

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	Diego Joaquín Pérez Venegas
Project title	The sources and impact of plastic pollution on South American fur seals (<i>Arctocephalus australis</i>) in Chilean Patagonia.
RSG reference	18815-1
Reporting period	Final
Amount of grant	Rufford Small Grant
Your email address	Diegojoaquin.pv@gmail.com
Date of this report	07/04/17

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
Identify and quantify the prevalence of "marine debris" in the area and its immediate surroundings.				Publication in progress Results have been presented in the scientific congress of the Wildlife Disease Association and the Latin American Association of Aquatic Mammals
Identify the sources of plastic debris that has potential for the entanglement of marine animals at Guafo Island.				Publication in progress Results presented in the scientific congresses of the Wildlife Disease Association and the Latin American Association of Aquatic Mammals
Determine the number of fur seals entangled during the season, differentiating their age classes and their relationship to population size.				Publication in progress Results shown in scientific congresses of the Wildlife Disease Association and the Latin American Association of Aquatic Mammals
Detect and quantify the ingestion of microplastics in the fur seals and its correlation with the fur seals' health status.				Publication in progress Results shown in scientific congresses Correlation with fur seal's health status in progress
Communication of our results to government agencies and local communities to avoid the release of the most common plastic debris from surrounding areas identified in the study.				Environmental talks held in schools, but not with government agencies. Waiting to finalise manuscripts to present final results to government agencies.

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

The communication with local government agencies has been difficult, mostly due to schedule contrast and the lack of definite results in our side. We expect to have a more formal dialog with government agencies (Subpesca, Sernapesca) once we can show the final results of the project, especially the results related to the origin of marine debris reaching reproductive colonies of wildlife in southern Chile. We would

have liked to do more educational talks in schools but schedule constraints make this complicated in some schools, however in the places where talks could be performed the reception was good and teachers and students were very participative and enthusiastic to help with domestic solutions to the plastic pollution problem.

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

- The origin of debris of Guafo Island was from the local fishery, we saw a diminution of pollution in the rookery, correlated with the diminution of fishery boats
- Every year appears 1 or 2 entangled adult fur seal females, but is not an imminent problem for the health status of the rookery, but if this rate increases it could be a problem, therefore there is a need to continue monitoring.
- The microplastics in fur seals' diet is abundant, and now is important check the potential impact for fur seal's health.

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

The local fishermen helped us to travel to the rookery that was the perfect moment to share with them of the impact of human pollution in the island. Now they feel more involved in the colony conservation and they are glad to help us and learn more. Some fishermen boat have started to adopt measures of garbage classification which include burn of plastic debris. Additional work is needed with coastal communities and fishermen to implement practices that are widespread and can be sustained over time.

5. Are there any plans to continue this work?

The plan is continuing the monitoring of the fur seal colony, the next years still work in communities' interaction with scientific staff, continue with environmental chats in schools.

Our next step, since we found great abundance of microplastics, is to analyse the impact of these debris in fur seal's health (e.g. chronic stress). This is especially important since it could be the base to alert about the hidden effects of plastic pollution and potential incorporation of plastics in the trophic chain. We feel that such impacts would make a more profound change in the view that local communities have regarding plastic pollution. We also plan to expand this analysis to a larger number of rookeries in the Chilean coast.

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

Now we are working in scientific publications, and we performed two presentations of our results in national and international conferences with specialists, and 1 presentation with university students in a local symposium.

We show this results with two schools in Chile, and our plan is continuing this dilution. We expect to share our final results with the Chilean ocean authorities, so they are aware of the role of local communities in the plastic pollution of southern Chile.

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

This grant was used for 2016 period, analysing 2015-16 summer`s samples and coordinating 2016-17 summer period. This was used for complete length of this project for this year as previously anticipated.

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
Laboratory and sampling supplies	377	2120	1743	We used other funds to cover the difference cost
Travels	686	2152	1466	
Meals	1479	2271	792	
Field, laboratory and campsite equipment	2178	3168	990	
Permits	0	198	198	
Total	4918	9909	4991	

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

To work in a more efficient diffusion with the local community and to foment with programmes more stimulated means of promotion to highlight the importance of plastic pollution and the conservation of Guafu Island

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, 1 scientific congress, 1 student's symposium, 2 school chats. No printed materials were produced but the logo was (and will) be used in all public activities related to the project.

11. Any other comments?

All the data are processing for publish, the papers are in preparation. Within this project a marine biology student had the possibility of prepare part of his master thesis.