

The Rufford Foundation

Final Report

Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs please send these to us separately.

Please submit your final report to jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Emma Gibbons
Project title	Reef Doctor Fano (Marine Turtle) project
RSG reference	18301-D
Reporting period	July 2016 – July 2017
Amount of grant	£9220
Your email address	emma@reefdoctor.org or gibbons.e.l@gmail.com
Date of this report	July 2017

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Strengthen capacity of the local turtle association, FIMPAMIFA, on the application of the local turtle fishery law through training focused on legal rights and procedures, increased "patrols", or visual presence by Miaro Fano (turtle protection team)				Integrating local turtle Dina's into region-wide decentralisation program 'Dina-be' developed by the Chef de region for Atsimo Andrefena region of Southwest Madagascar. Over the project year FIMPAMIFA expanded the number of villages running the program (from 5 to 7), increasing the visual presence of Miaro Fano teams.
Reinforce FIMPAMIFA bay-wide communication network and coordination of activities				Development of platforms (government, NGO's, commercial partners, and associations) to address conservation, fishing practices, and aquaculture.
Tag and release program : tagging and release of all juveniles protected by the local law (DINA) - Miaro Fano team				74.2% of juveniles were released with over 601 individuals, around 50% of total catch of marine turtles released over the project period.
Providing turtle hunters with the choice to switch to aquaculture farming				720 project participants received training in aquaculture farming techniques. 360 farming groups established.
Marine turtle fisheries data collection Activity				Data collected and submitted to international database
Initial meetings with beach-seine fishermen to present seagrass project ideas				Dina (local law) in place preventing the use of beach seine activity from sea cucumber and seaweed farming areas.
Series of focus groups to gain understanding of potential areas of conflict, or resistance;				One of the community ideas to improve the expansion of protected areas of high biodiversity is to build artificial fishing habitats for the community.
Village-wide meetings to discuss creation of seagrass reserves and to				Quartile meetings are held per village and biannual meetings per commune for discussions

reach consensus on placement / configuration				regarding aquaculture, conservation, and development
Creation of seagrass reserves to protect 10% of seagrass meadows in the bay, with zoning for strict protection and restricted use				945 hectares of seagrass provided partial protection (40%), and a further 254 hectares (10%) provided complete protection

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

While promotion of the link between healthy ecosystems and productive aquaculture farms was effective in establishing seagrass protection, it provided little incentive for the direct protection of marine turtles, the targeted species for biodiversity conservation in this project. Without a tangible benefit that turtles provided to aquaculture activities, and the continued high market value offered for them, it remained a challenge to reduce turtle hunting. While increased time spent on aquaculture activities necessarily resulted in less time available for fishing, a stronger feedback mechanism between the conservation of turtles and increased aquaculture production would have benefited the program design.

3. Briefly describe the three most important outcomes of your project.

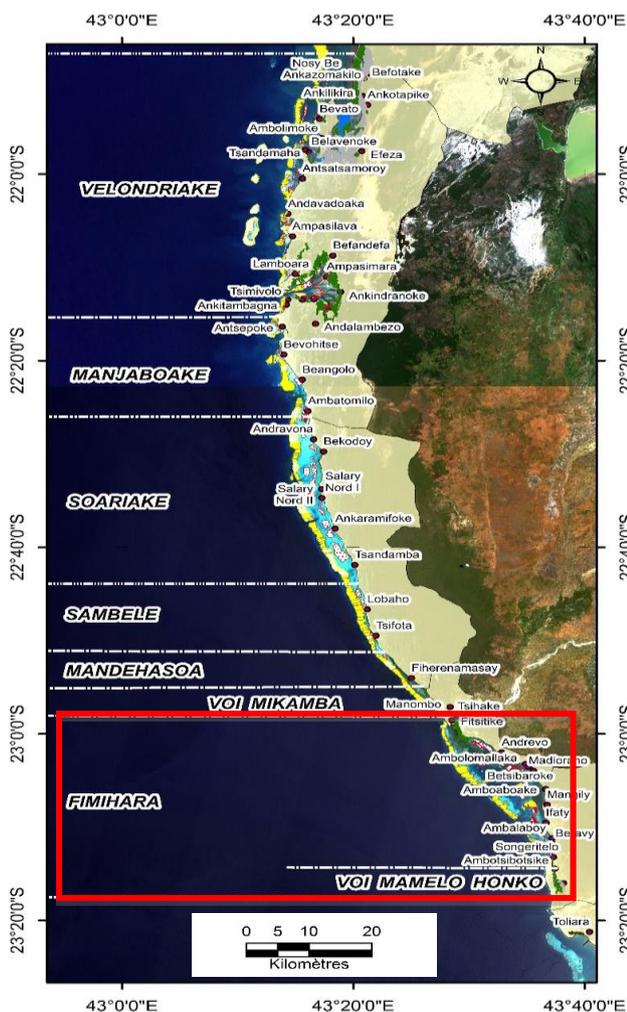
This project was successful in achieving its intended outcome of marine turtle protection through the implementation of sustainable aquaculture-based livelihoods. The live release of 601 turtles through the tag-and-release program provides around a 50% reduction in turtle mortality, 660 turtles killed (June 2016 – June 2017), from the total number (1261) of recorded turtles captured in the fishery. Our results show that the number of marine turtles captured in the fishery has increased by 23% over the last year in communities where the tag-and-release and aquaculture programmes are absent. If a juvenile turtle were caught in fishing gear, fishermen would deliver the turtle to a FI.MPA.MI.FA (Miaro Fano – turtle protection team) representatives, assist with the collection of biological data and the tagging and subsequent ocean-release of the turtles. Success of this tag and release programme was achieved through the active participation of the whole fishing community, empowering and engaging the community in conservation behaviour to attain long-term conservation objectives

The transition of turtle fishers to sustainable aquaculture-based livelihoods hinged upon the ability of fishers to generate sufficient income from their new livelihood. This was achieved for some farmers, most notably those engaged in sea cucumber activities, with the 25 households farming sea cucumbers earning a profit of \$1.15 USD/day since June 2016. Seaweed farming generated less income for project beneficiaries, but given the lower start-up cost, a greater number of community members were able to participate in this form of aquaculture. Average income generated through seaweed farming in the final month of the project was \$0.15

USD/day, however incomes were highly variable, both by community and by month. The most profitable household generated \$1.61 USD/day in their highest earning month, demonstrating that this type of aquaculture can provide meaningful incomes. The combined income from both forms of aquaculture over the last year of the project was \$27,385 USD, with an average daily income of \$0.3 USD benefiting 247 households.

Seagrass meadows, as critical habitat for marine turtles, were granted protection in excess of the indicator 3 target of 250 ha limited use, and 150 ha no-take zones, with 945 ha granted restricted use protection, and a further 254 ha granted full protection (annex 8.3). Full protection status was granted for aquaculture zones, while restricted use zones allowed for gleaning, and fishing with certain approved gears, but not the use of destructive beach seine nets.

4. Briefly describe the involvement of local communities and how they have benefitted from the project (if relevant).



Fikambanana Miaro sy Hanasoa ny Ranomasina (FIMIHARA): created in 2007, FIMIHARA is comprised of village elders, chiefs and fishermen concerned about all fisheries, marine conservation in the Bay of Ranobe, and co-management of the marine reserves. As the primary marine association representing the Bay of Ranobe, FIMIHARA became the natural responsible body for aquaculture zoning licences issued by the Ministry of Fisheries and Marine Resources. As project beneficiaries are also FIMIHARA members, the association has been well placed to facilitate conservation objectives, such as the discontinuation of destructive fishing practices, seagrass protection, throughout the zone of intervention, and serve as role models for effective and sustainable aquaculture production. After receiving association building training in the final year of the project, FIMIHARA are well placed to sustain aquaculture activities.

Fikambanana Mpaniriky Miaro ny Fano (FIMPAMIFA): created in 2012, the Turtle Protection Association, is a sub-association of FIMIHARA comprised of

village elders and turtle hunters concerned about the overharvesting of marine turtles, with representatives throughout the 13 villages of the Bay. FIMPAMIFA

continues to play an active role in monitoring of the marine turtle fishery, in partnership with Reef Doctor, and was integral in the expansion of this monitoring programme from two communities at the projects' beginning, to six communities at its conclusion. FIMPAMIFA manages 13 teams of community-based fishers who support the local indigenous law (Dina) for the protection of juvenile turtles, and act as community contact points for turtles submitted to the tag-and-release programme. As a community association, the support of FIMPAMIFA was critical in facilitating seagrass protected areas established through this project with FIMIHARA, and in disseminating updates and progress back to the community.

5. Are there any plans to continue this work?

Yes, the longevity of sustainable aquaculture livelihoods was confirmed through the creation of an expansion strategy with commercial business partners Copefrito (seaweed) and Indian Ocean Trapang (sea cucumbers) who have committed to supporting existing farmers and expanding the project until 2019.

6. How do you plan to share the results of your work with others?

Reef Doctor is part of a local, regional, and national framework linking community members with institutional and government bodies aimed at instigating sustainable development and biodiversity protection. Reef Doctor works closely with the local marine university IH.SM and provides Malagasy students: 1) work experience opportunities; 2) scuba qualifications; and 3) underwater survey training. Government bodies; Ministry (MRHP) and regional directors of fisheries (DRRHP), Ministry (MEEF) and regional directors of Environment, Ecology, and Forests (DREEF), have both visited Reef Doctor's projects in a show of support for the initiatives.

7. Timescale: Over what period was The Rufford Foundation grant used? How does this compare to the anticipated or actual length of the project?

The Rufford Foundation grant was completed in 12 months. However, we aim to continue with the initiative as this is the only marine turtle rescue programme in Madagascar.

8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Overheads for the base camp office (generator power, internet)	1000	1000	0	Reef Doctor received additional funding support and other costs were absorbed by

				the organisation.
Salaries for local staff (head of project) from the IH.SM	1200	1200	0	
Miaro Fano team compensation	900	900	0	
Community meetings and workshops	2200	2200	0	
Turtle tagging equipment	1440	1440	0	
T-shirts	200	200	0	
Transport and accommodation in rural villages in the BRB	600	600	0	
Signage	1430	1430	0	
Printing	250	250	0	

9. Looking ahead, what do you feel are the important next steps?

Continued support for local communities is required given the worsening social and environmental context of Madagascar. This is evident through the demands received from communities to increase the number of participant involved in seaweed and sea cucumber aquaculture projects. Linking poverty reduction strategies with conservation benefits is working; however support to strengthen community association to become leaders in delivering and managing these projects is required. Building a management framework to empower communities will be the next step to secure independence.

10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did The Rufford Foundation receive any publicity during the course of your work?

Yes, The Rufford Foundation logo was used internationally; The IOSEA Marine Turtle Memorandum of Understanding intergovernmental agreement concluded under the auspices of the UNEP / Convention on Migratory Species (CMS) publication; Marine turtle conservation challenges in southwest Madagascar, author; Emma Gibbons, published 12 Sep 2016. http://www.ioseaturtles.org/feature_detail.php?id=596 Indian Ocean Turtle Newsletter (IOTN) publication <http://www.iotn.org/iotn25-03-the-marine-turtle-fishery-in-the-bay-of-ranobe-madagascar/> nationally and locally at workshops and at events, and Reef Doctors website www.reefdoctor.org, blog page <https://reefdoctor.wordpress.com> Facebook <https://www.facebook.com/ReefDoctorOfficial>

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Emma Gibbons - Director of Reef Doctor and project manager

Cale Golding - Aquaculture manager, assisted in the development of the aquaculture program, monitored the scientific data for the turtle fishery and produced peer-reviewed publications on the marine turtle fishery.

Vijay Kumar Jivan - Fano project leader, provided communities training and support for FIMPAMIFA and the Miaro Fano Teams.

Ramanjehimanana Livatiana – Community-based aquaculture project coordinator

Busko - Community-based fisheries team leader, assisted in the tag-and-release program overseeing the payment mechanism.

Bezozo Maro – President of FIMPAMIFA, leading the association and assisting in the development of the seagrass protection initiative.

Miaro Fano teams; multiple community members assisted in the rescue and release of 601 turtles throughout the year.

12. Any other comments?

Reef Doctor would like to thank The Rufford Foundation for their continued support since the conception of this project. Tackling poverty and providing fishers with alternative sustainable livelihoods provides communities with the ability to protect biodiversity and thus protect their cultural heritage.