



REEFDOCTOR
CREATING SUSTAINABLE FUTURES



AQUACULTURE INTERNSHIP GUIDE



Introduction to the Aquaculture Internship

Our Aquaculture Internship offers the opportunity to join our experienced international aquaculture team, assisting in the development and expansion of our Darwin Initiative-funded Alternative Livelihoods Programme for the Vezo communities of the Bay of Ranobe.

The objective of this project is to provide communities with the tools, resources, and support to develop a sustainable aquaculture program with the capacity of providing guaranteed market access, food security, economic growth, and wealth for rural impoverished fishing communities.

This internship allows people with a keen interest in aquaculture and social development, but with limited experience, to gain their first steps in this exciting yet demanding field. We offer 2, 3, and 6 month internship positions, spaces are limited to 2–4 people per expedition, three times a year. We can also provide PADI dive training (from PADI Open Water up to Divemaster level) at an additional cost.

Following an initial training period (first month), interns become a valuable member of the aquaculture team, helping to implement, expand, and monitor seaweed and sea cucumber aquaculture activities across the bay.

Waking up to the sandy beaches in front of our project site provides an idyllic lifestyle, as does watching the sun set over the lagoon every evening. The conditions aren't five star, but living simply, next to a traditional Malagasy fishing community, is an incredible life experience.





Who Joins?

We recruit interns from all walks of life as long as they are over the age of 18. However, we do insist our interns are in peak physical fitness; most of the work comprises repetitive and strenuous activity on our sea farms, assisting community farmers. You must also be willing to live in extremely basic conditions when visiting our satellite sites in isolated communities in the Bay of Ranobe.



In addition, if you wish to do some dive training or recreational diving with us, you will need to have passed a diving medical before your arrival.

No prior skills are required, just a general enthusiasm to commit to becoming an integral member of our team.

This programme is suitable for a wide range of people including:

- Those undertaking a gap year.
- Those who wish to pursue a career in aquaculture and/or social development.
- Marine and environmental science graduate students who wish to gain extensive, practical field based experience to complement their studies.





Internship Training

The first month of the internship comprises a training period involving the following lectures and activities:

- Introductory lectures on Reef Doctor: our various projects, the local area, and basic camp management protocols.
- Introduction to Vezo communities: history, culture, facilities, and how to act towards the locals.
- Introduction to our Alternative Livelihoods Programme: overall objectives, goals, project outcomes, and latest project updates.
- Introduction to our turtle fishery management programme.
- Practical training in a variety of seaweed and sea cucumber aquaculture practices.
- Environmental and biological data collection training.
- Intensive Malagasy language lessons (in the local Vezo dialect).
- PADI dive training (if desired, can occur at any point throughout the internship).





Following Your Core Training

Trained aquaculture interns can expect to get involved in the following activities:

- Implantation and expansion of community sea cucumber nursery grounds and seaweed farms.
- Maintenance of seaweed and sea cucumber farms.
- Biological data collection on sea cucumbers and seaweed with the aim of improving production.
- Conduct environmental monitoring using YSI equipment, a weather station, and HOBO loggers.
- Day-to-day aquaculture team work; building projects/sourcing material/community meetings.
- Assist with monthly seaweed and sea cucumber harvests and sales.
- Develop material for outreach programs; posters/presentations/videos etc.
- Continuation of Vezo language training.
- Undertake socio-economic surveys of community members involved in aquaculture programmes, alongside data documentation and report writing.
- Visit our aquaculture sites in the Bay of Ranobe; our satellite camps are in isolated communities and therefore living conditions are extremely basic.
- Develop seaweed cooking programme; recipe development and community training.
- Assist the team and community turtle conservation association 'Fikambanana MPaniriky Miaro ny Fano' (FI.MPA.MI.FA) with turtle tagging, collection of data, and documentation.
- Assist the fisheries management team with fisheries catch data collection in the field and data documentation.





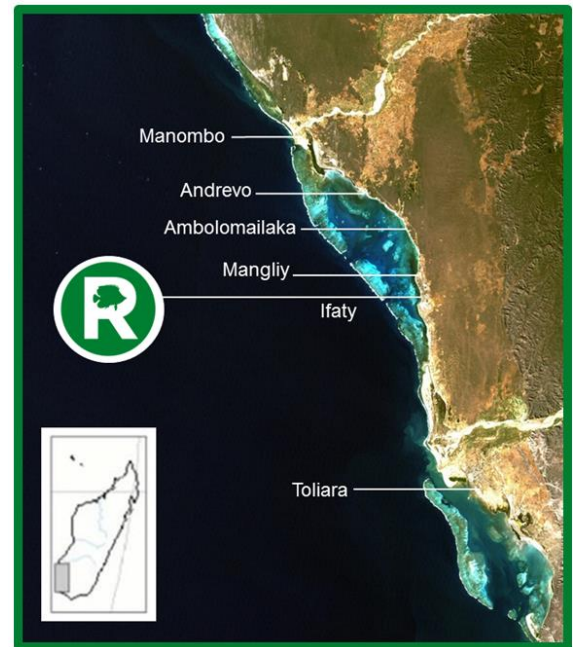
- Help the team involve Junior Reef Doctors in the aquaculture projects where possible.
- Assist in report writing for local, regional, national, and Darwin Initiative reports, as and when requested.
- Assist with creating monthly internal reports to be sent to company Directors.
- Be responsible for creating general project updates and work with the Communications Officer for dissemination on the website, newsletters, social networking sites etc.
- Assist with the writing of scientific papers for publication in journals when requested.
- Assist team members with providing PowerPoint presentations on the aquaculture projects to all Reef Doctor volunteers.
- Assist team members with the weekly dissemination and updating of project activities to the whole Reef Doctor team.
- Assist the team with organising volunteer project participation and supervise volunteers during times of participation.





Where We Work

We work in the Bay of Ranobe, South West Madagascar, a semi-enclosed lagoon extending from Morombe in the north to Toliara in the south. The bay is protected from the open ocean by an extensive fringing/barrier reef system creating a shallow lagoon, 32 km long and 8 km at its widest point. It consists of a diverse range of marine and coastal habitats including barrier reefs, patch reefs, reef flats, extensive seagrass beds, and mangroves. The coral reefs in this region form part of the world's largest barrier reef systems, the Toliara Barrier Reef Complex.



These ecosystems, however, are under enormous pressure from a variety of anthropogenic stressors such as over-exploitation, climate change, and sedimentation. Collectively, these stressors are causing widespread degradation to the marine habitats within the Bay of Ranobe and compromising resource availability for the local communities. As an aquaculture intern, you will be supporting these communities in the transition from over-exploited fisheries to more sustainable marine-based alternative livelihoods. Our sea cucumber aquaculture sites are based in the villages of Andrevo and Ambolomailaka, while the seaweed farms are located in Ifaty, Mangily, Andrevo, and Ambolomailaka.





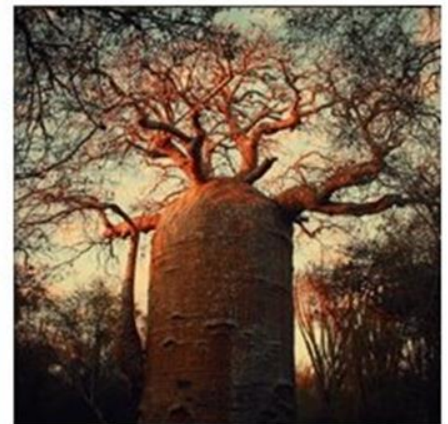
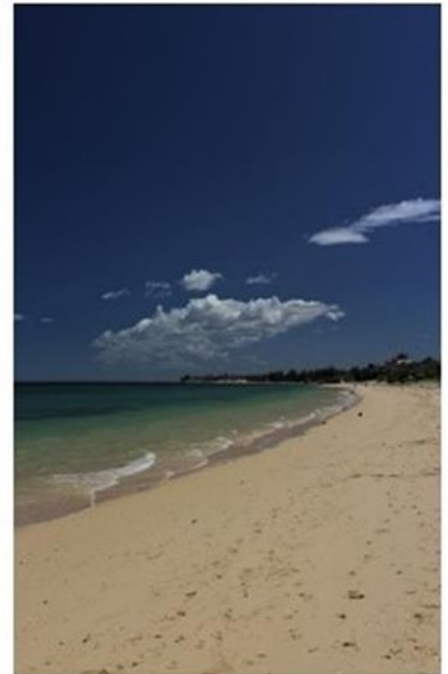
Our site is located on the periphery of Ifaty village in the south of the Bay, 27 km north of the main provincial town of Toliara. Ifaty is a small and traditional Malagasy fishing village; there is no mains electricity or running water, and, like in the other 12 fishing villages in the bay, life there is very basic.

The region we are located in is very arid and desert-like. Behind Ifaty village is the Spiny Forest, considered one of the most unique and endangered habitats worldwide. The Spiny Forest is known for its high rate of endemism; 95% of its plant species are found nowhere else on Earth! It contains a wide range of desert plants such as cacti, shrubs, baobab trees, tamarind trees, and the infamous spiny octopus tree. This habitat also supports many animals including regionally endemic lemurs and tortoises.



The sandy beach outside the Reef Doctor site stretches northwards for miles. After an hour's walk you'll reach Mangily the main beach and diving tourist destination in the region. This region is also an important area for Humpback Whales. Every year (July–Sept), approximately 7000 of these majestic mammals migrate from the Antarctic to breed in the coastal waters off southern Madagascar.







ReefDoctor Site & Facilities



Our compound is situated on a sandy beach with beautiful views of the Bay of Ranobe. This enclosed area is made up of one main house, eight brick bungalows, eight interconnected single volunteer huts, one dormitory, kitchen/dining area, dive shed, and utility room for the dive compressor and generator. The main house is used as a work area for all volunteers. A generator provides electricity for the compressor, pumping water to the house and bungalows, lighting, charging appliances, and computer/internet use.

Next door to this compound is land belonging to the University of Toliara. This is the main staff and intern accommodation. Our newly-refurbished community classroom from which we run all our community education programmes, is also located on this site. On the opposite side of our compound is the aquaculture headquarters consisting of couple of offices and equipment rooms. This will be your main working area.





All volunteer and intern huts are built from locally-sourced wood and reeds with a cement floor. Showers are taken in enclosed wooden shower stalls using water from the on-site well. There are two wooden stalls housing hygienic drop toilets on both accommodation sites.



For an additional cost (£200 per month, £6.66 a day), volunteers/interns may upgrade to one of the beach front brick bungalows complete with en suite shower and toilet.

We provide meals three times a day, seven days a week. All of our meals are cooked by our Malagasy chefs who serve up a mix of Western/Malagasy cuisine, consisting of the staple Malagasy diet of rice and beans, fresh vegetables, fish, meat, and fruit. We source all of our food locally to generate revenue for local communities. Our drinking water is locally sourced, delivered via traditional zebu cart, and treated on site.

We provide meals three times a day, seven days a week at our kitchen on-site. All of our meals are cooked by our Malagasy chefs who serve up a mix of Western/Malagasy cuisine, consisting of the staple Malagasy diet of rice and beans, fresh vegetables, fish, meat, and fruit. We source all of our food locally to generate revenue for local communities. Our drinking water is locally sourced, delivered via traditional zebu cart, and treated on site.







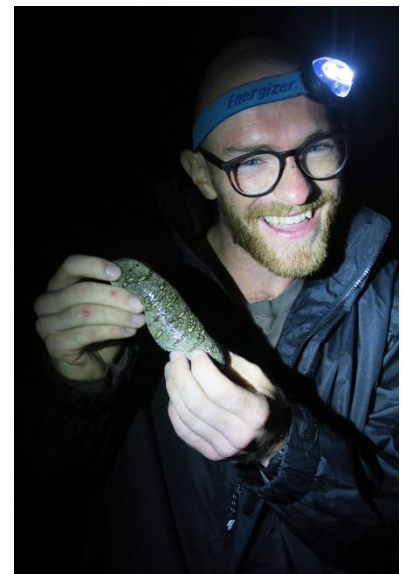
Daily Life

Working as an intern means you will be following the working times of the core staff. The normal staff working week runs from Monday to Friday, although due to the nature of the aquaculture project activities you will often experience irregular working hours. Fun dives are available on a Saturday morning.



On a typical 'seaweed day', you will head out to the Reef Doctor seaweed farms together with one of our local technicians. There you will conduct seaweed maintenance, distribute seaweed to local farmers, and conduct environmental monitoring. After you return to camp you will help with documenting the data and a variety of other computer-based activities. You will also be expected to get involved with the day to day running of the camp.

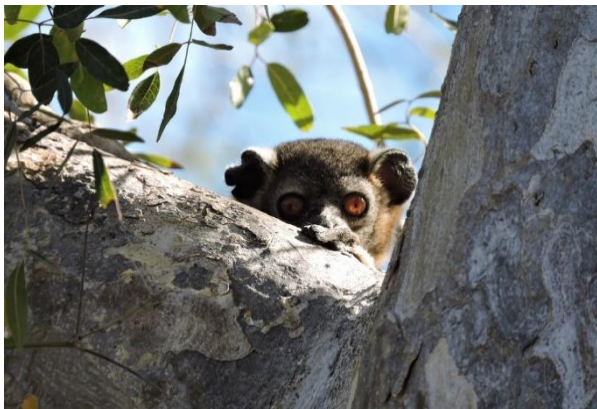
During spring tides, you will travel to our satellite sites in the Bay of Ranobe to visit the community sea cucumber farms. For one week, you will live with and work alongside the local communities. You will live in their houses and eat what heads of the household cook for the family. You will assist farmers in the maintenance of their sea cucumber pens at low tide during the day, and in the middle of the night you will lead farmers out to their pens to remove crabs and weigh sea cucumbers.





Weekends

You are free to do as you wish at the weekend; simply relax in the peaceful surroundings on site, go into town for shopping, take a pirogue trip, walk to the popular beach resort of Mangily, visit local parks such as the Spiny Forest, or take a long weekend to go further afield in order to visit one of the regional national parks.





Exploring Madagascar

All 6-month interns are entitled to 14-days holiday for the opportunity to explore this fascinating and beautiful country. However, because there are so many unique places to visit, we also recommend scheduling in extra time and budget to explore more this amazing country after your time with us.





Safety

Ensuring your safety at Reef Doctor is our top priority. There have been no serious incidents at Reef Doctor during the 13 years it has been operating in Madagascar. Whilst our project site is in a semi-remote location, hospital care is readily available in Toliara which can be accessed under an hour. We focus heavily on accident prevention; providing safety information, training, and advice to all volunteers and staff when they arrive.

We have conducted a full risk assessment of our Ifaty site, and created rules and procedures designed to promote safety and good hygiene in all aspects of our daily life. We keep standard first aid and diving medical supplies on site, and all of our staff are trained in the provision of emergency first aid and what to do in diving emergencies.

Due to our semi-remote location, we have introduced a series of safety procedures designed to minimise risk at all times. All of our diving is run under the strict guidelines laid down by PADI International, with additional specific rules and regulations created by ourselves for operating in this area. All rules and regulations are enforced at all times by the dive officers and boat captains. A copy of our dive regulations is given to each person entering our camp, and training in our emergency procedures is completed before working diving commences.





All of our diving equipment is serviced regularly and meets the necessary diving safety standards. Oxygen and first aid equipment is taken on every dive with emergency drill practices conducted monthly for staff and volunteers. We keep a 75 L and 15 L oxygen cylinder on camp and have two 5 L tanks for use on our dive boats.

Our main buildings and facilities are enclosed within a secure compound which is guarded at night by three local security personnel.

Working in a remote location means that we need to ensure that when help is needed we can contact the right people quickly. We keep the following ready for emergency use at all times:

- VHF radios, one base station in camp and one on each dive boat.
- Mobile phones, one in camp and one in each boat.
- Emergency first aid materials (neck and leg braces, spine board, bandages etc.).

For our emergency plan and evacuation procedures, we liaise with the Divers Alert Network (DAN) in Europe and South Africa. Our evacuation plan is reviewed monthly to ensure that information is correct and training is up-to-date. All volunteers and staff receive training on the plan on arrival.





South West Madagascar Climate

Month	Season (according to European seasons)	Malaria Risk	Average Day Temp °C	Average Night Temp °C
January	Summer (cyclones)	High	36	33
February	Summer (cyclones)	High	40	35
March	Summer	High	38	30
April	Autumn	Medium	35	28
May	Autumn	Medium	30	20
June	Winter	Low	26	17
July	Winter	Low	23	15
August	Winter	Low	23	15
September	Spring	Low	25	20
October	Spring	Low	25	25
November	Spring	Medium	30	28
December	Summer	Medium	32	28



Aquaculture Internship Start Dates & Fees 2019

We run three expeditions per year:

18th January, 14th June, and 18th October.

2 months: £1500

3 months: £2000

6 months: £2500





Services Included in the Internship Fees

- Airport pick-up in Toliara and transport to the Reef Doctor site in Ifaty
- Arrangement of hotel in the capital city Antananarivo, if required.
- All meals, Monday–Sunday.
- Filtered water, coffee, and tea.
- Lodging: bed sheets, pillows, and mosquito net provided.
- Standard first-aid medical care.
- Electricity for charging cell phones, laptops, etc. (limited to week days) and internet connection (limited to lunch times midweek for personal use).
- Occasional excursions to help some of our conservation partners in the area, such as HONKO (mangrove conservation and re-plantation).
- All aquaculture and language training.
- All living and transport expenses when working at our satellite camps.
- Pre-departure support and pre-departure guides: advice on flights, equipment, Madagascar, medicals, vaccines, insurance etc.
- UK based support/communication throughout the expedition for the intern's friends and family.
- Fuel, equipment and in-country personnel to make this all happen!

Your financial contribution not only funds your own living and work activities with us, it also contributes to our conservation projects and allows us to employ local staff to support our work.





Services Not Included in the Internship Fees

- Round-trip airfare.
- Visa. Unless the intern can go directly to a Madagascan embassy in their home country, interns need to send their passport and visa application documents (provided by the embassy and from Reef Doctor) to their nearest embassy to get the specific voluntary work visa required. Interns must send the forms using a secure postal service such as Fedex or DHL and provide a return pre-paid envelope or Fedex account information to allow the embassy to send the passport with visa back to the intern. In addition, some embassies require a fee to process the visa and interns will be responsible for this cost as well.
- Vaccinations and anti-malarial drugs.
- For those who are interested, PADI dive training fees (this must be pre-arranged with Reef Doctor prior to departure).
- Reef Doctor standard recreational dive medicals (if applicable; forms provided by us to be filled in by a medical professional which may incur a fee).
- All interns must bring their own wetsuit, mask/snorkel, fins and booties, and for those wishing to dive, time piece and/or dive computer, and weight belt.
- Diving (if applicable), travel, and medical insurance.
- Any personal excursions (often groups of staff and volunteers plan excursions to nearby national parks or other areas of interest).





Why Become a Reef Doctor Intern?

- On average, **80%–90%** of your internship fee goes directly into our conservation work and the local economy in Madagascar
- Our core staff are professionals in their respective fields, their knowledge and experience will be passed on to you throughout your expedition.
- Acquire first-hand experience in aquaculture and community development work which can be transferred to future employment.
- Malagasy culture is vibrant and memorable. During your stay you'll experience it first hand; through living with and working alongside local communities.
- A Reef Doctor internship attracts people from all walks of life and all over the world. You will make new friends with whom you will share memorable life experiences.
- Our work is part of a larger, global effort. It helps develop understanding of marine resource management in developing countries and contributes scientific information to a much wider conservation community.
- Our programmes are designed with the community at their heart; our work is directed at helping local communities develop and grow while conserving their culture and resources. Our internships are all about making a difference and you'll be contributing to helping us fulfil our long term ecological and social objectives in the Bay of Ranobe.
- As a Reef Doctor intern, you'll learn new skills, walk away with new experiences and a whole new level of scientific knowledge and ultimately, you'll have contributed to helping protect threatened marine ecosystems and the future livelihoods of the local Vezo people.





Application & Contact Details



Reef Doctor has 2–4 aquaculture intern positions available per expedition which run three times a year. To find out if you are eligible to become a Reef Doctor intern please download our volunteer questionnaire from www.reefdoctor.org and send it along with your C.V to

staff@reefdoctor.org

For further information or if you have any questions please contact us:

Email: volunteer@reefdoctor.org

Speak directly to someone from our UK headquarters:

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+44 (0)1756 380 198

Skype username: reefdoctor

