

Darwin Initiative Main/Post/D+ Project Half Year Report (due 31st October 2017)

Project reference	23-003
Project title	Eradicating invasive species from the highest priority Caribbean island
Country(ies)/territory(ies)	Antigua and Barbuda (with Montserrat)
Lead organisation	Fauna & Flora International
Partner(s)	Department of Environment (Government of Antigua and Barbuda), Environmental Awareness Group, British Mountaineering Council, Wildlife Management International Ltd.
Project leader	Dr Jenny Daltry
Report date and number	HYR2
Project website/blog/social media etc.	In progress

1. Outline progress over the last 6 months (April – Sept) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up to end September).

The project is on track and continued to make good progress against the planned outputs in Year 2, despite the unusually active hurricane season. Below is an update on progress against the agreed timetable, focusing on activities scheduled to take place in Q1 and Q2:

Output 1 Alien invasive vertebrates (rats and goats) successfully removed from Redonda, with systems in place to prevent (re)invasions

1.2 Capture and transfer goats from Redonda to enclosed government farmland on Antigua (COMPLETED) The operation to remove the feral goats—alive where possible—began in Year 1 under the direction of Peter Haverson, a livestock and animal control expert from the UK. Captured goats were translocated to Antigua, where most of them are housed at a new facility, built by the government's Veterinary & Livestock Division, to conserve and study this unusual breed. A second, smaller group is housed at a veterinary clinic on Antigua. Animals that could not be moved (e.g. old males in obviously poor health) were humanely shot, with government permission. In Year 2, Q1 Mr Haverson removed the last three individuals detected on the island. Subsequent surveys failed to find any goats left on the island.

1.4 Establish biosecurity surveillance system to prevent incursions, and monitor Redonda every 2 months to verify no invasive vertebrates remain (ONGOING) The project has established a biosecurity system for Redonda that encompasses all three key elements of biosecurity: prevention, detection and response. Thirty-nine permanent bait stations were installed on Redonda at the end of Year 1 to detect and kill rodents, and these have been checked and when necessary replenished at least once a quarter (and whenever the project team travels to Redonda for any other purpose). Other aspects of the biosecurity system were devised during a stakeholder workshop in August, including securing an agreement from Caribbean Helicopters Ltd to quarantine equipment and screen their helicopters and passengers to help prevent possible non-native seeds, insects and other organisms from reaching Redonda. The two-day workshop also educated stakeholders about how invasive species can travel to and endanger island ecosystems. Fortunately, because the island is remote and difficult to access, we could identify only a few—and mostly very controllable—pathways by which invasive species could arrive.

1.5 Publish technical report(s) detailing the methods, results and any lessons learned from Output 1 (UNDERWAY) The final technical report on the goat removal operation was produced and is undergoing final reviews by FFI's partners. An interim report on the rat eradication operation was also produced in Q1 and the final report is nearing completion. Illustrated progress reports were disseminated to the Steering Committee members and other interested stakeholders at least once a month, highlighting the challenges and lessons learned.

Output 2 Monitoring system established to measure the responses of fauna, flora and ecological processes to the removal of alien invasive vertebrates

2.1 Project scientists design and agree standardised methods to monitor birds, reptiles, bats, invertebrates, plants, soil and microclimate (COMPLETED) The project monitoring manual will continue to be tested, reviewed and improved throughout Year 2. As noted previously, we have expanded the scope of the monitoring programme to include the surrounding marine life.

2.2 Conduct monitoring as per 2.1 during the grant period (before and after removing the goats and rats) (UNDERWAY) During the reporting period, FFI, EAG and Government personnel and students conducted several trips to monitor birds (transects for seabirds and point counts for land birds), reptiles (point counts) and plants (fixed point photos and permanent quadrats). Because Year 1 had been very hectic, we also spent Q1 and Q2 catching up with processing data from the baseline monitoring in Year 1 and collating a reference collection of invertebrates and lichens (using specimens) and a photographic library of plants. The project was also gifted a new drone in Q2, which has proved invaluable for monitoring and demonstrating changes in vegetation and birdlife. Our findings point to a suite of changes that can almost certainly be attributed to removing the rats and goats in early 2017, including a striking increase in vegetation cover and insect abundance.

2.4 Publish technical reports detailing the results and lessons learned from Output 2 (UNDERWAY) The project team and collaborating scientists are working on additional publications from the biodiversity surveys, ahead of the Q4 deadline.

Output 3 Redonda becomes a protected area in accordance with the Sustainable Island Resource Management Zoning Plan for Antigua & Barbuda, with an effective structure to manage its ongoing ecological recovery and sustainable use

3.1 Complete stakeholder consultations in Antigua and Montserrat (COMPLETED/ ONGOING) Although the workplan in the original proposal indicated these consultations would cease after Year 1, we believe active engagement with stakeholders in all three countries should be ongoing, especially considering the need for regional cooperation to safeguard the island and its biodiversity under Output 3. Stakeholder consultations continued in Antigua during the reporting period and, in April, senior members of the team travelled to Montserrat to discuss various aspects of the project with the Department of Environment, Department of Agriculture and local fishers. The latter corroborated the opinion of Antiguan fishers that the fish around Redonda are prone to carry toxic ciguatera, which may explain why our preliminary marine surveys found almost no sign of fishing here. In Q1, the Project Leader returned to St Kitts & Nevis and talked with local fishers and tour operators who sometimes venture near Redonda, which can be seen clearly from Nevis.

Output 4 National capability to plan, manage and implement and monitor invasive species projects is raised, supported by enhanced technical skills and greater public awareness and cooperation

4.2 Implement campaign, including media releases, signage on Redonda and phone-in radio shows, and evaluate impact on public (UNDERWAY) The project received further coverage from a wide range of media groups, mostly centred on the relocation of feral goats (e.g. the BBC in Q1: <http://www.bbc.co.uk/news/world-latin-america-39748831>). The Project Coordinator made several appearances on national radio and television to discuss the removal of invasive species. The impact of this activity will be more formally assessed in Year 3, by repeating the questionnaire survey from 4.1, but feedback to date has been very positive.

4.4 Conduct training classes and on-the-job mentoring for local personnel participating in eradication and biosecurity activities (UNDERWAY) Further meetings and workshops in

Q1 and Q2 introduced around 20 Antiguan government and NGO technical staff to practical methods for preventing, detecting and eradicating invasive alien species. These were reinforced with hands-on work to monitor and maintain the permanent bait stations installed on Redonda in Year 1 to help prevent and detect rodent incursions (Activity 1.4).

4.5 Conduct training classes and on-the-job mentoring for local personnel participating in biodiversity monitoring (UNDERWAY) Methods for monitoring birds, reptiles, plants, fish and other taxa continued to be improved and applied with local technical personnel through meetings and field trips. More than a dozen nationals participated in wildlife surveys during the reporting period (Activity 2.2) and more have signed up to participate during the remainder of Year 2. Because the number of people who can travel to Redonda for practical training are constrained by the cost of helicopter transport, in Q1 we trialled running reptile and seabird surveys on islands much closer to Antigua and easier to access by boat. This was successful and, although there are some substantial differences in terms of species composition and terrain, we plan to conduct further training exercises on and around Antigua that will help prepare novice field monitors for fieldwork on Redonda.

4.6 Local technicians participate in project meetings and key field activities with FFI training and mentoring where needed (UNDERWAY) From the start of this project, FFI staff have worked alongside more than 30 Antiguan from government agencies, NGOs and the private sector. Sixteen are members of the Project Steering Committee, including colleagues from all relevant government agencies, NGOs and the private sector. During Q1 and Q2, more than 20 Antiguan participated in key technical workshops and fieldwork organised by the project team, while the Antiguan Project Coordinator—ecologist Shanna Challenger—acquired further skills and experience in project management, including budget management and facilitating workshops, with mentoring from the FFI Project Leader and other FFI staff. We also strongly encouraged and enabled our Antiguan colleagues to gain additional training from other organisations where appropriate. For example, Ms Challenger received training on drone use from Global Wildlife Conservation in Q2 and proposal writing from the National Climate Finance Advisor in Q3, while Natalya Lawrence attended a sponsored course on endangered species management from Durrell Wildlife Conservation Trust in Jersey.

Output X Project Management

X.2 Project Steering Committee meetings (UNDERWAY) The Project Steering Committee, formed at the Inception Meeting in Year 1, met again in Q1 and Q2. Committee members have also conducted additional meetings in smaller working groups to help plan and review areas of the project relevant to their skills and interests, including biosecurity, managing the rare breed goats from Redonda, and marine surveys.

X.3 Project biannual reports/ donor technical and financial reports (ONGOING) Reports produced by FFI to date include an internal FFI annual report for 2016, two financial reports to National Fish & Wildlife Foundation, quarterly reports to the Taurus Foundation, the first half-year and annual reports to Darwin Initiative, and illustrated updates to private sponsors. The Darwin project was also one of the two projects presented at FFI's AGM in Cambridge in Q2.

X.4 Monthly financial accounts (ONGOING) FFI maintains detailed accounts of spending each month, which are available for inspection at any time. Expenditures through the EAG (local partner NGO) are easily monitored thanks to the EAG having a separate bank account for this project. The Project Coordinator oversees spending through this account and reports to the Project Leader regularly.

2a. 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.

1) Response to Hurricanes Irma and Maria

These Category 5 hurricanes made world headlines when they struck the Caribbean region in September, scarcely three weeks apart. Irma and Maria were among the strongest Atlantic

hurricanes on record, with maximum sustained windspeeds of 295 km/h (185 mph) and 280 km/h (175 mph) respectively. Inevitably this had some impact on the Darwin project because our team members—most of whom live on Antigua—were occupied for weeks with ensuring the welfare of their families and compatriots, and with assisting national efforts to assess the storms' impacts and make repairs. Fortunately, we had correctly foreseen hurricanes as a risk on our log frame and deliberately avoided conducting any work during the hurricane season that could not be interrupted. Consequently, no personnel were on Redonda when the hurricanes struck or put at any risk in any other way through working on this project.

An update on the hurricanes and their impacts on FFI's personnel and projects was prepared by the Project Leader and shared with LTS at the end of Q2.

We have not had an opportunity to evaluate the impact of the hurricanes on Redonda yet, partly because the helicopter company has been too busy assisting with recovery efforts across the region. However, we do not anticipate substantive damage, given that the island had been almost completely stripped of trees by the invasive alien mammals. The hurricanes are bound to have killed many seabird eggs and chicks in September, but the adults are likely to re-lay, and the rain probably benefitted other species, including plants and reptiles. We will know more when we revisit Redonda at the start of November.

Following the storms (and continuing into October), the Darwin project team recognised the more pressing need for us to apply our skills and resources to assist Barbuda and other severely affected islands. The Project Coordinator Shanna Challenger was enlisted as part of the national DoE-led team to evaluate the storm's environmental impacts on the main islands of Antigua and Barbuda, who made good use of their Redondan survey experience and borrowed camping and survey equipment from the Darwin project. Our joint team also learned how to set up and disassemble ShelterBox tents for homeless families. Although damage to Barbuda's infrastructure was catastrophic, with some 95% of houses destroyed, the island's wildlife appeared relatively unscathed. Also in Q2, the Project Leader helped two local NGOs on Antigua and Anguilla to secure US\$100,000 to help meet some of their immediate needs.

To sum up, the hurricanes did not significantly affect any project activities planned for Q2 and damage to the project site is expected to be relatively minor and short-lived. Looking ahead to Q3 and Q4, however, the hurricanes might make it more difficult for our Antigua-based team to engage with some of the neighbouring islands regarding the proposed protected area around Redonda. The Barbudan community, for example, have more urgent reconstruction needs to deal with first. However, our team can work on other relevant tasks in the meantime, including marine surveys to help determine and justify the area's boundaries.

2) Additional fundraising to overcome the weakened pound

At the start of Year 2, £1 was worth only 3.30 Eastern Caribbean dollars (cf. EC\$4.08 when the grant proposal was submitted in late 2015: a reduction by nearly 20%). Although there was some modest improvement during the reporting period, we are concerned the value of the pound could drop again, depending on the progress of Brexit negotiations and other factors. FFI has therefore had to work doubly hard to raise additional funds and we are pleased to confirm that during this reporting period, new grants have been secured from Taurus Foundation (£XXX, for Year 2), Waitt Foundation (US\$XXX for marine surveys in Year 2) and Disney Conservation Fund (\$XXX of a \$XXX grant for FFI's work in the Caribbean in Years 2 and 3). We also prepared and submitted new proposals to several additional potential donors, and assisted the DoE with an invasive alien species proposal to GEF that we hope will bring more funding for Redonda in 2018 onwards.

Also in Q1, the EAG secured a new two-year grant of US\$XXX from the US Fish & Wildlife Service's Neotropical Migratory Birds Conservation Act (NMBCA) scheme for "Improving and Conserving Critical Bird Habitat on Antigua and Barbuda's Offshore Islands". Part of this is for training and ongoing biosecurity work and wildlife monitoring on Redonda, as well as supporting the EAG's staff costs. Because the NMBCA grant scheme demanded at least 3:1 matched contributions from the EAG and its partners, including FFI, the Darwin grant was pivotal in enabling the EAG to leverage such a substantial award.

2b. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?

Discussed with LTS: Yes/~~No~~ (Hurricane update)

Formal change request submitted: ~~Yes~~/No

Received confirmation of change acceptance ~~Yes~~/No (N/A)

3a. Do you currently expect to have any significant (e.g., more than £5,000) underspend in your budget for this year?

Yes No Estimated underspend: £

3b. If yes, then you need to 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 rebudget Change Request as soon as possible. There is no guarantee that Defra will agree a rebudget so please ensure you have enough time to make appropriate changes if necessary.

4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document. Additionally, if you were funded under R23 and asked to provide further information by your first half year report, please attach your response as a separate document.

Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also** be raised with LTS International through a Change Request.

Please send your **completed report by email** to Eilidh Young at Darwin-Projects@ltsi.co.uk. The report should be between 2-3 pages maximum. **Please state your project reference number in the header of your email message e.g. Subject: 22-035 Darwin Half Year Report**