

## The Rufford Small Grants Foundation

### Final Report

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

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. 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. 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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#### Grant Recipient Details

|                            |  |
|----------------------------|--|
| <b>Your name</b>           | Edward James Hehre III                                       |
| <b>Project title</b>       | Do seaweed farms subsidize fish in shallow coral ecosystems? |
| <b>RSG reference</b>       | 11749-1  |
| <b>Reporting period</b>    |  |
| <b>Amount of grant</b>     | £6000  |
| <b>Your email address</b>  | Jhehre@gmail.com   |
| <b>Date of this report</b> | 18_11_13   |

**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   |
|------------------------|--------------|--------------------|----------------|--|
| Peer reviewed articles |              | x                  |                | The first article has been prepared for submission to Conservation Biology and is awaiting final edits. Submission will take place before December 1st 2013. A second article is planned for the new year.   |
| Presentations          |              | x                  |                | I have given presentations at the Oceans Institute in Western Australia, Project Seahorse Foundation, Cebu and the Centre for Marine Futures retreat. I have appointments to give similar presentations for the Fisheries Centre, UBC as part of their on going lecture series as well as another for the Oceans Institute at the University of Western Australia. I am planning giving a presentation on the results from this study at the next ICRS in HI as well |
| Community outreach     |              | x                  |                | I held several community outreach events during my time in the Philippines, which were designed to inform the community about project goals. I was scheduled to return in the New Year, but because of catastrophic damage to my research area by both an earthquake and super-typhoon this has been postponed   |

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

Sample preservation was problematic, however specimens were preserved using a salt-drying techniques rather than freezing and the results from analysis were significant. The current issue is damage from both the earthquake and typhoon in my study area has made both planned follow-ups and future projects in the area difficult to plan for the foreseeable future

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

We found that rabbitfish do feed on farmed seaweed, particularly in high-density farmed areas, however in areas where farms were present in lower concentrations rabbitfish diet consisted of mostly wild seaweeds. Seaweed farms do not appear to be a true subsidy to rabbitfish diet so the conservation benefits of placing seaweed farms on degraded coral habitat needs to be considered cautiously as any benefits from their presence is not obvious.

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

Communities involved in the research were briefed ahead of time about why we were conducting the research and our long term plans to disseminate results. In the future, either personally, or through Project Seahorse Foundation, we hope to use the results to help seaweed farmers, fishers, and stakeholders to make more informed decisions about the implications of placing seaweed farms on shallow coral habitat.

**5. Are there any plans to continue this work?**

There are plans for two more projects as a result of this research conducted with the RSG. The first is designed to examine the social and economic importance of seaweed farming as it is currently practised on an artisanal level. The second is designed to look at the effects seaweed farming has on important food fish both nationally and globally.

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

Currently, a paper to be published in a peer-reviewed journal is in final edits and I anticipate submission before the New Year. Additionally, I have plans to return to the communities where I worked on the Danajon Bank in June of next year. During this time I will disseminate the results of my work to communities, NGOs and to government officials, including the governor of Bohol province.

**7. Timescale: Over what period was the RSG used? How does this compare to the anticipated or actual length of the project?**

The RSG was used over the course of 2013. Field research was conducted in the Spring of this year and then isotope analysis conducted and analysed in the latter half. Material for publication is in final edits and should be submitted for peer-review before the first of the year. Outcomes and dissemination of results within the Danajon Bank have been delayed somewhat by two concurrent natural disasters but should proceed before the second half of 2014. Overall, the project was conducted well within the anticipated timeframe.

**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  |
|-------------------|-----------------|---------------|------------|---|
| Salaries          | £650            | £750          | £100       | Some logistical difficulties required hiring an assistant for a week for the boatman  |
| Specimen shipping | £275            | £300          | £25        |   |
| Specimen analysis | £6850           | £7500         | £650       | There was an unexpected amount of error in some of the samples which required some reprocessing to ensure they hadn't been mishandled |
| <b>TOTAL</b>      |                 |               | £775       |   |

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

In addition to publication of results in scientific journal, I think the most important next step is to get the results of this study to famers, fishers and stakeholders in the Danajon Bank. While both the earthquake and typhoon present tremendous hardships to the people of the Danjon Bank, that most seaweed farms have been destroyed in the process presents an opportunity at this point to revisit farming practices and take advantage to implement more environmentally friendly practices. In this light my study is well timed in that the results come at a unique opportunity to inform the rebuilding process.

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

Absolutely. RSGF is mentioned in every presentation and talk that I give including informal talks here on campus. Furthermore the logo is displayed prominently on slide presentations.

**11. Any other comments?**

I just wanted to take the opportunity to thank the RSGF for allowing me to conduct this project. It has been an amazing experience and I believe the results come at a time when it is possible to use them to make a real difference in farming policy within the Danajon Bank