Biodiversity Challenge Funds Projects
Darwin Initiative, Illegal Wildlife Trade Challenge Fund, and Darwin Plus

Half Year Report

It is expected that this report will be a **maximum of 2-3 pages** in length.

If there is any confidential information within the report that you do not wish to be shared on our website, please ensure you clearly highlight this.

Submission Deadline: 31st October 2024

Please note all projects that were active before 1 October 2024 are required to complete a Half Year Report.

Submit to: BCF-Reports@niras.com including your project ref in the subject line.

Project reference	DPLUS210
Project title	Harnessing AI to prevent biodiversity loss in Anguilla
Country(ies)/territory(ies)	Anguilla
Lead Organisation	Re:wild
Partner(s)	Anguilla National Trust (ANT), Department of Natural Resources-Environment Unit (DNR-EU), Royal Society for the Protection of Birds (RSPB), Fauna & Flora, RESOLVE.
Project leader	Dr Jenny Daltry
Report date and number (e.g. HYR1)	HYR1
Project website/blog/social media	

1. Outline progress over the last 6 months (April – September) against the agreed project implementation timetable (if your project started less than 6 months ago, please report on the period since start up to end of September).
Although we are not looking for specific reporting against your indicators, please use this opportunity to consider the appropriateness of your M&E systems (are your indicators still relevant, can you report against any Standard Indicators, do your assumptions still hold true?). The guidance can be found on the resources page of the relevant fund website.
The project is on largely on track and has made some significant progress, especially with regard to software and hardware design and production: **Output 1   Biosecurity systems are established and proven to help prevent incursions by at least 10 priority invasive alien species in five biodiversity conservation sites in Anguilla** 1.1 Develop AI software to recognise ≥10 priority IAS including inter alia rats, mice, cats, dogs, green iguanas, mongooses and goats. *Underway.* A series of online meetings was held by RESOLVE, Re:wild, Anguilla National Trust (ANT) and other partners to guide the software designers on the preferred features for the new

technology. For example, the most important invasive alien species to target, whether the cameras will relay all or only the first images of any invasive species, and whether to send routine notifications to verify that remote cameras are still functioning even if no aliens have been reported. Re:wild and ANT also compiled numerous images of many of the target species that are being used to train the software.

Considerable work has also been carried out by RESOLVE on hardware and software design and production. Ita new camera-alert system is now in full scale production in India and is being deployed in multiple regions to successfully provide real-time alerts for the purposes of wildlife monitoring and preventing human-wildlife conflict (although this Darwin Plus project will be the first to apply the new camera system to detecting invasive alien species). An integrated dashboard is now available for users to receive alerts and manage deployed camera units remotely in the field, with additional Artificial Intelligence (AI) processing capabilities to improve classification and analysis. Considerable advances were also made to optimize the satellite protocol to improve the reliability and efficiency of transmitting alerts from the remote field.

1.2 Install and operate AI cameras and peripherals in priority conservation sites (five) and experimental control sites, which communicate with ANT staff smartphones. *Not yet.*

The cameras have been manufactured and the first five are expected to arrive in Anguilla in Q3 for the first round of field trials. To train the AI software to detect invasive alien predators that are not yet present in Anguilla but occur on neighbouring islands, at least one camera will be tested in Barbados (where Re:wild's Caribbean Programme Officer lives) before being moved to Anguilla. Barbados has an exceptionally high density of invasive alien animals, including mongooses, making it an ideal location for such testing.

1.3 Conduct monthly inspections of the same sites (1.2) for invasive species using manual methods, including bait stations, tracking tunnels and traps. *Underway.*

Biosecurity checks have been undertaken as planned by trained ANT staff in Fountain National Park (four times during the reporting period), Prickly Pear East and West, Dog Island, and Sombrero Island (once each). Based on careful inspections of permanent bait stations and searches for signs, no evidence was found of any target invasive species on any of these restored sites.

1.4 Monitor changes in abundance of threatened native reptiles, plants and birds on project sites against baselines established under previous DPLUS and other projects. *Underway.*

During this reporting period, we focused biodiversity monitoring efforts on Sombrero Island. In June, ANT and Re:wild staff conducted a mark-resight survey on the Critically Endangered Sombrero ground lizard *Pholidoscelis corvinus*: the first population survey since invasive rodents were successfully eradicated in 2021 (DPLUS086). The results are astounding: the total population of ground lizards is now estimated at 1,660±82 individuals; almost double the 2021 estimates of 884±103 individuals, and a more than six-fold increase from only 253±59 individuals in 2019. The Sombrero ground lizard population has excellent prospects for further growth as long as the island is kept free from mice, rats and other invasive alien predators. ANT also placed a passive acoustic station on Sombrero and, for the first time, confirmed the presence of bats: specifically Jamaican fruit bats *Artibeus jamaicensis*, velvety free-tailed bats *Molossus molossus*, and Antillean fruit-eating bats *Brachyphylla cavernarum*.

1.5 Review and update biosecurity plans and protocols for Prickly Pear Cays, Dog, Sombrero and Fountain National Park, incorporating the new AI camera network. *Underway.*

Although this activity is not scheduled to be completed until Year 2, we took the opportunity to arrange a two-week visit from invasive species specialists Peter Haverson (an independent consultant from the UK who previously worked with the Project Leader on the successful Redonda Restoration Programme, Darwin Initiative #22-003, in Antigua & Barbuda) and Justin Springer (Re:wild's Caribbean Programme Officer) to assess and advise on two invasive mammals of rising concern. Mr Haverson and Mr Springer met with DNR-EU and ANT and have drafted reports on their findings and recommendations, which will be incorporated into the biosecurity plans and protocols.

Output 2   National capability to manage invasive species threats is raised, supported by the new AI technology, enhanced technical skills and stakeholder collaboration.

2.1 Conduct, and agree actions on findings of, Gender and Social Inclusion Assessment of Anguilla National Trust (ANT) *Postponed to Q3.*

A qualified local consultant has been identified and will be contracted to conduct the study in Q3.

2.2 Plan, undertake and evaluate training and mentoring of ANT staff and other practitioners on how to set up, operate and manage data from AI cameras. *Underway.*

In the planning stage, with training to commence when the first cameras arrive in Q3.

2.3 Meet landowners, tourism operators and other stakeholders to explain the cameras and solicit cooperation for biosecurity on Prickly Pears, Dog, Sombrero and Fountain National Park. *Underway.*

Local partners have initiated conversations with the owners of the Prickly Pear Cays and met with the Premier of Anguilla to provide an update on the project, including proposed biosecurity protocols for the Crown-owned Sombrero Island and Fountain National Park.

2.4 Facilitate development and signing of an MoU between RESOLVE and Anguilla National Trust to provide ongoing technical support during and after the project. *Scheduled for Y2*

Output 3   Methods and lessons learned from this project are shared and discussed with other biodiversity-rich islands, including the UK and UKOTs.

3.1 Hold in-person workshop and field trip for ≥10 practitioners from other Caribbean UKOTs to demonstrate, teach and discuss the use of AI technology in biosecurity. *Scheduled for Y2.*

3.2 Hold webinar for ≥30 practitioners from UK and UKOTs to share and discuss the AI technology and biosecurity solutions. *Scheduled for Y2.*

3.3 Produce and disseminate a best practice guide and support videos on use of AI cameras for island biosecurity. *Scheduled for Y2.*

3.4 Prepare and submit paper on project methods and findings to a peer reviewed, open access journal. *Scheduled for Y2.*

2. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

The project had a slightly delayed start. The amended award letter was received in mid-May 2024 and spending was relatively slow through Q1 and Q2 while the team focused on planning, issuing agreements, and manufacturing the first cameras. Spending will ramp up through Q3 and Q4 with the purchase, testing and instalment of the first cameras, the Gender and Social Inclusion Assessment of ANT, and other activities described in the work plan.

3. Have any of these issues been discussed with NIRAS and if so, have changes been made to the original agreement?

Discussed with NIRAS:	~~Yes/~~ No
Formal Change Request submitted:	~~Yes/~~ No
Received confirmation of change acceptance:	~~Yes/~~ No

Change Request reference if known: *If you submitted a financial Change Request, you can find the reference in the email from NIRAS confirming the outcome*

4a. Please confirm your actual spend in this financial year to date (i.e. from 1 April 2024 – 30 September 2024)

Actual spend:

4b. Do you currently expect to have any significant (e.g. more than £5,000) underspend in your budget for this financial year (ending 31 March 2025)?

Yes ☐   **No** ☒

4c. If you expect and underspend, then you should consider your project budget needs carefully. Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project, please submit a re-budget Change Request as soon as possible. There is no guarantee that Defra will agree a re-budget so please ensure you have enough time to make appropriate changes to your project if necessary. Please DO NOT send these in the same email as your report.

NB: if you expect an underspend, do not claim anything more than you expect to spend this financial year.

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5. Are there any other issues you wish to raise relating to the project or to BCF management, monitoring, or financial procedures?

Re:wild is very pleased to have newly recruited Ms Nicole Simonelli as full-time Government Grants Manager. Having worked on Darwin Initiative projects in previous roles, Ms Simonelli is ideally placed to assist the project team with ensuring compliance with BCF requirements. Because her appointment removes the need for this project to find an external Financial Management Compliance Consultant, Re:wild will submit a formal Change Request shortly to request for that consultancy budget line to reallocated accordingly.

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6. Please use this section to respond to any feedback provided when your project was confirmed, or from your most recent annual report. If your project was subject to an Overseas Security and Justice Assistance assessment please use this space to comment on any changes to international human rights risks, and to address any additional mitigations outlined in your offer letters. Please provide the comment and then your response. If you have already provided a response, please confirm when.

N/A

Checklist for submission

For New Projects (i.e. starting after 1st April 2024)

Have you **responded to any additional feedback** (other than caveats) received in the letter you received to say your application was successful which requested response at HYR (including safeguarding points)? You should respond in section 6, annexes other requested materials as appropriate.	Yes
If not already submitted, have you attached your **risk register**?	Yes

For Existing Projects (i.e. started before 1st April 2024)

Have you responded to **feedback from your latest Annual Report Review?** You should respond in section 6, annexes other requested materials as appropriate.	

For All Projects

Include your **project reference** in the subject line of submission email.	Yes
Submit to **BCFs-Report@niras.com**.	Yes
Have you **clearly highlighted any confidential information** within the report that you do not wish to be shared on our website?	Yes
Have you reported against the most **up to date information for your project?**	Yes
Please ensure claim forms and other communications for your project are not included with this report.	Yes