DPLR1\1068

Darwin Plus Local - Final Report (1)

Officer: Linzi Ogden

Section 1 - Darwin Plus Local Project Information (Essential)

Project Reference Number

DPLR1\1068

Q1. Project Title

No Response

Overseas Territory(ies)

Montserrat

Lead Organisation or Individual

Island Solutions

Partner Organisation(s)

n/a

Value of Darwin Plus Local Grant Award

£38,741.00

Project Start Date

01 June 2023

Project End Date

10 April 2024

Project Leader Name

Andrew Myers

Project Website/Twitter/Blog etc.

No Response

Report Author(s)

Andrew Myers

Report Date

14 May 2024

Project Summary

No Response

Project Outcomes

Checked	Biodiversity: improving and conserving biodiversity, and slowing or reversing biodiversity loss and degradation;
Checked	Climate Change: responding to, mitigating and adapting to climate change and its effects on the natural environment and local communities;
Checked	Environmental quality: improving the condition and protection of the natural environment;
Checked	Capability and capacity building: enhancing the capacity within OTs, including through community engagement and awareness, to support the environment in the short- and long-term.

Section 2 - Project Outcomes (Essential)

On a scale of 1 (high – outcome substantially exceeded) to 5 (low – outcome substantially did not meet expectation), how successful do you think your project has been?

⊙ 2 - Outcome moderately exceeded

Project outcomes and justification for rating above

Our team feels our project, "Establishing a Video Survey Library Program for Montserrat's Coral Reef," met and moderately exceeded our project objectives. Details of each deliverable follows:

1. 20 high-definition video surveys will be produced – The project produced and replicated 4K video surveys at 10 different sites around Montserrat that documented fish and marine life and reef structure. Each survey site produced five (5) thirty (30) metre transect videos capturing the horizontal view of the reef. The timeline for the videos was adjusted slightly to capture the regionally occurring "bleaching" event and the first round of videos was able to capture the highly impactful and extensive stresses caused by the extreme high-water temperatures. The second round of videos was able to document the recovery or lack thereof by the reef. This unique, though sad event, was the first the team had experienced in their over 17 years in Montserrat. The video record of the reefs in the current state will be invaluable data for assessing increased stresses and the ability for the reef to recover and/or adapt from climate change.

2. An additional 20 surveys were produced that focused specifically on benthic habitat. The team documented an additional set of videos along the transects that captured the seafloor. From these videos a set of 20 photos

were captured from each survey which are being uploaded to both CoralNet and Reef Cloud; this is a total of 1589 benthic habitat photos. This data provides information on coral coverage, as well as, macro-algal coverage, sponge life, marine plants, and general structure. The data will be in the public domain for analysis and is currently being analysed by our team for classify each site's benthic habitat. This dataset was an additional information beyond the project's intended documentation.

3. Analysed data of the fish community – each site was analysed for fish abundance, diversity and richness, This dataset, unlike any previous survey efforts was able to capture reef life in a controlled assessment without distractions of data collection during the actual diving session.

4. Four (4) divers from the Government of Montserrat (GoM)/JNCC and youth dive team were trained on survey techniques and the general procedure of data analysis – A one (1) day training session was conducted for four (4) individuals. The training provided training on the equipment, use of the equipment, data collection procedures, securing data and an introduction to producing accurate fish counts. Please note multiple efforts were made to conduct a second training session however those GoM divers were never available for possible workshop dates. 5. A project outreach program – The project team produced a project video and held a public outreach event to explain the purpose and value of the program. The video has been uploaded to multiple social media platforms and cloud storage (available upon request).

Supporting Evidence - file(s) upload

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Supporting Evidence - links to published document/online materials

Project Challenges

The project did face multiple challenges, not unexpected.

1. Availability of trainees – As the GoM dive team consists of persons with full time jobs their availability was often limited. The project team had wanted to train more than the four persons but those persons were unavailable when an additional training session was proposed. This was an issue at times for data collection as well.

2. Weather and sea conditions – Given that the focus of the project was to collect data from the marine environment the conditions to access the sea must be acceptable and safe. Additionally, given the data collection required multiple people the marine conditions had to align with personnel availability. This was not unexpected but did require scheduling effort.

3. Equipment issues – Again this was not unexpected but the project team had to adjust data collection dates to address mechanical issues of boats.

4. Data analysis lead availability – The delivery of this final report was impacted by the delayed completion of the project data. The analysis was conducted by persons that had multiple other commitments that conflicted with preferred project timeline.

Lessons Learned

The project challenges will guide the project leaders in future projects.

1. Project support personnel – a goal of the project was to not only train but also regularly utilise multiple members of the GoM dive team. Though commitment was provided by department heads the reality was that these persons were often not available. Adjustments need to be made to ensure commitment to support and participate in a project. The team leaders used valuable time communicating and rescheduling to fit support team schedules.

2. Equipment issues – The lead organisation anticipated some issues and have purchased key operational equipment, in this project's case a boat, to avoid issues that can occur when hiring equipment outside the organisation. However, the unexpected can still happen so having back-up plans in place are essential.

3. Completion of supporting data took far longer than expected. We recognise that when using support personnel, we need to manage those resources far better and ensure that data analysis is conducted within stated timelines.

4. Expansion of datasets – By expanding the data collection to include seafloor videos the project created the most accurate/detailed data of benthic habitat on Montserrat's reefs. By using public domain resources these photos and videos can be compared in future surveys to gauge climate change impacts. This was a valuable and significant addition to the project and we were able to expand the training and allot for the time to conduct this additional work.

Section 3 - Project Finance (Essential)

Project Expenditure

(indicative) since last Annual Report	2023/24 Grant (£)	2023/24 Total actual Darwin Plus Costs (£)	Variance %	explain significant variances)
Project Spend				Comments (please

Consultancy Costs				
Overhead Costs				
Travel and Subsistence				
Operating Costs				
Capital Items				
Others				
Total	38,741.00	38,741.00	0	

Please provide a short narrative summary on project finances.

The project budget followed expected costs with only slight variance. Island Solutions provided significant in-kind labour costs coverage, as forecast in our application.

Section 4 - Contribution of Project to Darwin Plus Programme Objectives

Please select up to **one** indicator that applies within **each group/indicator list (A, B, C, D)** and report your results for that indicator in the text box underneath. If you do not have relevant results to report for any of the indicators in a particular group, you can leave them blank.

Please also submit some form of evidence (above) to demonstrate any results you list below, where possible.

Group A: Capability and Capacity - Core Darwin Plus Standard Indicators (select one)

Checked	DPLUS-A01: Number of people from key national and local stakeholder groups completing structured and relevant training.
Unchecked	DPLUS-A02: Number of secondments or placements completed by individuals of key local and national stakeholders.
Unchecked	DPLUS-A03: Number of local/national organisations with improved capability and capacity as a result of project.
Unchecked	DPLUS-A04: Number of people reporting that they are applying new capabilities (skills and knowledge) 6 (or more) months after training.

Group A Indicator Results

Four (4) people were trained on systems unfamiliar/unknown to them during the video survey training and data analysis workshop. All persons gained new knowledge and skills.

Group B: Policies, Practices and Management- Core Darwin Plus Standard Indicators (select one)

Unchecked	DPLUS-B01: Number of new/improved habitat management plans available and endorsed.
Unchecked	DPLUS-B02: Number of new/improved species management plans available and endorsed.
Unchecked	DPLUS-B03: Number of new/improved community management plans available and endorsed.
Unchecked	DPLUS-B04: Number of new/improved sustainable enterprises/ community benefits management plans available and endorsed.
Unchecked	DPLUS-B05: Number of people with increased participation in local communities / local management organisations (i.e., participation in Governance/citizen engagement).
Unchecked	DPLUS-B06: Number of Local Stakeholders and Local Communities (people) with strengthened (recognised/clarified) tenure and/or rights.

Group B Indicator Results

N/A

Group C: Evidence and Best Practices - Core Darwin Plus Standard Indicators (select one)

Unchecked	DPLUS-C01: Number of best practice guides and knowledge products published and endorsed.
Checked	DPLUS-C02: Number of new conservation or species stock assessments published.
Unchecked	DPLUS-C03: New assessments of habitat conservation action needs published.
Unchecked	DPLUS-C04: New assessments of community use of biodiversity resources published.

DPLUS-C05: Number of projects contributing data, insights, and case studies to national Unchecked Multilateral Environmental Agreements (MEAs) related reporting processes and calls for evidence.

Group C Indicator Results

The project produced two (2) sets of habitat assessment graphics for each site and one (1) summarised final report, developed one (1) reviewable habitat assessment video library and created one (1) photo database of benthic habitat with 1,589 photos.

Group D: Sustainable Benefits to People, Biodiversity and Climate -Core Darwin Plus Standard Indicators (select one)

Unchecked DPLUS-D01 Hectares of habitat under sustainable management practices.

Unchecked DPLUS-D02: Number of people whose disaster/climate resilience has been improved.

Unchecked **DPLUS-D03: Number of policies with biodiversity provisions that have been enacted or amended.**

Group D Indicator Results

N/A

Section 5 - Project Partnerships, Wider Impacts and Contributions

Project Partnerships

Government interaction

Though the Government of Montserrat was not a formal partner the project leaders have provided all project data to the relevant department heads and have offered summaries of data. Additionally, training was provided to 2 Government of Montserrat employees, including a member of the Fisheries Unit.

Community interaction

Again there were no formal partners but this project worked with the known certified and capable youth (still in school) scuba diver on this project. Our feeling was that by engaging with him it strengthened the access to the youth of Montserrat.

Wider Impacts and Decision Making

The data and assessments generated from this project have been provided to the key Government of Montserrat (GoM) departments of Agriculture and Environment. Island Solutions will continue to engage with the GoM on the results of the project and provide suggestions on how to implement protective measures and address impacts to the marine environment.

Sustainability and Legacy

The equipment, skills and video library will be maintained, with the intention and expectation to repeat surveys in 2-3 years. The cameras purchased through this project's will be used in our Darwin Local Round 3 mesophotic reef survey project.

The video library will be made public and access will be provided at all interested researchers. The benthic photo library will be further developed through Island Solutions staff for assessment. Those files are being uploaded to a research data repository.

Section 6 - Communications & Publicity

Exceptional Outcomes and Achievements

This project has developed an essential database to track the health of Montserrat's reefs in a way that can be seen and understood by the general public, government officials, and fellow researchers. This video library can easily be reassessed, and because of the use of videos the biases that occur by instant data collection have been removed. We feel that though there is a value in survey techniques such as Reef Check this video documentation format ensures that data is accurate.

The project report that we produced for this program was written to balance data analysis and understandable explanation for those who are not scientists. It provides a thorough explanation of current reef health and can be compared to other regional data.

This program continued the marine science and diving training program that was created for the Government of Montserrat through JNCC funding. Without our Darwin projects those divers would not still be active in that dive program.

Photo, video or graphic to be used for publicity and communications.

Please upload at least one relevant and engaging image, video or graphic that you consent to be used alongside the above text in Defra, JNCC or NIRAS communications material.

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- ₿ 30/06/2024
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Photo, video, and/or graphic captions and credits.

Project report-Montserrat reef surveys-Darwin Local-2023/24.pdf - This report summarises the work conducted in this project - Montserrat - credit Island Solutions

I agree for the Biodiversity Challenge Funds Secretariat, Administrator, and/or JNCC to publish the content of this section.

• Yes, I agree for the BCFs Secretariat and/or JNCC to publish the content of this section.

Please list any accounts that you would like tagged in online posts here. This can include project pages, partners' pages or individuals' accounts for any of the following platforms: LinkedIn, Facebook, Twitter, or Instagram.

Facebook - https://www.facebook.com/montserratreefproject - Island Solutions - Montserrat Reef Project

Scuba Montserrat Dive Shop - on Facebook and Instagram

Section 7 - Darwin Plus Contacts

Please tick here to confirm that you have read and acknowledge the BCF's Privacy Notice on how contact details will be used and stored and that you have sought agreement from anyone that you are sharing personal details with us on their behalf.

⊙ I confirm I have read the Privacy Notice and have consent to share the following contact details

Project Contact Details

Project Contact Name	Andrew Myers	
Role within Darwin Plus Project	Project manager	
Email		
Phone		
Do you need further sections to provide additional contact details?	⊙ No	