

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	Karen Fuentes Martínez
Project title	Mexican Caribbean Manta Ray Project
RSG reference	17076-1
Reporting period	18 months
Amount of grant	£5000
Your email address	manzafuentes@gmail.com
Date of this report	25 July 2016

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
Database registration			x	<p>We accomplished more of that we expected with numbers of registered manta rays individuals.</p> <p>We currently have 183 mantas.</p> <p>Information collected from manta rays behavior like: breaching, feeding techniques, mating scars, pregnancy, injuries (natural or anthropogenic).</p> <p>All of above allowed us to determine and learn more about their ecology, spatial distribution within two reserves proposed for this study project (Contoy Island national park or Whale sharks Biosphere Reserve).</p>
Data collect (plankton, biopsies, and registration measure depths).		x		<p>Through a long permit process we still waiting for a specific permit that will allow us to collect plankton samples and biopsies collection. Furthermore we do had permit to collect ID pictures and CTD samples within the Whale Shark Reserve and Contoy National Park.</p> <p>After the summer we are analysing all the data collected for presentation of a scientific report during next months.</p>

Education approach in local communities.			x	<p>Through the last year we had such an amazing response from different sectors of the communities not only local people from Isla Mujeres, but also Playa del Carmen area where we had the opportunity to raise awareness in festivals, environmental activities and workshops related with mantas, mobulas and sharks and the general marine ecosystems.</p> <p>We also participated in a conference about the importance of manta rays and our project in the most relevant University of Marine Science (Reef Unit). For future potential volunteers that want to collaborate with our project.</p> <p>Local event had a relevant importance in order to get close with the communities, kids, schools, students and families.</p> <p>Awareness through beach and mangrove clean ups with communities in Playa del Carmen and Isla Mujeres.</p> <p>Our activities are more organised through a 2 years startup of the project and now officially as a non-profit.</p> <p>Activities programme attached</p>
Obtain further economic support.			x	<p>After I applied for Rufford Small Grant, (and successfully received it).</p> <p>I also sent another application to Manta Trust for founding for an expedition to complete a formal report with statistics using science as platform to conclude or formulate new specific research questions that leads new objectives in order to obtain more information to understand more about the manta rays populations in this region.</p> <p>We collected information about the weather and physical characteristics where mantas were found and not,</p>

				<p>during the summer in different times and very specifically this expedition we set up the research guidelines for the next 1 and 2 years follow up.</p> <p>Using the oceanography tool that we were able to buy thanks to Rufford Small grant, conductivity, temperature and depth (CTD).</p> <p>We were able to record in different areas where mantas can be seen (which are areas far from land) data from different waters to analyse during the next month's why the mantas are present in those different areas and description of the water characteristics according with the ctd data to describe visiting patterns trends.</p> <p>Thanks to the participation of our mentors Josh Stewart (Scripps and Manta Trust) and Dr Robert Rubin (Santa Rosa Univ.), which their experience with manta rays is very robust and had led them to be two of the most knowledgeable and experienced people in the world for manta rays behaviour, genetics among others, and very suitable to apply their work here in our project where mantas are involved.</p>
Register relevant information about manta rays populations.			x	<p>Our research programme is based on a method of not only ID registration but also to register other patterns behaviour like feeding, mating, breaching, cleaning which can explain maybe why s the reason that mantas populations can be found on this region.</p> <p>Through the last year of registration we could identify new individuals, more behaviour patterns and location of those individuals.</p> <p>Also I open a volunteer's programme for this summer where four people were</p>

			<p>selected from different parts of the world.</p> <p>They have helped me a lot with social media work, and help with registration and update of our database where information has been collected since 5 years ago.</p>
Increase awareness in local governmental authorities		x	<p>During the whole transition of growing and developing the Mexican Caribbean Manta Ray Project and it's legal foundation under the Mexican laws as non-profit, allow us to get a better approach to collaborate with local authorities in order to put work together activities to protect the manta rays through education, conservation and give them reports of our actual work for a better management of possible threats that affect manta rays populations like fishing lines, and knowledge of the existence of these species in this region.</p> <p>During the next 6 months we agree to deliver a manual of good practices about interactions with manta rays, (if it's the case) and recommendations from our organisation that they can integrate with their conservation programmes in the area.</p>
Include them as protected species within the Whale Shark biosphere.	X		<p>Even though manta rays are protected in all Mexican territory, there are more conservation efforts that can be achieved through research collecting data that proves importance of mantas habitat protection. We consider we need to collect more data to present the adequate information that will allow authorities to take responsible decisions in conservation terms for mantas. (1 to 3 years more).</p>

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

Most of the objectives were partially or fully achieved according with the initial project programme. I would say we need to keep working as we did for the last year in order to accomplish the medium and long term goals. I am very happy with the advances of the project and definitely keep us working hard, the result are evident in a positive way for conservation, education and research objectives. Even that I would like to be able to obtain more grants for more research, is happening little by little. I'm learning a lot why, how and what is possible to accomplish with the present resources we have and we look forward to apply for more grants.

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

I would like to say that everything has been important and a complement of each of the activities with we had been working in. I refer to this because in our organisation the three pillars of our cause are conservation, research and education, which we are trying to keep in balance during yearly activities in order to give the importance and relevance of those three aspects, during different months.

Scientific advice: We feel more confident about the information we have had collected and how to use in order to provide relevant information for a better understanding of manta rays in this location and the result is part of the global efforts to diminished the collapse of manta rays populations. (e.g.: identify mantas behavior, description of weather patterns among others).

Training: Through Manta Trust we had the opportunity to have a training in research terms which we really need it, and is fundamental for our progress as a project.

Education: Local communities are learning about manta ray species and are very interested about the project because not only involve manta rays also different ecosystems like mangroves, reefs and tropical forest.

Our agenda is full with schools conferences and workshops after kids come back from summer break.

Government entities approach: If something will be remarkable about the last year is the collaboration with the Municipality of Isla Mujeres, which are very cooperative with our ideas, work and objectives. We had organised a couple of events together in the yearly calendars related with environment and ecology topics.

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

We basically go wherever we find an opportunity: festivals, schools and definitely a place that is been crucial for project like ours is the Planetarium of Playa del Carmen where other non profits, projects or ideas are shown through specialised conferences or workshops open to the public with the goal of spread out the knowledge and non profits work for different causes in the area: Cancun, Isla Mujeres, Playa del Carmen and Tulum.

Which a consider as a meeting point to share our experiences and work from different conservation topics, which will help and increases further collaborations for education proposes.

5. Are there any plans to continue this work?

Absolutely!!! There are many goals to accomplished.

I want to create a solid research and conservation platform for manta rays where people can develop their skills and complement our project through volunteers programs and to keep encouraging people all around the globe to protect the marine ecosystems and that is not necessarily to be a marine biologist to get involve with research and conservation projects instead, to discover the best of each individual and apply their capabilities in our project! like people with marketing, engineers, biologist, physiologist, managers, etc, everyone has a strength that can accomplished lots of project objetives through the right direction of the project leader to assign specific task according with their skills.

In terms of research: We just set up the basis of our future goals and long term objetives like:

Database: work during summer (field trips, working as a tour guide in the reserves) rest of the year collect information from different tour operators and social media publications.

Conservation and education: get even more involved with local schools, universities, tourism sectors to keep spreading information about manta rays and marine ecosystems importance.

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

I'm currently working on my annual report for Manta Trust. This report will be shared with 15 other project locations worldwide to help improve the knowledge and advances of the manta ray research and conservation efforts from each of the project that are part of Manta Trust.

Also the same report is shared with the government entities in this area related with the Protected Areas National Commission (CONANP) to show the work we have done related with the manta rays and relevant information about their presence for a better natural resources management within the protected areas.

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

From the beginning as part of the grant we could pay the expenses for the legal foundation of our organisation Manta Mexico Caribe AC. Registered under the Mexican law.

The second article obtained with the money from the Small Rufford Grant was the CTD device, which save us a lot of money, time and other oceanography tools. It measures depth, conductivity, and depths, from that we can obtain important information like specific oceanographic characteristics where mantas can be found or the environment where they move around this area in specific conditions. For me was important to use the grant to buy expensive tools and to found the organisation as a non profit for long terms objectives like: obtain more economic sources that support the project, and in the case of the CTD to save money and collect data in shorter periods.

Also I would like to mentioned that Manta Trust help with some economic sources to complete the payment of the foundation of my organisation, because the £5,000 almost pay the CTD device furthermore the rest of the money need it was covered by Manta Trust.

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
CTD device	3160	4772.11	1612.11	The initial price was and approximate cost rate but after 1 year prices were higher, was more expensive.
Expenses for the founding of Manta Mexico Caribe AC	632	571	61	The initial money asked for the foundation was 632, we paid 571, but the difference was used to complete the payment of the ctd device.
Total	3792	5343	1673.11	+++

+++ I would like to comment that the initial grant proposal included more items, furthermore even that weren't able to pay the articles like plankton net, flowmeter and GPS, we could bought them anyways through my savings and as part of other grant won.

So basically we were working with all the materials that initially we were thinking and planned to used, even that they weren't bought at the same time, the objective to buy our research gear is accomplished! :).

We currently have:

Plankton net, flowmeter, cameras, gps, ctd and the foundation of our non profit organisation.

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

The important thing is to keep working with the main project programme, keep looking for grants and support of possible donors, collaborators, scientific advice, volunteer programmes and education activities related with conservation of the manta rays and the marine ecosystem.

Persistence and discipline is what had help us to create a solid platform of this project and this is only the beginning.

I am more than honoured and grateful for the great opportunity that Rufford Foundation gave me to start up my non profit and to established a long term organisation that cares, work and protect the marine ecosystems with communities, particulars, students, and government for the conservation of the most beautiful and majestic animals existent for me the MANTA RAYS!

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

Yes, I used in my presentations and conferences.

And as a reference of received grant with other applications while I was submitting them during the last year.

11. Any other comments?

I am very happy with the result of the last 2 years work, and I am sure that this project with last forever, for future environmental and conservationist leaders that follow up work with manta rays research will be a platform of collaborations for future project related with marine protection to decrease the impact of human activities in the planet.



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