DPLR1\1034

Darwin Plus Local - Final Report (1)

Officer: Linzi Ogden

Section 1 - Darwin Plus Local Project Information (Essential)

Project Reference Number

DPLR1/1034

Q1. Project Title

No Response

Overseas Territory(ies)

☑ British Indian Ocean Territory (BIOT)

Lead Organisation or Individual

Zoological Society of London

Partner Organisation(s)

Zoological Society of London

Value of Darwin Plus Local Grant Award

£49,844.17

Project Start Date

01 June 2023

Project End Date

01 April 2024

Project Leader Name

Dr Claire Collins

Project Website/Twitter/Blog etc.

No Response

Report Author(s)

Claire Collins

Report Date

10 June 2024

Project Summary

No Response

Project Outcomes

Checked	**Biodiversity: improving and conserving biodiversity, and slowing or reversing biodiversity loss and degradation;**
Unchecked	**Climate Change: responding to, mitigating and adapting to climate change and its effects on the natural environment and local communities;**
Unchecked	**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

The project's overall aim was to improve community engagement with recreational fisheries sustainability to enhance data collection. This was important to understand their social importance and ecological impact. Key knowledge gaps existed, as no data pertaining to shore-based catches existed, aside from creel surveys carried out in 2018-2019, and there was minimal fisher engagement.

This project successfully built engagement with recreational fisheries by building a network of individuals who frequently fished and were willing to share data (e.g., the 'Recreational Fisheries Experts' (RFEs)) (Figure 1; RFEs with project t-shirts). By building relationships and trust with key figures within the fishing community, it facilitated informal exchange of information (Figure 2; fishing trip with RFEs) around shore-based fishing practices including co-development (with fishers) of a 'commonly caught DG fish' identification sheet (Figure 3; ID card in a contractor's room).
The first data collection on shore-based fisheries was initiated through this project, leading to 82 data points on fish caught submitted by 'RFEs' over a four-month period (Link 1; instructions handed out to RFEs) (exceeding 3-

month period identified in proposal). Only ten experts were recruited primarily due to limited fieldwork time and poor weather (not meeting target of 25). However, these data provide the most comprehensive understanding of shore-based fisheries within the last two decades along with data from Darwin project DPR9S2\1015 (Figure 4; example of submission of data by RFEs. This project assisted completion of data collection under this DPR9S2\1015 also through building the network of RFEs.

Increased engagement with science and management of recreational fisheries was also generated through social events including recruitment and training days (Figure 5; recruitment and training events for RFEs) and activities such as bingo nights (Figure 6; social event in contractor village). These events helped build trust around discussions of recreational fishing practices and were attended by 167 people from April to November 2023 (exceeding the goal of 150 attendees).

Through the project it was identified that groups were engaging differently with volunteering activities, and we designed a survey to explore, a) motivations for engagement, and b) levels of engagement. Likert-scale statements were developed based on existing theory and literature and barriers identified through fieldwork and included in a 'volunteer survey', comprised of 27 questions (25 closed and 2 open), including the 22 Likert-scale statements. Overall, 65 surveys were completed and showed that contractors had only engaged in 1.2 ± 0.8 volunteering events compared to British military (2.2 ± 1.2), followed by American military (1.6 ± 1.3). Findings suggest values, e.g., personal morals or values attached to environmental stewardship or care for others, strongly motivate engagement for all (Figure 7) but that social and protective motivations were much stronger for contractors, e.g., volunteering to relieve boredom or stress and because it was a social occasion (Figure 8). These data can be used to model future engagement on DG and will be widely disseminated. For example, a peer-review paper is currently in preparation, entitled "Motivations for engagement with science and conservation on remote island systems".

Supporting Evidence - file(s) upload

Figure 8
24/05/2024
10:10:27
pdf 589.28 KB

Figure 7
24/05/2024
10:02:42
pdf 693.02 KB

Figure 6
24/05/2024
10:01:19
pdf 284.33 KB

Figure 5
24/05/2024
09:46:07
pdf 258.09 KB

Figure 4
24/05/2024
09:44:41
pdf 263.77 KB

Figure 3
24/05/2024
09:40:46
pdf 189.07 KB

Figure 2
24/05/2024
09:39:35
pdf 192.14 KB

Figure 1
24/05/2024
09:37:12
pdf 214.99 KB

Supporting Evidence - links to published document/online materials

[REDACTED]

Project Challenges

Throughout the project it was identified that data collection around shore-based fisheries was sensitive for some fishers as they were worried about repercussions for revealing any illegal behaviours (e.g., such as catching undersized fish). This was somewhat anticipated through previous fieldwork however, there were additional issues generated by elevated discussions around management regime changes in 2023. Therefore, considerable effort was put into building relationships and trust before recruitment of RFEs could commence.

Due to high costs associated with staying on BIOT (~$95 per night), a switch in flight schedules due to elevated military action, the absence of existing infrastructure and human resources to support projects, total fieldwork time was ~5 weeks only. This necessitated building trust, relationships and conducting training and monitoring of data input in a short space of time which can be problematic in generating long-term results. During fieldwork in November (4 weeks), weather conditions also prevented the project team from running complimentary fishing trips to recruit new and reward existing RFEs. Plans were adapted so more social events were run and a training and recruitment event was run using shore-based caught fish. In addition, a fishing trip was booked for experts when the project team were not on-island as an incentive.

Owing to previously identified concerns about timeframe and trust-building, data were collected only over a 4-month period. This exceeded project aims (3 months) but highlighted issues with sustaining engagement in the scheme via virtual communication only.

Lessons Learned

In terms of data collection, using social media ('Facebook') suited fishers as they regularly use the site, including to send or post catch pictures. However, it is resource-heavy in the long-term as individual records need to be accessed, verified and then input. Future projects or initiatives around data collection could seek to develop an app for offline use that would automatically collate data but could still be accessed via fishers' phones.

In terms of outreach, running large events within spaces that contractors regularly use generated impressive engagement and received good feedback. Similar events, that have been co-developed with the contractor community and have a variety of relevant incentives are highly recommended for future projects. Due to weather preventing group fishing trips, these events were relied on more heavily than expected and more events like this would have been planned if we repeated this project.

In terms of generating longer-term engagement with data collection, community experts are highly recommended. Feedback was that RFEs felt empowered to be recognised for their expert knowledge. Ways in which key community individuals can be meaningfully engaged in future environmental projects is also highly recommended. However, ideally this would be supported by a consistent engagement between fishers and environmental staff who are on-island.

Section 3 - Project Finance (Essential)

Project Expenditure

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

Operating Costs			
Capital Items			
Others			
Total	49,844.17	49,843.00	0.002%

Please provide a short narrative summary on project finances.

Overall, project finances are reconciled with a very small variation. There was considerable overspend on travel and subsistence which primarily reflects the reliance on military accommodation and flights for fieldwork on Diego Garcia, which are subject to availability and price changes. Wherever possible, money is saved by travelling by boat to island however, that is only possible very rarely and is subject to availability. Considerable cost savings were made to accommodate this by ensuring money spent under this grant and DPLUS127 was coordinated to maximise returns in terms of data collection and building relationship and trust with fishers. Money allocated for staffing and salary was maximised by engaging a PGRA with experience working on Diego Garcia and who can contribute to high-quality outputs, including a peer-review paper that is in preparation.

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.**
Unchecked	**DPLUS-A05: Number of trainers trained reporting to have delivered further training by the end of the project.**

Group A Indicator Results

Overall, 10 recreational fisheries experts were trained comprehensively in data collection and input including species identification, collecting biometric data and complication of accurate species recording. In addition, Environmental Officers (n=2) were trained in biometric recording and species identification. Broader events trained >50 people on data collection and species identification.

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

Checked	**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

Results will input to new fisheries management plans, including supporting changes in policy, through input of data on shore-based recreational fisheries take and effort.

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

Checked	**DPLUS-C01: Number of best practice guides and knowledge products published and endorsed.**
Unchecked	**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.**
Unchecked	**DPLUS-C05: Number of projects contributing data, insights, and case studies to national Multilateral Environmental Agreements (MEAs) related reporting processes and calls for evidence.**

Group C Indicator Results

Species identification guides, including regionally-relevant fish pictures and Tagalog translations used by shore-based fishers, were published and widely distributed. A peer-review publication of motivations for volunteering and engagement will be submitted by July 2024.

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

Group D Indicator Results

Project data will feed into adaptations for recreational fisheries management and policy.

Section 5 - Project Partnerships, Wider Impacts and Contributions

Project Partnerships

The project team from IOZ were the leads for this project and implemented all activities however, they had close engagement with informal partners, the BIOT Administration (BIOTA). This was primarily during fieldwork in October 2023 where IOZ staff worked closely with the on-island Environmental Officers (EO). This included them attending and participating in training, recruitment and social events with fishers. In addition, the project coincided with a recommendation by the chief science advisor (Dr Mark Spalding) for a review of recreational fisheries management. Therefore, the EO leading this work was able to attend a variety of project events and activities to familiarise themselves with fishing practice, target species and perceptions of a wide range of stakeholders around recreational fisheries.

The engagement of local communities in the form of fishers was central to this project and included ways previously described including central role as data collectors, co-development of outreach and engagement events and through informal exchange of knowledge around fisheries and their management. This was facilitated through engagement of key informants and designing activities around fishers interests and normal practices.

Wider Impacts and Decision Making

Outputs from this project will hopefully contribute to an ongoing review of recreational fisheries management and policy by contributing data on fisheries take and effort. In addition, it has helped to understand how to enhance engagement with fishers around science and conservation. For example, by collecting data around volunteering needs and motivations it can help to design events for fishers. Through trialling the first data collection scheme that used relationship building, incentives and building a network of fishers, it has identified key lessons for improving data collection that can be incorporated into design of future management.

Hopefully, the project also highlighted to wider project partners and fishers themselves, the importance of integrating fisher opinions and thoughts in co-development of management and policy. Existing policy and decision-making is entirely top-down and there is little training around rules for fishers, meaning that fishers felt disengaged with fisheries management. By trialling engagement methods and empowering fishers to understand their knowledge and experience is the best asset for understanding fisheries, this project has hopefully contributed to future positive change.

Sustainability and Legacy

The project enabled the project team to build a social communication network with key community individuals on Diego Garcia and also trialled and successful run engagement events that were aimed at engaging the contractor community which are often not engaged with environmental events. As a result, it has created a community-engagement model that has been referenced and will be used in future projects, including DPLR_003 and DPLR_001.

The weights and measures used for collecting data by the RFEs remained on-island and continue to be used by the fishers to weigh and measure their catches. Enforcement staff said the use of these would be crucial if there were suggested changes to take limits that adopt a maximum total weight for fish catches. Therefore, there is resources to support these management changes. In addition, it has created familiarity with using these tools to ensure recommended minimum landing sizes are adhered to as well as giving fishers the equipment to measure their catches.

Section 6 - Communications & Publicity

Exceptional Outcomes and Achievements

This Darwin Plus Local project widened engagement around recreational fisheries on Diego Garcia, British Indian Ocean Territory by recruiting 'Recreational Fisheries Experts' who collected biometric data on fish caught in shore-based fisheries. This voluntary scheme saw fishers use social media to submit data on their catches, some of the first data on species and related biometrics collected for the shore-based fisheries in decades. It highlighted the depth of knowledge amongst recreational fishers and importance of improving voluntary engagement with management of these fisheries.

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.

⤓ Figure 1	⤓ Example_datacollection
📅 24/05/2024	📅 24/05/2024
🕐 16:10:39	🕐 16:03:53
📄 jpg 110.24 KB	📄 jpg 337.37 KB

Photo, video, and/or graphic captions and credits.

Figure 1. Recreational fisheries expert weighing their shore based catch in Diego Garcia

Figure 2. Example data collection: biometric data sheet completed by one of our recreational fisheries experts

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.
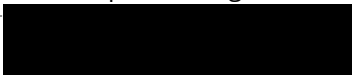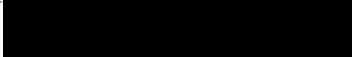
Twitter: @clairesjcollins and @ZSLMarine

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	Dr Claire Collins
Role within Darwin Plus Project	Principal Investigator
Email	█████████████
Phone	█████████████
Do you need further sections to provide additional contact details?	⊙ No