation projects.



This has been a year of growth for the Manta Trust, with our income increasing considerably. This was due to a large unexpected and very generous legacy gift we received half-way through the year which boosted our income by 34%. Support from corporates, public donations and grants also continued to increase. This has allowed us to successfully establish our new RahVeshi Programme in the Maldives and to support more PhD and Masters students worldwide in their studies. Importantly, we have been able to help more of our global Affiliate Projects in carrying out new and innovative manta research and data collection. Again, we would like to thank everyone who donated to us in 2023, however big or small your contribution, for keeping vital manta and devil conservation efforts alive.



Income

£973,438

This year 47% of our funds have come from unrestricted sources such as public donations and corporate supporters. A single, large legacy gift constituted a quarter of our total income in 2023, and the Trustees have set this fund as designated to decide each year how it will be spent. We continue to diversify our income sources, slowly relying less on restricted grants for our core operations by bringing in more corporate sponsors and increasing marketing efforts to increase public donations. At the same time, we have been able to secure more funding to carry out our conservation and education projects through restricted grants from trusts and foundations.

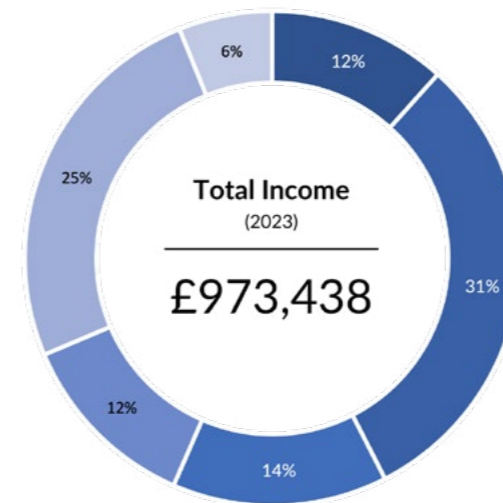
Expenditure

£817,928

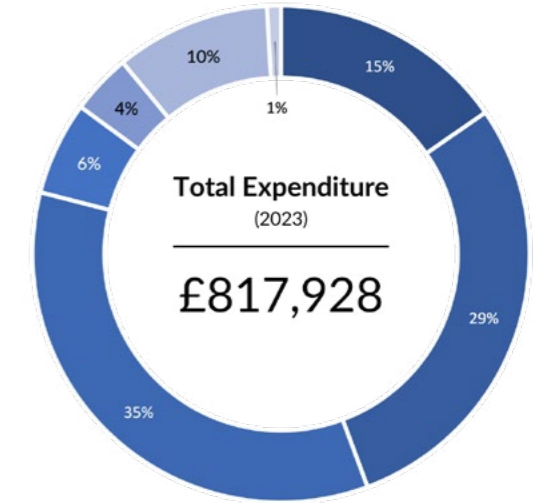
Where our funding is spent is decided by the Core Operations Team, with guidance from our Board of Trustees, and direction from our 5-year strategic plan.

Finance Breakdown

Please note that the following figures are unaudited and approximate. For detailed financial information please view our audited [Financial Statement for 2022-23](#). Manta Trust Reserves: To safeguard the core activities of the charity in periods of fluctuating income, the Trustees have established unrestricted reserves to cover six to twelve months operational costs £250,000-£300,000. In 2023 there were adequate funds to ensure the charity was able to meet all current operational costs and some estimated possible future liabilities. Our free reserves on 31st Dec 2023 were £278,783 (2022: £446,373).



- Partnership with Maldives Resorts
- Trusts & Research Grants
- Public Donations & Fundraising
- Corporate Social Responsibility Funding
- Designated Funds (Legacy)
- Other



- MMCP
- Operations & Overheads (13 personnel)*
- Research and Conservation Projects
- Education & Outreach Programme
- Studentship Programme
- Research Expeditions
- Other

*Our personnel are one of the greatest conservation tools at our disposal. Our core team is only small, but its influence is far reaching; as an umbrella organisation, we coordinate activities for, provide expert guidance to fundraise for, and encourage collaboration between 29 affiliated projects worldwide. Charities are often criticised for spending funds on their operations and overheads; making it difficult for charities to maintain a highly skilled core operational team and pay them a fair wage ([We highly recommend watching this short but powerful TED Talk on the topic](#)). So, we are especially grateful for the incredible support our core team has received from several progressive sponsors and donors over the years, without whom we could not continue our work.

Thank You & Summary

The success and achievements of the Manta Trust in 2023 would not have been possible without the incredible support of the following groups:



We would like to give a special mention to our Patrons who have been extremely supportive over 2023, helping us to highlight our special events and using their unique platform to raise awareness of the Manta Trust. Thank you to our Trustees for guiding and supporting the core operational team as we strive to grow and develop our charity, and to the Action for Mantas (our partner registered 501 (c)(3)) Board for their continued support of us and our US-based supporters. Thanks to Manta Expeditions for helping us to get our researchers into

the field and raising much needed donations for our charity. We would also like to extend a huge thank you to our cyclone members, commercial supporters, supporters who adopted a manta ray, purchased our merchandise, donated to us directly, or through Action for Mantas, supported our crowdfunding campaigns, or took part in our Cross the Oceans challenge! Without your support, none of this work would have been possible. Our growing number of supporters is incredibly inspiring and we are grateful for everyone of you.



Since its inception in 2011 the Manta Trust has grown from a single research project in the Maldives to a network of 29 manta and devil conservation projects worldwide.

2023 was another year of action for the Manta Trust and our affiliates, as demonstrated by the many achievements detailed in this report. However, it was also a year of reflection and introspection for our core team. The creation of our new Five-Year Plan provided an important opportunity for us to pause, take stock and consider just how much has been achieved by the charity over the last thirteen years, as well as to identify areas for improvement within our operations.

Since its inception in 2011 the Manta Trust has grown from a single research project in the Maldives to a network of 29 manta and devil conservation projects worldwide. Our core operational team is still only small, but its influence is far reaching; as an umbrella organisation, we coordinate activities for, provide expert guidance to, fundraise for, and encourage collaboration between our affiliate projects. Whilst our Five-Year Plan is ambitious, we believe it is achievable with structures in place to: maintain the right combination of expertise in our team, ensure our personnel feel secure and supported in carrying out their work, and ensure our affiliate network is working efficiently and strategically. Therefore, our priority over the coming five years will be on consolidation rather than growth.

2024 is already off to a promising start with the designation of 38 ISRAs (Important Shark and Ray Areas) in the Maldives and Chagos, the enrolment of 20 teenagers from around the world in our new Ocean Ambassadors programme, and the launch of the Atlantic Manta & Devil Ray Research Coalition. However, we have a lot more planned! Any support you can give, big or small, to help us in our mission will make a huge difference for these incredible species and the marine habitats on which they depend.

Bex Carter
Director of Conservation Programmes





A reef manta ray feasts on plankton in Maamunagau Lagoon, Raa Atoll Maldives.

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Impact Report 2023

[The Manta Trust](#)

The Manta Trust is a registered charity in England & Wales (Charity Number 1145387).

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