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This report, along with other information about MMF, is available online at www.marinemegafauna.org

Marine Megafauna Research Center
Casa Barry Lodge
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Mozambique

MMF is a tax-exempt non-profit charitable organization under section 501(c)(3) of the US tax code (Tax ID #46-0645082). All contributions are tax-deductible in accordance with US tax law. The Marine Megafauna Association is also a registered not-for-profit association in Mozambique.
Friends and supporters, all too often these days our emails are full of doom and fear. Let me assure you this is not one of those messages!

As you continue to read about all that has been going on in MMF during 2016 I feel sure you, like I do, will feel inspired and hopeful.

Hopeful that together we can help create a world where the natural environment will survive and be cared for so our children and grandchildren can, among other things, be awed by the magnificent mega-creatures of our oceans.

When the mega-creatures flourish so will their marine environment so we can be awed by the smallest nudibranch too!

Harnessing this hopeful feeling can be incredibly mobilising. It can help inspire each one of us to do our bit. For most of us that could mean something as simple as making a donation to keep our exciting research projects, empowering educational programmes and transformative conservation work alive.

MMF is brimming with ideas. We are ready to grow in all our research areas and to introduce new education and conservation programmes, but we cannot do it without increasing our funding.

Please make a donation today and let us know if your company will match your gift, your club would like to sponsor a manta ray or whale shark, you think an organisation you know may give us a grant, or if your own company would like to partner with us in an active philanthropy program...

We are excited to be moving into a new era of fundraising and need you to come along with us!

Enjoy reading the good news in this report and brighten your week by becoming one of our team.

I look forward to having you with us on the journey through 2017.

Philippa Nigg
Chairperson of the Marine Megafauna Foundation Board
2016 IN NUMBERS

- Research dives by MMF scientists in our three priority regions: 1,220
- Presentations made by our scientists to audiences around the world: 14
- Sustainable Seas ambassadors trained in Mozambique: 1,120
- Encounters with manta rays recorded on www.mantamatcher.org across the world: 2,990
- Children engaged in MMF education programmes across the world: 6,920
- Hours spent underwater researching and observing marine megafauna: 392
- Encounters with whale sharks recorded on www.whaleshark.org across the world: 193
We found a rare gap in Josh’s schedule to take stock and discuss how MMF has progressed since he joined in June 2015, his standout moments of 2016 and what big things we can expect to see from MMF in the future.

Looking back over the past year what are three highlights that stick in your mind?
Number one has to be the people that I had the pleasure of working with. Enthusiasts and professionals who all care deeply about the cause and spend so much of their time and effort dedicated to it.

The animals; swimming with manta rays, whale sharks, turtles, seeing dolphins hunting tuna and of course the magnificent breaching humpback whales.

The beauty of Mozambique itself and having the opportunity to live with raw nature all around – I never needed to look far for inspiration.

What has been the most exciting moment and why?
In September there was an incredibly intense working period full of exciting moments. A team had joined MMF from Stanford University Business School to develop exactly how to maximise our impact globally over the next 15 years and thus define what our strategy should be. It was a month of working all hours, many times by candlelight due to power outages and hosting numerous global conference calls.

We discussed the major risks we face from many angles – how we interact with our planet and its oceans and specifically how MMF can shape the future to achieve our vision of a world where marine life and humans thrive together.

You’ve been on the ground in Mozambique since June 2015, how has the community changed or progressed in that time?
It has been great to see the community coming together to support conservation, not only the local community, but the dive and tourism community too, all working together for the benefit of the ocean and the future role it will play in their lives.

What has been the most exciting moment and why?
In September there was an incredibly intense working period full of exciting moments. A team had joined MMF from Stanford University Business School to develop exactly how to maximise our impact globally over the next 15 years and thus define what our strategy should be. It was a month of working all hours, many times by candlelight due to power outages and hosting numerous global conference calls.

MMF has played a large part in helping this cohesion come about, through hosting workshops, ocean festivals and meetings between key figures within the community.

What key steps has MMF taken to widen its ripples?
This year we have completed the groundwork necessary to expand our operations in Indonesia. We have developed formal relationships with national universities and government departments as well as increased the number of research projects we currently have underway in the country. This year also saw our second satellite research base open in Raja Ampat.

For 2017 we are hoping to establish our regional HQ and research center in Lembongan, just east of Bali, this will then serve as the base for expanding our impact across the South East Asia region.

We have also began to increase the range of our research across the Western Indian Ocean, with exciting new projects this year in Madagascar and South Africa that show promise for the future.

What are your hopes for the future of MMF?
My hope for MMF, in the long term, is that we can unite with like-minded partners across the globe to achieve a greater impact – through more media engagement, government lobbying, technological advancement and education. I hope that MMF will be at the forefront of changing the mindset of the human race to protect the incredible – life giving and supporting – nature of our oceans.

Josh Axford
Chief Operations Officer

"It has been great to see the community coming together to support conservation...working together for the benefit of the ocean and the future role it will play in their lives."

MMF plans to keep strengthening its presence in Indonesia during 2017 and beyond
Our vision is to live in a world where marine life and humans thrive together.

MMF was founded in 2009 by internationally renowned marine scientists Andrea Marshall and Simon Pierce to save the world’s ocean giants from extinction.

Since its inception, MMF has made an impressive impact on the global scientific community. Our ground-breaking research resulted in whale sharks and manta rays being listed on the IUCN Red List of Threatened Species, we have featured in some of the world’s biggest media outlets such as CNN, BBC, National Geographic and TED, and we even discovered a new species of manta ray.

But there is still so much work to do.

We need to deepen our research to find out why all megafauna, such as turtles, sharks and rays, are in rapid decline.

We need to continue to educate coastal communities in our three priority regions across the globe.

We need to ‘think global and act local’ to create long-lasting sustainable solutions that protect vulnerable megafauna for the future.

And to achieve this, we need your help.

WHAT WE DO

WHERE WE DO IT
What were your top three achievements in 2016?

It’s been such an exciting year for manta ray research, it’s hard to pick three!

We placed the first ever satellite tags on giant manta rays in South African waters – a significant step forward in widening our reach and learning more about manta movements around the continent.

In Ecuador we completed the first comprehensive study on the feeding ecology of the giant manta using biochemical analysis. The study revealed that giant mantas are deep sea predators, not surface feeders. A groundbreaking discovery, and one that helps us to better understand the movements, seasonality and behaviour of this mysterious species.

It’s already having a positive impact on their future, as it enables us to identify their critical habitats and develop even more effective conservation strategies.

Since widening our scope to include Indonesia in 2014, we’ve enjoyed many successes. In 2016, we opened up a new research centre in Raja Ampat and acquired Aquatic Alliance, a small organisation also studying marine megafauna. We have three exciting PhD projects underway, including one exploring the implications of microplastics on large planktivores (focusing on manta rays and whale sharks), and impressive data collection happening in three locations – 2,000 manta rays ID’d and counting!

And the good news for that region doesn’t stop there. In Thailand we successfully documented the first round-trip manta migration using our very own www.mantamatcher.org, the world’s first visual database for recording manta ray encounters and identifying individual species.

What has been your proudest moment?

Since 2010, our researchers and collaborative partners have been working hard to gather enough data to scientifically describe a new species of manta ray found in the Atlantic Ocean. This year, we took significant steps towards concluding our research and being able to introduce this fascinating new creature to the world, so watch this space...

Other highlights?

In April our team encountered one of the largest aggregations of the new putative species of manta off the Florida coastline and launched a new study on the regional population. Most of the rays we encountered – if not all – appeared to be the new species.

During another expedition off the coast of the Yucatan Peninsula in Mexico, we documented the first cleaning station for this new species in the region (affectionately dubbed Manta Valley) and explored their offshore environments for the first time.

Cleaning stations are where mantas congregate to have their teeth and bodies cleaned by obliging fish, who in turn benefit from receiving an easy meal. So it’s a great spot to see lots of individuals in one place and gather comprehensive data.

What was your biggest breakthrough?

We conducted a study to find out the economic impact of manta rays on the Mozambican tourism industry, and the results were enough to make anyone sit up and listen! Manta ray tourism brings US$34 million directly into the economy every year. An impressive number which has helped strengthened our case to keep protecting these vulnerable – and hugely valuable – species.

What do you love most about the ocean?

I’m an explorer at heart. In the ocean, you’re never quite sure what’s lurking around the corner. It feels like anything is possible! It’s a feeling that captured me when I first dived in, and one that keeps me hooked today.

The ocean has an amazing ability to recreate itself. Its capacity to bounce back astounds me. It is so resilient despite so many things standing in the way… it’s SUPER inspiring and fills me with hope for the future.
The data told an alarming story – since the last IUCN assessment in 2005, we’ve lost more than 50% of the overall population. Which means whale sharks have been endangered for some time, we just didn’t know about it. The data told an alarming story – since the last IUCN assessment in 2005, we’ve lost more than 50% of the overall population. Which means whale sharks have been endangered for some time, we just didn’t know about it.

The conference attracted nearly every whale shark researcher in the world, so to unite everyone towards a clear, common goal is a major step forward. Off the back of the conference, we are writing a manifesto to capture our commitments and guide us for the next few years. We all agreed that working together – on a global scale – is the only way we can give whale sharks any hope for the future.

Dr. Pierce founded MMF’s flagship research program on whale sharks, and is now studying these gentle giants in seven countries. In 2016, Simon led a research team whose efforts resulted in whale sharks being recognised as globally endangered for the first time on the IUCN Red List. He is also a scientific advisor to the online global whale shark database (www.whaleshark.org), and regional co-chair of the IUCN Shark Specialist Group.

What were your top three achievements in 2016? The standout achievement for me was discovering that whale sharks should be classified as ‘endangered’ instead of ‘vulnerable’ on the IUCN Red List of Threatened Species. Although this may seem like bad news, it means we’ve finally collated enough data to see the full picture. And now that we can see it, we can do something about it.

Another top moment for me was being selected as co-chair of the Sub-equatorial Africa Regional Group for the IUCN SSC Shark Specialist Group. This honour is a reflection of the impressive conservation work that’s been coming out of MMF. It also gives us a platform to kickstart initiatives that impact on multiple species – widening our focus beyond the whale shark and manta ray to include a whole suite of vulnerable species.

What was your proudest moment? It has been such an exciting year for our students. David Robinson completed his PhD on whale shark ecology in the Arabian Gulf and Gulf of Oman, Jessica Williams submitted her thesis on Mozambican sea turtle conservation biology and Jens Paulsen completed his MSc thesis. Helping others develop and then seeing them push things in the right direction is one of the most fulfilling aspects of my work in the field. It’s so exciting to see them already achieving great things for conservation... with so much more to come!

How do you ‘act local and think global’? In Madagascar, our emerging whale shark project has been making impressive progress. We’re working with tour operators across the region to develop a sustainable whale shark tourism scene, and collecting valuable data at the same time. How do you ‘act local and think global’? In Madagascar, our emerging whale shark project has been making impressive progress. We’re working with tour operators across the region to develop a sustainable whale shark tourism scene, and collecting valuable data at the same time.

Another achievement in 2016 was winning a three-year grant from the National Geographic Society, which will help take this research to the next level. Now we can work together to tackle the BIG global problems, which is definitely the most effective way forward for the future of the whale shark!

What do I love most about ocean giants? There is something really special about being in the water with ocean giants. On land there are very few large wild animals you can be around safely. And for good reason! They’re scared of us, and if we make them feel vulnerable, they can be dangerous.

But it’s a different story underwater. Ocean giants are very gentle, curious and interested in people. You can spend time with them in perfect safety. Ocean giants trust us. And I think it’s really important that we respect their trust and help them flourish without interference.
Since joining MMF in January 2016, Razaque has helped support the steady growth and progression of our education programme. Last year the programme gained impressive momentum, with over 650 children engaged in marine-focused learning across two sites in Mozambique. A passionate teacher, Razaque is always finding new ways to help children connect with the ocean and its creatures, while improving literacy and numeracy at the same time.

Why did you want to work with MMF? What MMF does is so inspiring. I always dreamed of working for an organisation that works to solve the greatest issues facing the world today.

What I like most about MMF is the way they work alongside local communities to help change behaviours towards the ocean and create a long-lasting sustainable legacy. I was so excited when I learned that MMF was recruiting someone for the educator position - I’m a qualified teacher and thought this would be the perfect path for me. I had a feeling I wouldn’t look back, and I was right!

Describe your role - what does a typical day look like? In general, I oversee, coordinate and implement all programme activities. My normal daily tasks are: lesson planning, teaching, conducting feedback sessions and preparing creative activities. Each day, we visit one or two local schools to teach primary and pre-school curriculums.

I also monitor and support Nemos Pequenos (Little Nemos), MMF’s flagship integrated marine conservation, water safety and swimming programme. We aim to inspire local guardianship of the coastline and marine life within Mozambique. 52% of Mozambicans (14 million) are under the age of 18 and by 2050, this is predicted to increase to 25 million and provides great power for change!

We want to help children so they can help themselves and their ocean. The local school children are the hope for the future protection and sustainability of Mozambique’s marine life.

You joined MMF one year ago, how have things progressed since then? Since joining Nemos Pequenos, we have been able to extend our scope to include three more schools. This is impressive progress in just one year, and means that many more children are learning how to swim and connecting more deeply with the environment.

What were your top three achievements in 2016? My top three achievements in 2016 were: introducing new activities to the preschool programme (as we did not have a comprehensive curriculum), managing to teach large classes of 90 children at a time, and proposing and starting a Portuguese language development programme for the instructors.

Describe your favourite moment of 2016? There is more than one! My favourite moments consisted of learning amazing things about the ocean, especially when I discovered new species that I didn’t even know existed. Another favourite moment was when I realised how quick I was learning the research theory and passing this knowledge onto others. But one of the greatest moments was when I saw my students performing songs, short stories and plays to show their understanding of the lessons. I felt so proud of everything we had achieved!

What do you hope to achieve in 2017? In 2017, I hope to achieve a higher level of leadership, communication and teaching. We will publish our bespoke school curriculum and continue working with government and partner organisations to determine the best way to increase our reach across Mozambique. We are developing our Young Adults program to facilitate job opportunities which involve elements of marine conservation.

In addition to training more Ocean Guardian Instructors and feeding Nemos program graduates into dive master internships, we are focusing on capacity building in other ways. I have so many ideas for extending our programme and strengthening our national presence. 2017 is set to be an exciting year!

What is your favourite ocean animal and why? My favourite ocean animal is the manta ray. They are so graceful and inspiring! And their intelligence is super impressive. I always love to see mantas in large groups breaching, which is an incredible skill. Honestly, I still can’t understand how they jump out of the water. It’s just amazing!

How do you feel about working with MMF for another year (and many more to come)? Working with MMF for many years to come would be a dream come true. I believe MMF will continue to offer good opportunities for me to grow professionally, and I look forward to seeing where our journey takes us.

Razaque Quive
MMF Education Officer
The challenge: a community relying on unsustainable fishing to survive
During the past 13 years, we have developed a strong understanding of the wider Tofo community (across Inhambane Province) and their relationship with the ocean, while also painting a comprehensive scientific picture of the surrounding marine populations.

Fishermen in the area have reported a drastic decline in fish stocks during this period, which has forced them to resort to unsustainable fishing methods. At the same time, our scientists have documented a 79% and 88% decline in manta ray and whale shark sightings respectively (between 2005 and 2011), and sadly these populations continue to decline.

From aerial surveys along the coastline we know that high-use areas for manta rays and whale sharks overlap with areas where local fishermen are regularly using large gill nets.

We have seen first hand, the devastating impact these nets are having – not just on these gentle giants, but also on other marine megafauna in the area, such as turtles and dolphins.

In one of our studies, we found that an estimated 20-50 reef mantas are taken by subsistence fishermen annually along a ~100 km length of coastline – an unsustainable number for this vulnerable species.

Our solution: a grassroots ‘sustainable seas’ strategy
Tofo has an approximate population of 5,000 people, spread across 12 different communities, each with its own chief. Sustainable Seas was borne out of the need to help these communities:
- Understand the negative impact of unsustainable fishing
- Work together to implement a strategy to save their livelihoods before it’s too late

To engage and reach as many people as possible, 14 local ambassadors have been appointed to represent the communities (six of which are women), and this number is soon to grow.

The more ambassadors we have, the wider our reach will be, and the bigger impact we will have. With our guidance, the ambassadors are leading the programme, and together we are working towards a sustainable solution for the coastline.

This sustainable solution includes exploring viable alternative livelihood options alongside reef closure strategies, benefiting both present and future generations.

Success to date
In just 12 months we achieved a temporary six-month reef closure of 7km², effective since 11 November 2016. A first for Tofo and a first for us!

This was driven by the ambassadors and the community, who came together to lobby the government, fishermen and dive businesses.

In just 12 months we achieved a temporary six-month reef closure of 7km². A first for Tofo and a first for us!

The impact of their shared vision and voice was impressive – achieving the reef closure much quicker than we had ever imagined possible.

Since then, the ambassadors and community have continued to be super engaged.

We had an impressive turnout at an Ocean Festival the ambassadors organised to celebrate the reef closure. And we are forming a Locally Managed Marine Area (LMMA) Committee to help lead the way forward.

But this is just the beginning. We will keep working until we achieve our ultimate goal: the first LMMA in Inhambane Province.

500,000 Mozambicans directly depend on fishing activities for their livelihood and more than 90,000 people are involved in the fishing sector.
FINANCIAL SUMMARY

REVENUE
How you helped us

- Grants from governmental bodies $14,079.86 | 3%
- Private contributions $37,430.76 | 7%
- Corporate donations $39,619.70 | 7%
- Grants from foundations and trusts $437,713.29 | 83%

Total: $528,843.61

EXPENDITURE
For every dollar raised

- Fundraising $6,647.16 | 1%
- Governance and management $33,960.70 | 6%
- Research, education and conservation activities $547,660.54 | 93%

Total: $588,268.40

GEOGRAPHIC SPEND
In research, education and conservation activities across our three priority regions

- Americas $121,947.54
- Western Indian Ocean $365,153.89
- South East Asia $60,559.11
THANK YOU FROM THE BOTTOM OF THE OCEAN

With your generous help and support, we were able to take significant steps towards achieving our vision of a world where marine life and humans thrive together. Our work would simply not be possible without you.

Amilia Fushi
Andrea Ross
Andrea Voss and family
Ann Rooney and Jim Artindale
António Sequeira and Aurea Sequeira
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Aquatic Alliance
Arenui Boutique Liveaboard
Ayudian Swarry
Bali Diving Academy
Bali Hai Diving Adventures
Barefoot Conservation
Barra Lake and Sea
Bazaruto Archipelago National Park
BBC Natural History Unit
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Big Blue-Vilanculos
Big Fish Diving
Bintang Gustavina
Black Sand Digital
Blue Ant TV
Blue Corner Dive
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Carbondale University
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Ch’ooj Ajaul AC
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Indonesia
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Current Junkies
Darwin Initiative
Dive in Ecuador
Dive Operators Community
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Exploring By The Seat Of Your Pants
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Murdoch University
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Natural History Museum Maputo
NatureAllY
Nautilus Swimming
Nicole Watson
Ocean Park Conservation Fund
Ocean Realm Images
Oceanaria Chondrichthyan Society
Our Children’s Earth Foundation - Tiffany Schauer
PADI Foundation
Papua Explorers Dive Resort
Peri-Peri Divers
Pestana Bazaruto Lodge
Pestana Rovuma Hotel
Pomene Lodge
Pomene Reserve
Princes Bernhard Foundation
Prodato
Ray of Hope Expeditions
Red Whale
Ricardo Catering
Richard Horner
Royden Hobbs
Rufford Foundation
Sam Matthews
SCUBA Center Asia
SCUBA Junkies
SCUBAPRO South Africa
Secret Garden
Shane Larkin
Shark Explorers
Shark Foundation
Shark Guardians
Singita
Six Sense Lamuu
Sulao Buceo
Stanford University GMIX program
Surface Interval Productions
Tam Warner Minton
Tilizinwe Bazaruto
Two Fish Divers
Uber Scuba
Underwater Africa
University of Papua
University of Queensland
University of Udayana
USAID
US Embassy Maputo
Vila Vita Portugal
Wait Foundation
Walter Schaffner
Waterlust Project
Wicked Diving
Wild Me
Windrush Trust
World Diving Lembongan
Wunderpus Liveaboard
WWF Tanzania & Sweden
Závora Lodge
Zoomarine

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