

Final Evaluation Report

Your Details	
Full Name	Nicolas Davalos
Project Title	Galapagos Reef Revival
Application ID	41153-2
Date of this Report	26/10/24

1. 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
Expansion of coral nursery			x	The project expanded substantially its coral gardening capacity to create tangible restoration impact in the area.
Inclusion of new coral species and cultivation methods			x	Our team included new coral species and varieties by exploring new coral populations, allowing us to increase nursery coral diversity. We also implemented new methodology to be able to cultivate different species and morphologies.
Study coral resilience during extreme climatic events.		x		We carefully studied coral response to bleaching during El Niño, nevertheless we were not able to find conclusive evidence of warm water coral resilience due to a unusually mild El Niño conditions present in the Galapagos during 2023-2024

2. Describe the three most important outcomes of your project.

- a) The increase in coral nursery capacity and restoration output, allowing our team to restore more than 2000 corals from endangered coral varieties in southern Galapagos which we have cultivated with superb survivorship rates.
- b) Exploration and charting of 6 different coral populations, allowing our team to increase diversity of corals in our nursery and restoration sites by more than 5 times. Implementation of new and perfected cultivation methods to allow for cultivation of different species, including massive corals.
- c) Recollection of robust data regarding coral response during El Niño event, including genetic samples for future analysis of stress response on corals.

- d) Creation of a robust restoration framework, integration of the local community in decision making process, piloting outreach and education initiatives with local school children and stakeholders.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

Unforeseen circumstances mostly concerned permit regulations regarding genetic sampling and conflict resolution with local stakeholders. Thankfully both were tackled efficiently, the first by working closely with the Galapagos National Park authorities and socializing our research and its importance for coral conservation, while the second by working closely with the local stakeholders to resolve any misunderstandings. By involving authorities and stakeholders during important decision making, the actors became immersed with the project becoming critical players and active advocates of restoration.

4. Describe the involvement of local communities and how they have benefitted from the project.

The local community of Puerto Villamil has become key participants in the decision-making process and coral restoration activities. Through several outreach initiatives we have been able to involve the community and local stakeholders, providing a solid community base for the project. We have socialized the creation, expansion and implementation of restoration work with local fishermen, tourism operators and users of the bay area so they are not only informed but are actively involved in the decision-making process. For example, to decide the area for restoration we developed a round table conversation with tourism operators, fisherman and local authorities to define need and priorities and foster conflict resolution. This allowed for the identification of the best suited restoration areas, the identification of stressors and the definition of best management practices. We have created significant advancements in educating and creating awareness with the local community, especially with the local youth of Puerto Villamil. By partnering with the Galapagos National Park we managed to pilot several education campaigns aimed towards school children, where they got involved and learn through hands-on experience the coral gardening process and its importance in conservation. Through these outreach activities we have inspired local youth to get involved, some of which eventually became part of the coral restoration team. The active participatory involvement with the community has allowed us to share, train and enhance local marine stewardship in future generations.

5. Are there any plans to continue this work?

Yes. We plan to continue our valuable work and increase our restoration capacity. Our coral restoration efforts have proven highly successful which shows the potential for future implementation and scalability. We see restoration not only as a method to improve marine ecosystem health and services, but also as a potential driver for sustainable development in the local economy. In the future we aim to create an

environmental education program for the nursery to not only enhance our outreach activities but also further integrate the local community. By working closely with local tourism sectors and other key actors we hope to create sustainable business model around environmental education to maintain restoration work in the area, promote stewardship and raise awareness while enhancing the local economy.

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

Up until now we have shared the progress of our work through presentations and workshops to the Galapagos national park authorities, park guides, students, locals, school children and visitors. We have showcased our progress in symposiums and poster sessions and have even been interviewed in the local radio. Furthermore, we are currently working on a scientific research paper as well as a book chapter section which will be published in the near future.

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

There are several important areas that must be worked on. First and most importantly is the generation of a sustainable source of income. Our team has identified this as the essential factor to determine the projects survival and growth. In this sense we also believe that integrating a more robust education framework will be the perfect strategy to generate sustainable sources of income as well as fostering conservation of the restored area. Other possible next steps in the medium to long run would be the expansion of our restoration capacity and the diversification to other islands of the archipelago.

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

Yes, The Rufford Foundation was included in all the materials utilized during presentations and workshops. It was present in banners and posters, as well as in publications in social media. The Rufford Foundation was mentioned as our donor in all of our outreach activities.

9. Provide a full list of all the members of your team and their role in the project.

Nicolas Davalos – Project Leader
Margarita Brandt – Lead Scientist
Jose Barrios – Chief Coral Gardner
Karem Arreaga – Coral Monitoring Specialist
Jonathan Baquerizo – Coral Gardner

10. Any other comments?

Thank you for all your support!