



MADAGASCAR
WHALE SHARK
PROJECT
FOUNDATION

THE MADAGASCAR WHALE SHARK PROJECT FOUNDATION

NOSY BE, MADAGASCAR | SINCE 2016

Our Goal

Changer pour que ca cale la version FR: The foundation aims to to protect a threatened species and biodiversity in North-West Madagascar, still an unchartered whale shark .

To achieve this:

1

The foundation collects scientific information through the development of a research program dedicated to whale sharks in Nosy Be

2

She links knowledge to action across a variety of audiences, by integrating an education program in schools and by involving local actors to respect the code of conduct

3

She contributes to implement a regulation for species protection at the national level

These activities will help us to better understand the threats to which the whale sharks are exposed, and to work to implement local legislation to protect this important area to ensure these gentle giants can feed naturally, uninterrupted, and avoid being injured or disrupted by valuable tourism activities or other industrial activities. Through our work, we continually share our findings with the world in order to shed light on Madagascar's sustainable whale shark tourism.

An opportunity for change

In 2018, Madagascar ranked as the world's 4th poorest country and is witnessing habitat destruction and wildlife loss at an unprecedented rate. While the bay where the whale sharks are found is still relatively untouched, many threats are looming and could have serious detrimental consequences on the area.

The lack of national protection along with poor knowledge of the ecological importance of whale sharks for ecosystem health put these vulnerable animals at risk in Malagasy waters and across their distribution range in the Western Indian Ocean. Only through scientific evidence and socio-economic evaluation will we be able to identify the real value of live whale sharks, and at the end grant them a protected status in Madagascar.

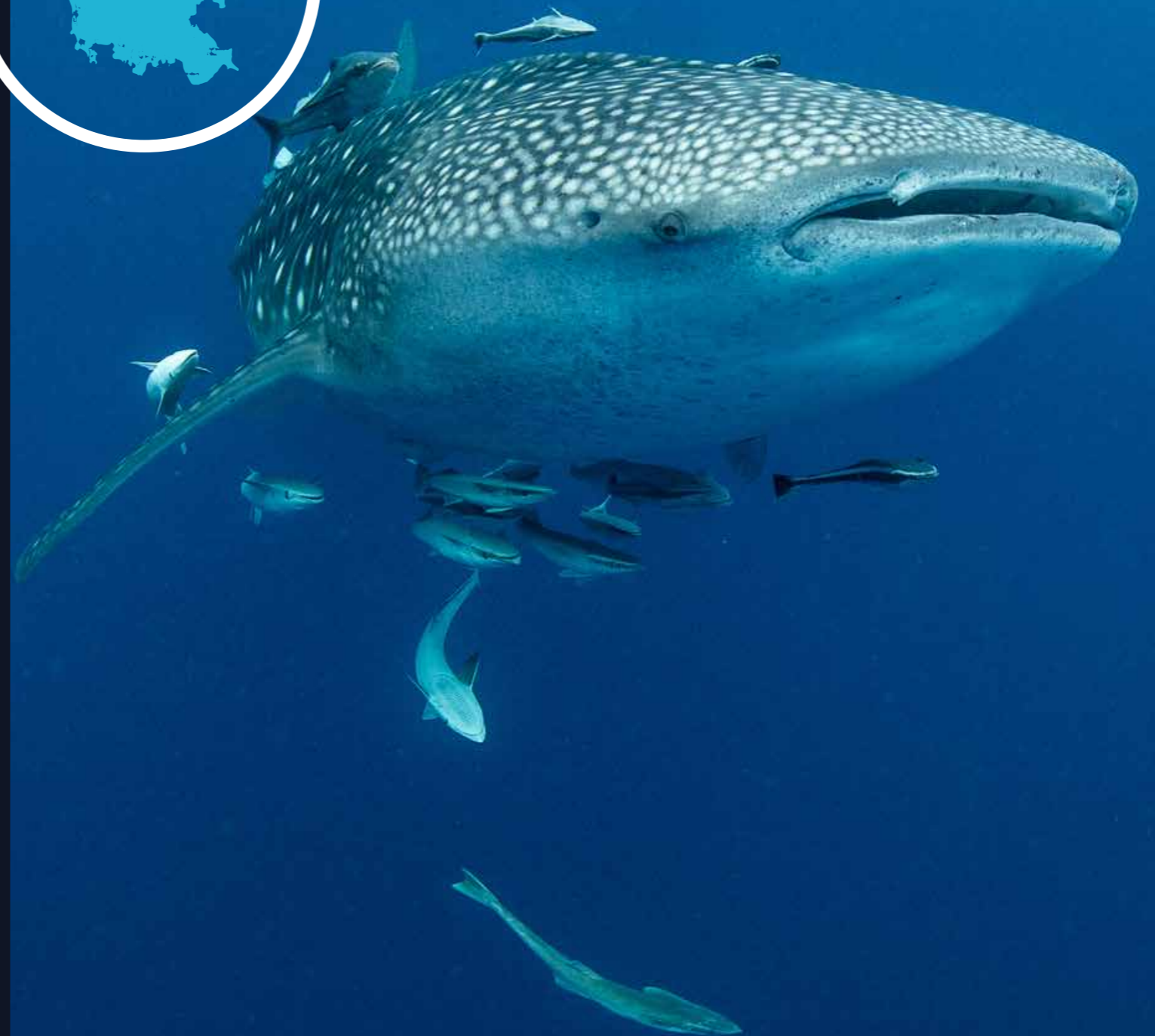
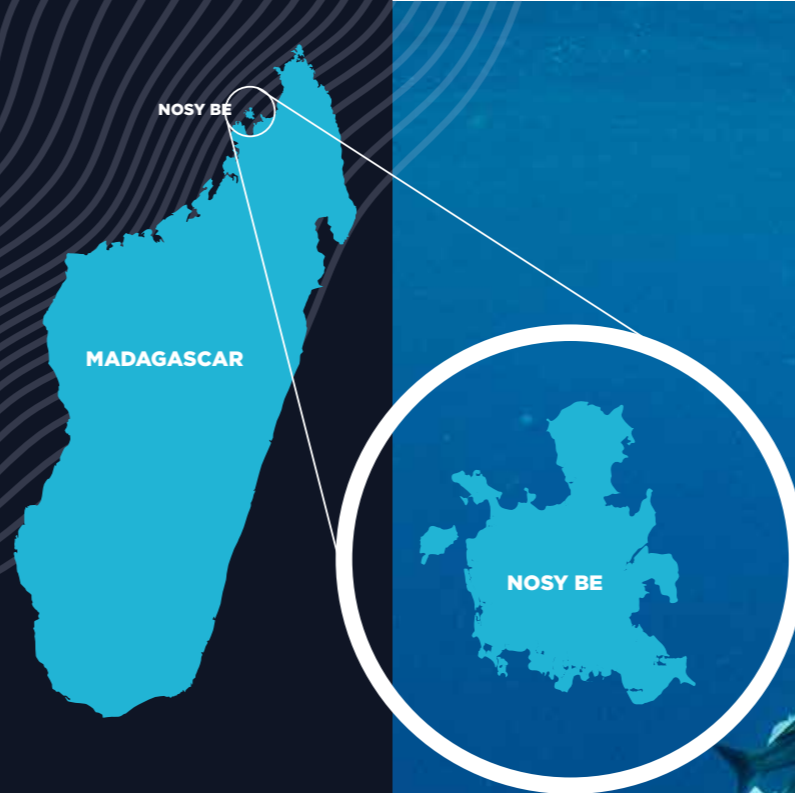
Our Story

The Madagascar Whale Shark Project (MWSP) Foundation, founded by Stella Diamant, is a research and conservation project that was initiated in 2016.

Indeed, thanks to a partner tourism operator, Les Baleines Rand'eau, high numbers of whale sharks were recorded in 2015 by simply taking pictures of whale sharks while guiding clients to start a dedicated program from 2016 onwards.

While the seasonal presence of whale sharks has led to a growing marine tourism industry in Nosy Be, no scientific research had been conducted other than a preliminary note confirming their presence in 2007.

Since, in collaboration with the Marine Megafauna Foundation (MMF), the Florida International University (FIU) and MADA Megafauna, the project has become the world's first study of globally threatened whale sharks in Nosy Be, a newly- identified hotspot in northwestern Madagascar.



Our Challenge

The Mozambique Channel, the body of water in the Indian Ocean that flows between Mozambique and the island nation of Madagascar, is thought to be home to the world's highest density of whale sharks. However, there has been a **steep decline in sightings since 2005**, with a **79% decline documented in Mozambique alone**.

In 2000, whale sharks were listed as "Vulnerable" on the IUCN Red List of Threatened Species and later included in Appendix II of CITES. In 2016, the species' IUCN status was downgraded to "Endangered" because of the continued decline in sightings.

As an endangered species with slow growth and sexual maturity, whale sharks desperately need to be better understood in order to be protected appropriately.

To date, aside from a voluntary Code of conduct our team has implemented, no legislative measures have been put in place to safeguard this hotspot, which also boasts a high concentration of cetaceans and turtles. **The current situation is very worrying as tourism is exploding in Nosy Be** - thanks to companies like Ethiopian Airlines now offering flights to Madagascar, - putting whale sharks at risk from unregulated mass tourism, with 38% of whale sharks bearing collision scars, as observed in 2015.

Of even more concern is the development of a potential mining hub. The oil company BP is currently investigating the area with the aim to

start drilling in the near future. Even though the area has been explored in the past (specifically between Mahajanga and Nosy Iranja), and was deemed not interesting, it seems things have changed, and both terrestrial and marine ecosystems are at risk, as well as the local communities and their livelihoods.

Oil exploration, which remains an understudied threat for whale sharks, mainly will impact the food source that whale sharks feed on, such as plankton and small fishes.

Ongoing threats such as both bycatch by purse-seine tuna fisheries and illegal fishing by Asian boats also are major problems for migratory species like whale sharks, whose movements outside Malagasy waters remain unknown.

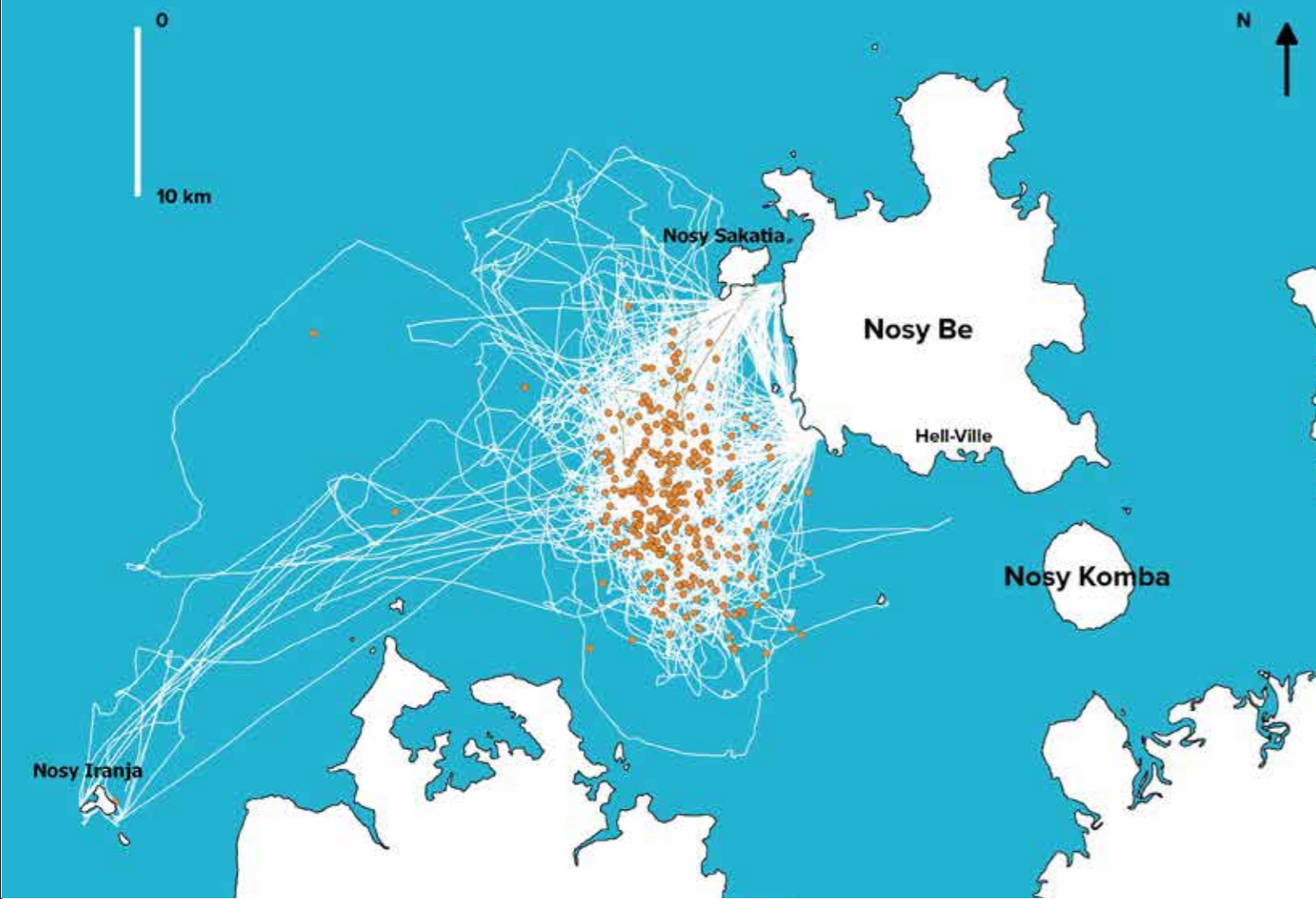
While there is existing legislation for tuna fisheries fishing off Madagascar, often whale sharks end up caught accidentally in the enormous nets that target tunas, and it is often too late to release them. Illegal fishers target whale sharks for their fins, which are worth a lot of money as sharks get bigger, thus reducing their chances to reproduce.





STELLA DIAMANT, PROJECT LEADER, PHOTO-IDENTIFIES
BALOO LE REQUIN (MD-289) A 7 METERS SHARK.

Our published study (Diamant et al. 2018) shows that while Whale sharks travel long distances, with the longest track covering **more than 4250km**, they use Nosy Be as a feeding hotspot year after year (avec en gras “use Nosy Be as a feeding hotspot



Achievements to date

Published the first study on whale sharks in Madagascar in the journal *Endangered Species Research*. Tagging results from a pilot study in 2016 have shown that the whale sharks found in Nosy Be travel vast distances yet seem to stay within Malagasy waters.

Received media attention from more than 70 media outlets (and counting!) with highlights such as the BBC, The Telegraph newspaper, Diver Magazine, Lonely Planet, TF1, RTBF, Oceanographic, Mongabay.... The project continues to receive interest from media around the world and was recently featured on BBC's new show Blue Planet Live.

Identified more than 300 different whale sharks in Nosy Be. A major milestone for our research, which confirms that indeed the area is an important hotspot for the species, now ranked 7th across all whale shark hotspots in the world.

Created and implemented a Code of conduct since 2017. The Code of conduct has been widely adopted by local tourism operators, and we are observing positive results out on the water.

Collected socio-economic data amongst both tourists and operators to identify the economic value of live whale sharks in Madagascar. This data is now being analysed by partners and will be presented to the Ministry of Tourism later this year.

Initiated Nosy Be's first marine environmental education program in 2018, which is led by a local instructor across two schools.

Started a volunteer programme to double our data collection efforts since 2017.

Trained and supervised a Malagasy student for his Master thesis on whale sharks.

Partnered with travel companies like Natural World Safaris to explore new whale shark hotspots.



The Madagascar Whale Shark Project is a Registered Private Foundation in Belgium under the number # 0724.642.161

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FANNY FLORIA-LOHYER, ONE OF THE PROJECT VOLUNTEERS,
SWIMS NEXT TO PIERROT (MD-198), ONE OF THE REGULAR
SHARKS WE SEE EACH YEAR SINCE 2015

Why support this project?

With your help, we can guarantee the MWSP stays active and fulfils its objectives. Most importantly, as the whale sharks only visit Nosy Be seasonally, it is crucial our team is present to monitor interactions with both tourists and operators while trying to better understand what drives the sharks to the area and how many of them return each year.

Your contributions are important and will allow us to use our vital research to protect this incredibly

biodiverse hotspot - we are grateful for any financial or in-kind donation towards this project.

Please find below (on page 6) our 3-year budget requirements to fulfil the urgent needs of this valuable project.

Thank you for considering supporting this project. We value our donors as key partners in helping to achieve our vision of a world where marine life and humans thrive together.

**Please don't hesitate to contact us for more information at:
info@madagascarwhalesharks.org.**



AMANDINE PAUVERT AND RAPHAËL JARNIAS, VOLUNTEERS IN 2018, TAKE A BREAK ON SAKATIA ISLAND



BRUNO HÉLIO BENJARA, THE PROJECT'S EDUCATOR, LEADS AN ACTIVITY ON THE BEACH WITH LOCAL CHILDREN.

Planned objectives and impact

The primary goal for the next seasons (2019-2022) will be to further **establish the occurrence, residency, and population structure of whale sharks** off Nosy Be. This will enable us to develop a comprehensive database of the local population which, with continued annual monitoring, will provide an evidence base for further research and conservation efforts. We collect data from a motor boat, and by free diving we are able to easily gather photo-identification data and skin samples, which give us information about whale shark diet, genetics and genomics.

Another objective will be to further **investigate and map the threats** to whale sharks in the region, such as gillnets and illegal fishing via interviews with local fishermen, while understanding how whale sharks use the area by deploying an array of acoustic tags. Such innovative study techniques have already proven successful in Mafia Island, Tanzania, by our colleagues at MMF, who showed that whale sharks were using the bay year-round. By using the same approach, we could test whether whale sharks are in Nosy Be year-round, which, if true, could be a strong argument for the protection of whale shark habitat in Madagascar.

While sharing our findings locally and further expanding our efforts in terms of capacity building island-wide, we **aim to also further implement the Code of conduct** at a higher level by transposing it into the national legislation, as it currently stands as a set of guidelines for willing operators to follow.

We will **continue to carry out interviews with tourists** to assess the importance of whale sharks for the region and estimate the economic value of the whale shark tourism industry for Nosy Be and Madagascar.

This year, in collaboration with academics, we will also **initiate interviews with fishermen in the region to explore the presence/absence of key marine species**, including whale sharks, in fishing villages in NW Madagascar. This way, we hope to assess locals' perceptions of, and behaviours towards, key marine wildlife of interest, as well as to measure locals' marine wildlife value orientations using a qualitative approach.

We will **continue our educational program** across the schools of Nosy Be, in partnership with local NGO MADA Megafauna, and we will aim to expand it to other schools and nearby islands.

Budget proposal

The whale shark season runs from September to December each year (4 months). During this time, we have a bigger team out in the field, including the project leader, a Malagasy scientific assistant, a Malagasy student, two administrative assistants, and around 20 short-term volunteers who help with data collection.

Most of our requirements cover salaries, the access to a research boat, a trip to the Tourism Ministry and the purchase of acoustic tags. We require bi-weekly access to a private research boat in order to ensure the continuity of data collection as well as volunteer training, the deployment and maintenance of the tags and the receiver stations, but also to be able to host visitors such as videographers, TV crews, and donors wanting to visit.

The staff salaries cover full-time employment for the project leader, the student, and three part-time assistants. Some of our local staff originate from other parts of Madagascar and need to travel large distances to reach our study site. The rest of the year, our full-time staff is busy with data analysis, permit applications, program development, communications, fundraising and training. The educational project is now being funded for the next two years thanks to a successful fundraising campaign we launched in late 2018.

The figure below shows both yearly costs and one-off costs, which at this stage, in 2019, are both needed. From 2020, only the yearly costs will be needed so 78 000 € per year for 2020 and 2021.

Activity	Cost €	Comments
Yearly costs		
Salaries		
Project leader	30 000	Year-round management
Assistant	24 000	2x part-time assistants, a scientific assistant, a Malagasy student
Costs		
Travel costs	5 000	International and domestic flights, taxis
Accommodation	2 000	Team accommodation through the season
Research boat	5 000	Boat rental and fuel over the season bi-weekly
Upgrade of research equipment	2 500	Go Pros, laptops, access to online storage for data
Code of conduct training	500	Hosting operators, on-board training
Communication & IT	2 000	Website, visuals, data automatization
Administrative costs	3 000	Insurance, office rental, permit, materials
Unforeseen costs	4 000	Year-round management
Sub Total	78 000	
One-off costs		
Costs		
Trip to the Tourism Ministry	2 000	Flights, accommodation in Tana
Interviews with fishermen	2 000	Salaries for translators, travel to remote areas
Deployment of acoustic tags	20 000	Purchase of 20 tags and 6 receivers
Social science research	4 000	1 student salary, tablet, printed materials, travel
Sub Total	28 000	
Total	106 000	



FISHERMEN AT DAWN ON A TRADITIONAL SAKALAVA PIROGUE OFF NOSY BE



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