

# DPLR1\1041

Darwin Plus Local - Final Report (1)

Officer: Linzi Ogden

## Section 1 - Darwin Plus Local Project Information (Essential)

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### Project Reference Number

DPL00021

### Q1. Project Title

*No Response*

### Overseas Territory(ies)

Anguilla

### Lead Organisation or Individual

Anguilla National Trust

### Partner Organisation(s)

UK Centre for Ecology and Hydrology

### Value of Darwin Plus Local Grant Award

██████████

### Project Start Date

15 April 2023

### Project End Date

31 March 2024

### Project Leader Name

Farah Mukhida

### Project Website/Twitter/Blog etc.

*No Response*

### Report Author(s)

## Report Date

01 May 2024

## Project Summary

*No Response*

## Project Outcomes

Checked	<b>Biodiversity: improving and conserving biodiversity, and slowing or reversing biodiversity loss and degradation;</b>
Unchecked	<b>Climate Change: responding to, mitigating and adapting to climate change and its effects on the natural environment and local communities;</b>
Unchecked	<b>Environmental quality: improving the condition and protection of the natural environment;</b>
Checked	<b>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.</b>

## 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 objective of this project was to streamline environmental data collection, management and decision-making through the development and application of digital data collection tools, Over the last year, we successfully implemented all four components of this project

With the UKCEH, an on-line data portal, iRecord AXATrust was created (Evidence 1). This portal acts as the hub for all of the biodiversity data that the ANT currently holds and collects. This portal integrates with a mobile app for paperless data collection in the field (Evidence 2 & 3).

Post-project, with the training we received and with continued commitment of support from the UKCEH), we are in a strong position to continue to enhance the data portal and create the online/off-line frameworks to support biodiversity data collection as we may need.

Collecting data using our newly-created app has saved an incredible amount of staff time: staff no longer need to manually upload data to Access databases. Beyond the app, however, we also recognise how powerful the portal is in terms of not only storing data but in analysing and presenting data as well, particularly considering its link to open-source GIS software. we have already been taking advantage of with a major rodent eradication





programme that we are currently conducting at Fountain National Park (DPLUS158).

The second component of this project, with assistance from Guadeloupe-based AquaSearch and using open-source AI software (Intelligent Individual Software, I3S), we have created an AI-informed database (Evidence 4) of all Lesser Antillean iguanas that we have encountered and photographed within the Prickly Pear Lesser Antillean iguana sanctuary. Using this newly established database, we are now in a position to cross-check all newly photographed individuals with images of individuals that we already have in the database. This AI system will enable us to monitor breeding, survival and population trends over time using less invasive and time-intensive methods.

The third component of this project through our collaboration with Marine Spatial Information Solutions, enabled us to purchase a DJI Air2S drone and to host an intensive one-week drone deployment course (Evidence 5). Through the training, we have so far captured images of three priority sites. With our field season starting in May, we will be trailing the use of the drone to capture seabird and sea turtle nesting activity and monitor change in landscapes post-eradication on all restored offshore cays and Protected Areas

Finally, through this project and working with the British Trust for Ornithology and Guadeloupe-based Ardops Environnement, we have created a bat call classifier for bat species found within the Anguilla Bank (Evidence 6). As an added benefit, we can also use the passive acoustic stations and the BTO classifier to pick up and identify rat vocalizations which will support our biosecurity work. Through this work, we were able to record a new bat species for Anguilla: greater bulldog bat *Noctilio leporinus*. This is an exciting find for Anguilla and we will work with our collaborators to formally document and share these results.

## Supporting Evidence - file(s) upload

-  [DPL00021 - Evidence and Supporting Materials - 042024](#)
-  01/05/2024
-  14:05:17
-  docx 17.49 KB

## Supporting Evidence - links to published document/online materials

Supporting evidence, including to documents and online materials have been uploaded above (links provided to files saved in box.com folders).

## Project Challenges

We were fortunate to not have encountered any significant problems during the implementation of this project: the project was implemented as expected, on time and within budget.

## Lessons Learned

This project comprised 4 distinct components. While all have been extremely valuable, we recognise that the development of the iRecord AXATrust system was substantial enough that it could have been a project in and of its own. With available funding, UKCEH was able to take advantage of system frameworks already developed and built on that framework to make the mobile app system fit for ANT purpose. At the same time, we also recognised that by working within existing frameworks, some of what we would have liked to have accomplished (for example, wetland bird monitoring/survey form) was not possible due to the complexity of the work and the survey forms and how the data is collected. With additional funding, we would have been able to develop the additional coding required to support our more complex survey forms.

At the same time, although we may not be able to use the app to collect some data, the portal has been created to still accept that data – meaning that we can still upload both historical and new data to the portal. making it far more accessible and usable.

Following this project, we note that there may be opportunity for scaling up and expanding the iRecord system to other agencies and Territories and following an end-of-project webinar attended by representatives from across the UKOTs, this is something we are currently exploring with the UKCEH, and have been sharing experiences with the St Helena Biological Record Centre which has been very valuable.

## 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)
<b>Staff Costs</b>	██████████	██████████	0	<i>No Response</i>
<b>Consultancy Costs</b>	██████████	██████████	0	<i>No Response</i>
<b>Overhead Costs</b>	██████████	██████████	0	<i>No Response</i>
<b>Travel and Subsistence</b>	██████████	██████████	█	<i>No Response</i>
<b>Operating Costs</b>	██████████	██████████	█	<i>No Response</i>
<b>Capital Items</b>	██████████	██████████	█	<i>No Response</i>
<b>Others</b>	£0.00	£0.00	0	<i>No Response</i>
<b>Total</b>	██████████	██████████	█	

### Please provide a short narrative summary on project finances.

There were no major variances in project expenditure, although we did slightly overspend in travel and subsistence, particularly related to flight costs for the UKCEH, with an underestimation of the cost of travel between what we projected in our application to actual cost.

Co-financing was secured for the project, including ANT staff time, contracting Marine Spatial Information Solutions, additional travel costs for UKCEH to conduct in-person training, and data portal and app training workshop expenses (catering).

## 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	<b>DPLUS-A01: Number of people from key national and local stakeholder groups completing structured and relevant training.</b>
Unchecked	<b>DPLUS-A02: Number of secondments or placements completed by individuals of key local and national stakeholders.</b>
Unchecked	<b>DPLUS-A03: Number of local/national organisations with improved capability and capacity as a result of project.</b>
Unchecked	<b>DPLUS-A04: Number of people reporting that they are applying new capabilities (skills and knowledge) 6 (or more) months after training.</b>
Unchecked	<b>DPLUS-A05: Number of trainers trained reporting to have delivered further training by the end of the project.</b>

## Group A Indicator Results

6 individuals from key national stakeholder groups completed structured and relevant training.

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

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

## 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.**

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Unchecked **DPLUS-C02: Number of new conservation or species stock assessments published.**

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Unchecked **DPLUS-C03: New assessments of habitat conservation action needs published.**

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Unchecked **DPLUS-C04: New assessments of community use of biodiversity resources published.**

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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.**

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## Group C Indicator Results

n/a

## 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.**

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

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

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## Group D Indicator Results

n/a

## Section 5 - Project Partnerships, Wider Impacts and Contributions

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### Project Partnerships

The UKCEH was a formal partner on this project and led on the development of the web-based data portal and the mobile application. In addition to building the portal, the app framework, and five priority mobile app survey forms, UKCEH also facilitated a one-week, in-person practical training workshop which included training five ANT staff in how to upload historical data to the portal, how to manage and analyse data on the portal, how to use

the app in the field and upload data once connected to WIFI, how to create new app survey forms, and how to troubleshoot portal- and app-related problems/issues.

Other technical specialists who have assisted with this project included Nathalie Duporge of AquaSearch (Gaudeloupe) who introduced and trained staff in the application of I3S iguana facial recognition software. Dr Kimberly Baldwin of MarSIS trained four ANT staff and one Department of Disaster Management staff in drone deployment and the application of drones in biodiversity conservation. BTO and Ardops Environnement worked with us to create an Anguilla Bank bat classifier which supports our work to better understand bat species diversity and distribution, the identification of important roosting and foraging grounds.

We also presented results and lessons learned regarding our bat acoustic work to a national audience (in-person), while virtual presentations (with audiences from Anguilla and other UKOTs) were held regarding the value of drones to support biodiversity conservation and disaster risk reduction, the iRecord portal and app, and the project in general, reaching a total of 167 individuals.

## Wider Impacts and Decision Making

This project has increased ANT (and national) capacity to embed biodiversity data into decision-making. Two examples of this impact include:

1. The data portal increases accessibility of data and with data analysis and GIS software integrated into the portal, basic data analysis (e.g., diversity, density, distribution) is possible directly on the portal. Data, however, can also be exported for use on other software programmes (Excel, ArcGis, R) for more complex analysis. We have already been using the portal (and the data we have uploaded to it through the mobile app) to monitor progress of our rodent eradication work at Fountain National Park, monitoring change in the amount of bait take over time as well as hotspots in bait take, thereby helping us to identify areas where bait may need to be more concentrated (e.g. a cave).
2. Our drone deployment training was immediately put to use at the end of the week-long training workshop. Training in drone deployment took place just before Hurricane Tammy passed over Anguilla. While the hurricane was relatively weak (Category 1), heavy and sustained rainfall led to a significant landslide in a populated area. With Kimberly on-island, newly trained Department of Disaster Management staff and Kimberly were able to assist the Department of Search and Rescue (DSR) in damage assessments, flying drones and capturing images of the extent of damage and actual and potential impact area. Data was shared with DSR and the area impact area was subsequently closed to the public due to safety concerns.

## Sustainability and Legacy

The continued benefits of this project are built into the continued application of knowledge, skills, and tools. While the funding may have ceased, the work is only just starting. The data portal and app now represent the main mechanism for data collection and storage for ANT. The partnership with UKCEH also led to the UKCEH successfully submitting a Darwin Plus main proposal, in collaboration with the ANT, to pilot AI devices to detect and identify moths and butterflies at priority sites across Anguilla. The partnership also led to the expansion of the UKCEH's Flower-Insect-Timed survey mobile app to include Anguilla, supporting the ANT's Darwin Plus funded project A 'B-Line' to Re-wilding: the Anguilla Pollinator Project (DPLUS131).

We are using the AI software to identify individual iguana that we are able to photograph and this software will be used as part of our newly-funded DPLUS Main project (DPLUS211) for more efficient monitoring.

We have used our newly acquired drone and training to take aerial images of a priority site (adjacent to one of Anguilla's most important sea turtle nesting sites on the mainland) and to support our fundraising efforts.

Next month (May 2024), we will also be launching a citizen science initiative focusing on island-wide deployment of bat acoustic stations, based on the grid system developed by BTO, and will be applying the classifier in-house to identify species and overlaying distribution with habitat type.

## Section 6 - Communications & Publicity


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## Exceptional Outcomes and Achievements


n/a


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.

 [DPL00021 - Evidence and Supporting Materials -](#)

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

n/a

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.

Anguilla National Trust.

Facebook: @axatrust

Instragram: @axatrust



Linkln: Anguilla National Trust

## 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	Farah Mukhida
Role within Darwin Plus Project	Project Lead
Email	
Phone	



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**Do you need further sections to provide additional contact details?**

No

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