Darwin Plus:
Overseas Territories Environment and Climate Fund
Annual Report

To be completed with reference to the "Writing a Darwin Report" guidance: (http://www.darwininitiative.org.uk/resources-for-projects/reporting-forms). It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

Submission Deadline: 30th April 2020

Darwin Plus Project Information

Project reference	DPLUS086
Project title	Future-proofing endangered species conservation in Anguilla
Territory(ies)	Anguilla
Lead organisation	Fauna & Flora International
Partner institutions	Anguilla National Trust, Durrell Wildlife Conservation Trust, Royal Society for the Protection of Birds
Grant value	£291,992
Start/end dates of project	1 April 2019 – 31 March 2022
Reporting period and number	Apr 2019-Mar 2020 Annual Report 1
Project Leader name	Dr Jenny Daltry
Project website/blog/social media	Not yet
Report author(s) and date	Dr Jenny Daltry, Farah Mukhida and Dr Louise Soanes, April 2020

1. Project summary

Scientists predict up to 43% of species could disappear due to climate change, with Caribbean islands forecast to be hardest hit[1]. The biodiversity-rich but low-lying archipelago of Anguilla is exceptionally vulnerable, as was demonstrated by the devastating impacts of hurricanes Irma and Maria in 2017. As many models predict even more severe hurricanes in the Caribbean[2] along with rises in temperature and sea level, multiple extinctions and ecosystem collapse could ensue, and jeopardise human communities in turn[3].

The Government of Anguilla's Climate Change Strategy (2012) and National Environmental Strategy (2005) recognised the pressing need for resilience to climate change, while the Biodiversity and Heritage Conservation Act called for action plans to be developed for Anguilla's threatened species. However, international guidelines on species action planning offer surprisingly little advice on how to help endangered species adapt to climate change.

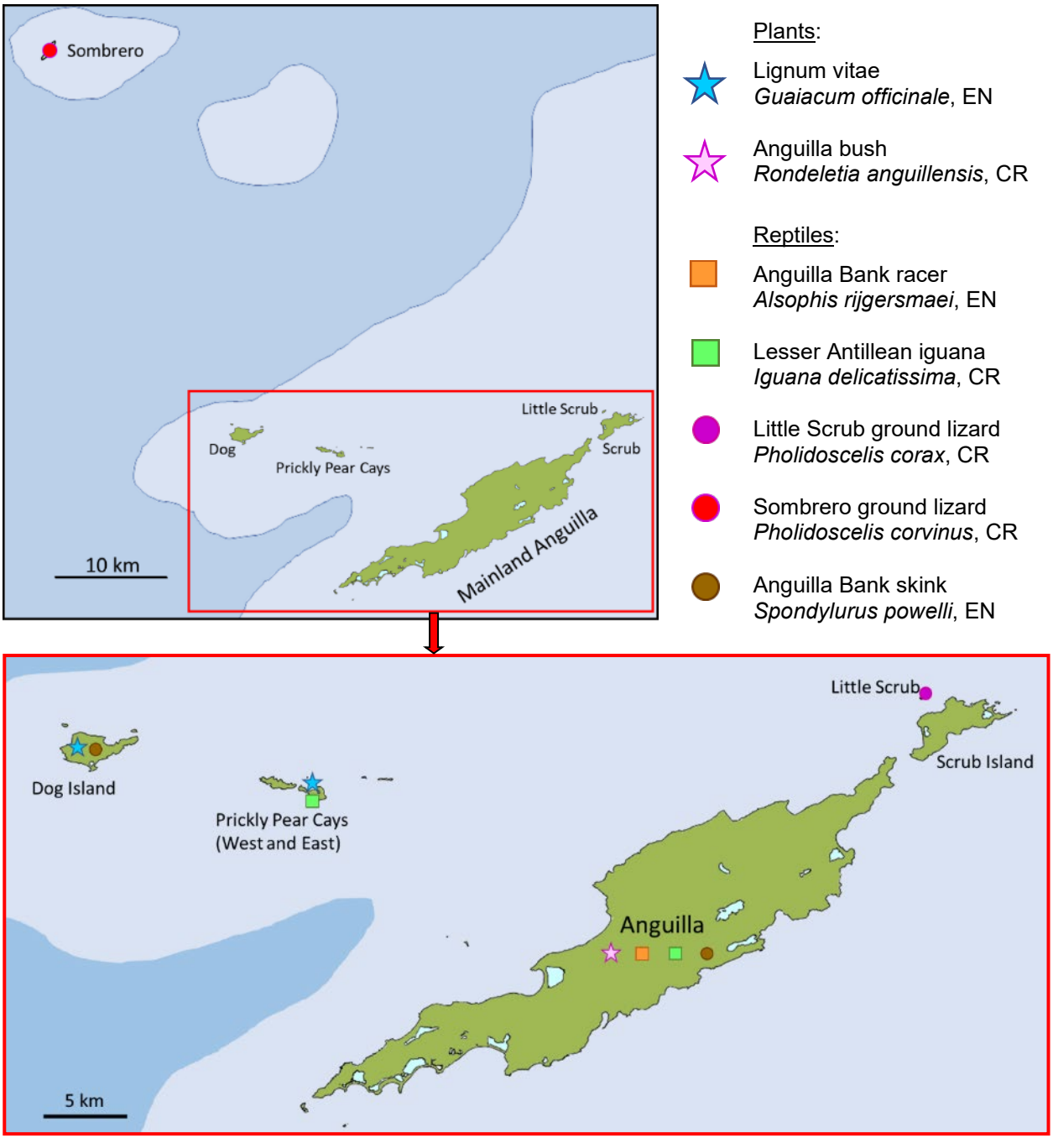
[1] Malcolm, J.R., Liu, C., Neilson, R.P., Hansen, L., & Hannah, L. (2006) Global warming and extinctions of endemic species from biodiversity hotspots. *Conservation Biology*, 20, 538–548.

[2] IPCC (2014) *Climate Change 2014: Synthesis Report.* Intergovernmental Panel on Climate Change, Geneva, Switzerland.

[3] Brown, N. (2008) *Climate Change in the UK Overseas Territories: An Overview of the Science, Policy and You*. Joint Nature Conservation Committee, Peterborough, UK.

This innovative project focuses on safeguarding Anguilla's seven globally threatened reptiles and plants most at risk from climate change impacts according to species vulnerability analyses: Lesser Antillean iguana *Iguana delicatissima* (Critically Endangered), Sombrero ground lizard *Pholidoscelis corvinus* (Critically Endangered), Little Scrub ground lizard *P. corax* (Critically Endangered), Anguilla Bank skink *Spondylurus powellii* (Endangered), Anguilla Bank racer *Alsophis rijgersmaei* (Endangered), lignum vitae *Guaiacum officinale* (Endangered) and the Anguilla bush *Rondeletia anguillensis* (Critically Endangered). Most of these are restricted range species, endemic to the Anguilla Bank, and they include some of the rarest species in the Caribbean. This work spans the whole of Anguilla including its offshore islands (Figure 1), which can be accessed by boat when the sea is calm.

Figure 1. **Anguilla, showing its offshore islands and seven globally threatened species vulnerable to climate change**. Symbols signify confirmed presence of the species on the island, rather than exact localities. Island banks are indicated with paler blue (shallower sea): these were historically connected by land bridges and share the same flora and fauna. Note Sombrero has always been separate from Anguilla and has its own endemic species, of which the Sombrero ground lizard is just one.



In what we believe to be a world first, this project is enabling local stakeholders to develop a suite of species recovery plans that are expressly designed to boost the resilience of endangered reptiles and plants to climate change. The action planning process is highly participatory and incorporates innovative computer models to identify and test how alternative conservation actions could affect the species' prospects of survival. The project will implement priority actions in Years 2 and 3, such as combatting harmful invasive aliens, restoring habitats and reintroducing endemics to former ranges, so that even by the project end, the target species will be demonstrably more resilient.

2. Project stakeholders/partners

This Darwin project was developed at the request of the Anguilla National Trust (ANT) and is jointly led and coordinated by ANT and Fauna & Flora International (FFI) with technical input from with other NGO partners named on the proposal: Durrell Wildlife Conservation Trust (Durrell) and the Royal Society for the Protection of Birds (RSPB). All four partners have worked together on successful projects in Anguilla before and thus were ready to "hit the ground running" as soon as the Darwin Initiative grant was approved. Each partner was actively involved in project planning and implementation during Year 1: ANT and FFI worked together on all aspects of surveys, training and stakeholder consultations throughout the year, while Durrell and RSPB chiefly contributed their expertise to the species action planning workshops in Q3 and Q4 and provided additional training and mentoring. Our team also worked very closely with the Government of Anguilla during the year; in particular the Department of Fisheries and Marine Resources (DFMR), which has a particular interest in the offshore cays, and the Department of Environment (DoE).

Relationships between FFI and these partners proved effective throughout Year 1. Our staff genuinely enjoy working together and learning from each other, recognising that each partner brings valuable skills and knowledge. Day-to-day management of the project in Year 1 was handled by Dr Jenny Daltry (FFI) and Farah Mukhida (ANT), together with the Project Coordinator Dr Louise Soanes. Dr Soanes is jointly employed by FFI and ANT and is based in the ANT office. This all-female core management team is further supported by the Project Steering Committee: a small body of representatives from all the partners (including Matt Goetz from Durrell and Lyndon John from RSPB) with other participating organisations joining the meetings where possible, including the Anguilla Hotel and Tourism Association, the DFMR, DoE, the Department of Physical Planning, and the Department of Lands and Surveys. The Project Steering Committee oversees the project and has met once a quarter since the project began. Meetings were held in Anguilla, with international representatives usually joining by Skype.

The Government of Anguilla agencies and private sector stakeholders (including landowners) also actively participated in the project inception meeting in May 2019 and the species conservation action planning workshops in Q3 and Q4. The action planning process involved a number of technical specialists, including botanists, herpetologists and climate change experts from Anguilla, Saint Lucia, St. Barths and the UK. During Year 1, the project also benefitted from exchanging expertise with other projects, NGOs and government agencies in this region, especially DPLUS091 (*Improving coastal ecosystem resilience to climate change in Anguilla*), the Environmental Awareness Group and Department of Environment in Antigua (training on *Alsophis* racer survey techniques), Agence Territoriale de l'Environnement (ATE) in St. Barths (training on iguana and plant survey techniques, exchange of knowledge of the ecology of Anguilla Bank racers, lignum vitae and Anguilla Bank skinks), Roehampton University, the Institute of Integrative Biology at the University of Liverpool and the School of Biological and Environmental Sciences at John Moores University, also in Liverpool (genetic studies of Lesser Antillean iguanas).

Because a major focus of Year 1 has been on gathering baseline data on the distribution, status, threats and ecology of the target species, householders throughout Anguilla were encouraged to contact the project leaders with any questions about and/or sightings of the endangered species as part of Activity 3.4. ANT conducted a questionnaire survey of householders regarding their knowledge of Anguilla's endangered species to inform the project's education and outreach

programme (Activity 3.3). Stakeholder engagement will continue in Years 2 and 3 of the project, especially while priority conservation actions are further developed and implemented.

3. Project progress

3.1 Progress in carrying out project Activities

The project has been well on track and made good progress against the planned outputs in Year 1. Below is an update on progress against the agreed timetable:

Output 1. Climate change-informed species action plans produced by a participatory process for Anguilla's terrestrial Endangered species that are most at-risk to climate change

1.1 Complete literature review and rapid field surveys of the status, distribution and ecology of the seven target species (*Iguana delicatissima*, CR; *Pholidoscelis corvinus,* CR; *P. corax*, CR; *Spondylurus powellii*, EN; *Alsophis rijgersmaei*, EN; *Guaiacum officinale*, EN; *Rondeletia anguillensis*, CR) (COMPLETED)

The literature review was completed (Annex 3: 2) and excellent progress made with field surveys nationwide (Annex 3: 3):

- Lesser Antillean iguana *Iguana delicatissima*: We recorded and mapped all sightings of iguanas on mainland Anguilla and the Prickly Pear Cays, building on extensive data from a previous project managed by ANT.
- Sombrero ground lizard *Pholidoscelis corvinus*: We mapped the distribution of this species on Sombrero Island and estimated its total population size using mark recapture. Findings indicate a total population of 237±52 individuals in 2019; only half the number recorded in the last survey (463±68 in 1999). This drop appears genuine and is probably due to the combined impacts of recent severe hurricanes, invasive alien rodents and a corresponding loss of vegetation and invertebrates from Sombrero island.
- Little Scrub ground lizard *P. corax*: We mapped the distribution of this species on Little Scrub Island and estimated its total population size using mark recapture. Findings indicate a total of 457±52 individuals (70% adults and 30% juveniles), which is approximately 10% fewer than in the previous surveys in 2000 and 2011. Habitat quality has deteriorated in the wake of severe hurricanes and storm surges, and this species has become heavily dependent on food provided by a local fisher.
- Anguilla Bank skink *Spondylurus powellii*, Anguilla Bank racer *Alsophis rijgersmaei*, lignum vitae *Guaiacum officinale* and Anguilla bush *Rondeletia anguillensis*: We conducted field surveys of all four species across mainland Anguilla and Scrub Island and all individuals observed were recorded using GPS and mapped to identify core areas of distribution. While some important populations of lignum vitae and Anguilla bush were discovered in unexpected new localities during Year 1, the skink and racer appear to have become scarcer and more highly localised than previously reported.

Findings were compiled in a report by the Project Coordinator Dr Louise Soanes (FFI) and Devon Carter (ANT) "*Distribution and Population Estimation of Anguilla's Endangered Reptiles and Plants*" (Annex 3: 3).

During the 2019 field surveys, a possible new and endangered species of bromeliad was found by the project team on the Northeast coast of Anguilla. ANT sent samples to a bromeliad specialist in the Netherlands for identification. A botanist at the Royal Botanic Gardens, Kew, has secured a small grant to study this plant and its distribution on Anguilla and proposes to work with the project team when travel restrictions between the UK and Anguilla are lifted.

1.2 Complete analysis and report on the climate change vulnerability assessments for Anguilla's globally threatened terrestrial species (COMPLETED)

Project Coordinator Dr Louise Soanes conducted the analysis in consultation with other team members using NatureServe's Climate Change Vulnerability Index. Methods and findings are presented in "*Climate Change Vulnerability Assessment of Anguilla's Endangered Terrestrial Species*" (Annex 3: 4). In summary: The Little Scrub ground lizard was rated as "Extremely Vulnerable", primarily due to its severely restricted range that will only get smaller with sea level rise; The Sombrero ground lizard, Anguilla Bank skink, and Anguilla Bank racer were rated as "Highly Vulnerable"; and the Lesser Antillean iguana, Anguilla bush and lignum vitae are "Moderately Vulnerable". This analysis was used to guide the conservation action plans (Activity 1.5 below).

1.3 Collate and analyse climate change data and forecasts for the northern Lesser Antilles to elucidate likely climate change impacts on species and habitats in Anguilla, including offshore cays.

Project Coordinator Dr Soanes led this study, in consultation with project team members, presented in: "*Climate Change Predictions for Anguilla: Considerations for Endangered Species Management*" (Annex 3: 5). In summary:

- Regional forecasts predict a 0.5–3.0°C increase in temperature and a likely decrease in precipitation across the northern Lesser Antilles, including Anguilla, by the end of the century.
- Tropical storm activity (including hurricanes) is predicted to increase in *intensity*, with greater windspeeds and higher rainfall, but it is uncertain whether the *frequency* of tropical storms will also increase.
- A sea level rise of at least 1 metre is considered "inevitable" by the end of the century, causing severe coastal flooding: particularly the western end of Anguilla (an area dominated by tourism developments) and several of Anguilla's offshore cays, especially Anguillita, West Cay the Seal islands and lower areas of Dog Island, Prickly Pear East and Scrub Island.

Recognising that climate change will have a profound impact on Anguilla's human population and development choices as well as ecosystems and ecological processes, this analysis has helped identify which habitats are liable to be lost and the areas where endangered species have the best prospects of surviving in the future.

1.4 Drawing on findings from 1.1–1.3, conduct Population Viability Analyses (PVAs) of the seven target species to calculate extinction risk (repeated at project end to measure impact on viability) (ONGOING)

Using the programme Vortex (version 10), Population Viability Analyses (PVAs) were conducted by Dr Louise Soanes and Dr Jenny Daltry for four target reptiles: the Lesser Antillean iguana, Anguilla Bank racer, Sombrero ground lizard and Little Scrub ground lizard. For these species we now have sufficiently accurate population estimates and knowledge of their ecology and life history characteristics to establish robust models, thanks to the previous activities above.

In what may be a world first, we incorporated the climate change forecasts from Activity 1.3 into the Vortex programme, factoring in the expected loss of habitable areas over the next 50 years and expected changes in the severity of hurricanes, storm surges and droughts. All the species were found to have a high probability of declining, even extinction, if no further action is taken. Having now set up the PVA models, we can now test and compare the impact of conservation actions such as reintroductions or removal of other anthropogenic threats on the probability of species survival and the genetic diversity of each population (e.g. Annex 3: 6). The PVA models were presented and discussed at the reptile action planning meeting in Q3. We plan to submit a manuscript to a peer-reviewed journal in Year 2 to share more widely our innovative method for incorporating climate change forecasts.

PVAs have not been completed for the Anguilla bank skink, Anguilla bush and lignum vitae yet because there are still critical gaps in our knowledge of their population sizes and, especially, reproductive biology that would make the forecasts too unreliable. We will endeavour to address these gaps during the remainder of the project.

1.5 Hold stakeholder workshops to present and discuss findings from 1.1-1.4 and, using a participatory process, develop action plans for the target reptiles and plants (one plan per group) (COMPLETED)

Action plans for Anguilla's endangered reptiles and plants were developed through seven days of stakeholder workshops in November 2019 and March 2020 respectively, facilitated by the Jenny Daltry using a highly participatory process. The workshops successfully coupled expert knowledge of the species and technical know-how for conserving threatened species with local understanding of the territory, its people, national policies and the likely opportunities and constraints for interventions. Planning sessions were interspersed with presentations and discussions on the target species and relevant conservation techniques (e.g. Annex 3: 9).

The new draft Endangered Reptiles Action Plan focuses on increasing the size and number of populations primarily through reintroductions/ range expansions onto Anguilla's larger offshore cays, which the climate change projections point to having the best prospects of providing sufficient secure habitat. Among the conservation actions prioritized for Years 2 and 3 are to: (i) reintroduce Anguilla Bank skink*s* to Prickly Pear East (which was recently cleared of invasive rats by DPLUS060), (ii) conduct a conservation introduction of Little Scrub ground lizards to Prickly Pear West (ditto), (iii) increase population size and resilience of the Sombrero ground lizard by eradicating invasive alien mice and replanting native vegetation on Sombrero, (iv) release additional Lesser Antillean iguanas to boost the genetic diversity and resilience of the small reintroduced population on Prickly Pear East, and (v) conduct a feasibility study for constructing a mainland island on Anguilla to conserve larger populations of iguanas, racers and skinks in the absence of invasive alien animals. Stakeholders also noted a serious gap in the level of legal protection afforded to most of Anguilla's endangered reptiles and the project team, supported by the Department of Environment, will therefore lobby for including the Anguilla Bank racer, both endemic ground lizards, and the Anguilla Bank skink on Schedule 1 of the Biodiversity and Heritage Conservation Act.

The new draft Endangered Plant Action Plan focuses on combatting other direct threats to the lignum vitae and Anguilla bush (including livestock, invasive species, decline in pollinators) and expanding their population sizes and ranges through planting seedlings and saplings in appropriate areas (taking the climate change forecasts from Activity 1.3 into account). Action prioritized for Years 2 and 3 include: (i) translocating Anguilla bush seedlings and trees from high risk areas to protected areas and the offshore cays and (ii) rearing lignum vitae seedlings in a nursery and working with landowners, resorts and developers to plant these attractive native trees nationwide. Stakeholders noted that despite Anguilla bush being relatively hardy and protected under Schedule 1, this endemic species is in jeopardy because most of its population is on private property with a high risk of development, especially if sea level rise drives more people inland. The planning meeting participants therefore identified the need to directly protect species *in situ* where possible through developing conservation easements and purchasing key sites. We therefore propose (iii) developing a fundraising strategy for land acquisition by the Anguilla National Trust.

1.6 Write up, peer-review and publish the climate change-informed conservation action plans for the threatened reptiles and plants (UNDERWAY)

Conservation action plans for endangered reptiles and plants have been drafted and are currently being reviewed and finalised.

Output 2. At least six priority interventions prescribed by the action plans to increase climate change resilience are implemented, monitored and evaluated

2.1 Translocate at least 30 *Iguana delicatissima* from Forchue Island, St. Barths, to reinforce the colony on the Prickly Pear Cays, Anguilla

Although not scheduled to occur until the second half of Year 2, the project team engaged in talks with the environmental agency Agence Territoriale de l'Environnement (ATE) on St. Barths about sourcing 30 subadult Lesser Antillean iguanas. ATE readily agreed in principle to donating iguanas but unfortunately the bacterial disease *Devriesea agamarum* was discovered in some populations on St. Barths in 2019. This debilitating disease, confirmed by tests at Ghent University, could make it too risky to take any iguanas from St. Barths to Anguilla. While this is

terrible news for St. Barths, we still have time to source alternative stock from another island and have begun discussions with colleagues in Dominica (home to the largest remaining population of Lesser Antillean iguanas) and St. Eustatius. Project partner Durrell is advising on health screening and has submitted a grant proposal to the Morris Animal Foundation to further investigate the epidemiology of *D. agamarum* to inform iguana conservation management in Anguilla and neighbouring islands.

2.3 Plant seeds and seedlings of *Guaiacum officinale* and *Rondeletia anguillensis*, including those translocated from sites at high risk, in the Department of Agriculture nursery and suitable habitats identified by Output 1, and provide follow up care as needed (BEGUN AHEAD OF SCHEDULE)

Although not scheduled to start until Year 2, project staff have already begun growing lignum vitae seedlings in the Anguilla National Trust's nursery and a satellite nursery at the Albena Lake Hodge Comprehensive School. Trials are also underway to determine how best to translocate and grow Anguilla bush *ex situ* as this has never been done before. ANT Tashim Flemming has taken responsibility for leading these trials.

2.6 Implement biosecurity surveillance and rapid response protocols to prevent further incursions by harmful invasive alien species on priority islands for endangered species (Dog Island, Prickly Pear Cays, Little Scrub, and Sombrero) (ONGOING)

Trained field staff and volunteers from the ANT conducted biosecurity checks on the Prickly Pear Cays (see report DPLUS060) and Dog Island, including inspecting and maintain over 200 permanent bait stations to intercept rats. Happily, no signs of invasive alien rodents, green iguanas or other new invaders were detected on any of the three islands. Similar measures to protect Little Scrub and Sombrero (home to two of the project species) will be rolled out in Year 2.

Output 3. National capability to plan, manage, implement and monitor climate change-informed species conservation actions is raised, supported by enhanced technical skills and greater public awareness and cooperation

3.1 ANT staff and other participating nationals complete self-assessment competences questionnaires to identify training needs (repeated at project end to measure impact on capacity) (COMPLETED/ ONGOING)

Eight staff completed a self-assessment questionnaire in May 2019, which described 75 competences selected and adapted from Appleton's (2016) *A Global Register of Competences for Protected Area Practitioners* that are relevant to this project. Staff scored themselves from 1 ("Little or no knowledge: extensive training and development needed") to 4 ("High ability: could train and instruct others in this subject") (Annex 3: 11 and 12). The results have informed the training programme and provide a baseline for measuring changes during the course of the Darwin project.

3.2 Plan and undertake training and on-the-job mentoring of ANT staff and other nationals in applied conservation management (ONGOING)

Project Coordinator Dr Louise Soanes has been based in the Anguilla National Trust (ANT) office throughout Year 1 and helped to instruct and guide 20 local project team members and volunteers on wildlife survey planning and data analysis (particularly with reference to activities under 1.1). Project Leader Dr Jenny Daltry provided further training on wildlife survey methods, including taking four ANT staff to Great Bird Island, Antigua, in Q2 (with FFI co-funding and support from the Environmental Awareness Group and Department of Environment, Antigua) to learn and practice methods for surveying and monitoring snakes, including capture, handling, measuring and tagging Antiguan racers (*Alsophis antiguae* CR) (Annex 3: 1f, 1g). This experience greatly boosted the team's prowess at finding and catching Anguilla Bank racers for Activity 1.1.

Also during this period, one ANT staff member participated in the IUCN Iguana Specialist Group's Iguanas and Conservation Workshop in Roatan, Honduras, in Q1 (Annex 3: 1e) and four ANT staff accompanied ATE biologists in St. Barths in Q1 to advance their skills on iguana surveys, including learning how to taking mouth and cloacal swabs to test for disease (Annex 3: 1h, 1i).

Towards the end of Year 1, FFI and ATE provided further training to ANT staff on plant status assessments and methods for conserving threatened plant species, both in situ and ex situ.

In total, 20 ANT staff, volunteers and other nationals (12 male, 8 female) gained advanced training in wildlife survey planning and data analysis during Year 1, and nine of these (6 male, 3 female) were also trained in and applied biosecurity methods (to prevent incursions by rats and other harmful alien vertebrates to the offshore islands) during the same period.

All ANT staff, plus staff invited from other agencies, took part in the species action planning workshops (Activity 1.5), learning not only how to develop action plans in a participatory way but learning from the methods and results of a variety of other species recovery projects, which were presented by representatives from FFI, Durrell, ATE and other partners (e.g. Annex 3: 8 and 9).

3.3 Conduct public survey to evaluate knowledge, attitudes and behaviour towards endangered wildlife and climate change (repeated at project end to evaluate impact) (COMPLETED/ ONGOING)

A total of 134 members of the public completed questionnaires regarding Anguilla's endangered wildlife (Annex 3: 13). The results were analysed and used to inform the development of the project's education and outreach campaign plan below. Overall, the respondents exhibited little knowledge of the territory's endangered native reptiles and plants. While this was a small sample, these results are consistent with what we have observed previously.

3.4 Develop and implement an advocacy and public awareness campaign (including but not limited to, newspaper articles, press releases, presentations, CCSleuth, and social media) (ONGOING)

A national advocacy and public awareness campaign plan was prepared by the Anguilla National Trust (Annex 3: 14) and is now being implemented (see Annex 3: 1s-x). Among the outreach activities conducted in Year 1 were:-

- An endangered species information pamphlet developed and circulated to the over 100 members of the Anguilla Hotel and Tourism Association.
- Information about the endangered species were circulated to all ANT members and supporters and the national newspaper, and called on members of the public to report sightings (and thereby assist Activity 1.1).
- A pamphlet targeting visitors to Anguilla developed to help guide best practice with a focus on Anguilla's biodiversity, including endangered species (Annex 3: 18).
- Young people were specifically targeted through presentations in classrooms (two pre-schools, one primary school, and one high school), two summer camps, and the ANT's Young Explorers afterschool programme, reaching 114 young people plus their teachers in Year 1 (Annex 3: 1s–1x).
- The ANT's annual Iguana Fest featured and celebrated the Lesser Antillean iguana. Over 80 people attended the event in April 2019 (Annex 3: 1s and 1t). In addition to a guided hike, presentations, games, and arts and crafts activities, pamphlets about the Critically Endangered iguana were also shared with everyone in attendance.
- Local fisherman Mr Stanley Rogers was successfully nominated by FFI as a Disney Conservation Hero for his work to protect the Little Scrub ground lizard, one of the most threatened of the project focal species. His award was presented at the ANT Annual General Meeting in December 2019 (Annex 3: 1q) and was widely celebrated on Anguilla, with several media articles in print and online.
- The Anguillan public was further engaged through one-on-one discussions about Anguilla's endangered species, with community members contacting the ANT about iguana, racer, and skink sightings (Annex 3: 16). The ANT was called to rescue individuals from private properties and members of the public also brought iguanas and snakes to the office (a positive sign of rising awareness because previously such animals would usually be killed on sight) (Annex 3: 1r).

3.5 Publicise and report on project progress and results through national and international media and directly to national groups, cross-territory stakeholders, international scientific community, and Executive Council (ONGOING)

A national press release announcing the new project was circulated by ANT to Anguilla's radio and press (Annex 3: 15), and updates on project activities have been circulated using radio, print (newspapers), and social media (Facebook and Instagram), focusing on audiences in Anguilla.

Project team members have also presented project methods and findings at three international conferences: The Project Coordinator presented the project at the *4th Annual Caribaea Initiative Research and Conservation Conference*, a large regional conference in the Dominican Republic in Q1. The Project Co-leader and Project Coordinator gave another presentation and participated in a climate change session at the *Inter-Island Environment Meeting and Wilder Islands Conference*, in Alderney, Channel Islands in Q2 (Annex 3: 19). The Project Leader presented on the reptile action plan at the *World Congress of Herpetology* in Dunedin, New Zealand, in Q4. Collectively, these talks reached over 400 conservation practitioners, scientists and students from over 40 countries, including most Caribbean island nations and UKOTs.

The Project Coordinator also presented the project at the ANT's Annual General Meeting in Q3, while the Project Leader gave a talk on restoring island biodiversity to ANT members and other interested members of the public.

3.8 Procure equipment to enhance national conservation capacity, including purchasing a boat to facilitate the management of offshore islands and other coastal areas by ANT and Government of Anguilla (ONGOING)

In Year 1, the project has procured over £18,000-worth of equipment plus £2,900-worth of consumables for conservation work in Anguilla, including office equipment, field survey tools, camping gear and nursery equipment (this figure includes matched funds). These are, and will continue to be, used in Anguilla for project work.

In addition, the project commissioned a 34' boat (total cost approximately £112,000) which has been built and will be launched as soon as possible (Annex: 3p). This will not only be an invaluable asset for implementing project fieldwork in Years 2 and 3 but is expected to have a lasting positive impact on the capacity of ANT and Government of Anguilla to work on, conserve and protect the territory's offshore and marine biodiversity. Until now, ANT, DoE and even DFMR were forced to hire expensive and often unsuitable tourist vessels. We propose the new boat is owned and maintained by ANT but made readily available for use by DoE and DFMR for biodiversity management purposes. Our Anguillan partners have elected to name the boat '*Corvina*', after an old name for the Sombrero ground lizard.

Other Project Management activities

X.1 Establish Project Steering Committee and meet quarterly (remote members to participate by Skype) (ONGOING)

A small Project Steering Committee was formed at the Inception Meeting in May 2019 (below) to help plan and review the project. Members comprise representatives from FFI, ANT, Department of Environment, Department of Fisheries and Marine Resources, Durrell Wildlife Conservation Trust and Royal Society for the Protection of Birds. The Project Steering Committee has met quarterly since the launch of the project in May 2019.

X.2 Project inception meeting (COMPLETED)

The inception meeting was held in May 2019 at the ANT office in The Valley, Anguilla (see Annex 3: 7). Participants included representatives from key government agencies (Department of Environment, Department of Fisheries and Marine Resources, Department of Physical Planning), the Anguilla Hotel and Tourism Association, FFI, and all the ANT staff.

X.3 Project biannual reports/ donor technical and financial reports (ONGOING)

Completed reports include the first technical and financial report to John Ellerman Foundation and illustrated updates to private sponsors, and the half year technical report to Darwin Plus.

X.4 Monthly financial accounts (ONGOING)

The Project Leader maintains the project financial plan and complete accounts of spending each month, with input from FFI's and ANT's financial teams.

3.2 Progress towards project Outputs

Output 1. Climate change-informed species action plans produced by a participatory process for Anguilla's terrestrial Endangered species that are most at-risk to climate change (COMPLETED)

Climate change-informed species actions plans were produced in Year 1 through implementing activities 1.1 through 1.6. Prior to this project, there existed a global IUCN action plan for Lesser Antillean iguana and a sub-regional action plan, but neither took any account of the impacts of climate change (and, furthermore, the IUCN plan largely overlooked Anguilla). There were no plans or projects for any of the other six species.

Through our efforts in Year 1, we have achieved almost all of the indicators for this Output: 1.1 Baseline information on distribution, status, and life history of 7 target Endangered and Critically Endangered species updated (Annex 3: 3), 1.2 Projected effects of climate change on Anguilla in general, and the target species in particular, reviewed and updated (Annex 3: 4, Annex 3: 5), and 1.3 Action planning workshops conducted with at least 30 stakeholders, taking account of short- and long-term climate change predictions. Only one indicator (1.4) remains to be completed: The new reptile and plant climate-smart conservation action plans have been drafted and are scheduled to be finalised in Q1, Year 2, as originally planned.

Each action plan defines an overall goal as well as specific goals for each species by 2030. The plans contain a suite of objectives that speak to research and monitoring, policy and legislation, biosecurity, conservation translocations, education and outreach, and capacity, all taking into account carefully studied forecasts of the impacts of climate change on sea level, storm surges, hurricanes, temperature and rainfall. For species on the main island of Anguilla, we have also endeavoured to predict how people and the island's economy are likely to respond to climate change (while there are uncertainties, for example, Anguilla is likely to see an increase of development pressure inland, as people are forced to flee low-lying coastal areas, and potentially more land brought under cultivation as a coping strategy).

Output 2. At least six priority interventions prescribed by the action plans to increase climate change resilience are implemented, monitored and evaluated

Priority interventions have been identified as part of the reptile and plant action planning processes (see Activity 1.5). They have not been implemented yet, but considerable headway has been made to prepare for Years 2 and 3, including feasibility studies and consultations with landowners and other stakeholders.

At present, the project is on track to achieve this output and all of the proposed indicators by the end of Year 3, and more besides. However, the planned eradication of invasive mice from Sombrero island (Indicator 2.3) must be postponed from Year 2 Q2 to Year 3 Q2 because of current travel restrictions imposed by the Covid-19 pandemic. This activity can take place only between April and July and requires specialist input from international team members to train and assist the Anguillian team members.

Output 3. National capability to plan, manage, implement and monitor climate change-informed species conservation actions is raised, supported by enhanced technical skills and greater public awareness and cooperation

Considerable progress was made in Year 1, informed by the ANT competences assessment (Annex 3: 12) and public awareness survey, building on previous capacity building and outreach projects in Anguilla (e.g. DPLUS060). Of the seven planned indicators, the project has already met the targets for three: 3.1 Communications and public awareness communications plan developed by Q2Y1 (Annex 3: 14); 3.5 Project methods and lessons learned disseminated to relevant natural resource managers within all Caribbean UKOTs and other sub-regional islands by end of project; and 3.6 At least GBP 100,000 generated in cash and/or in-kind to continue

implementing action plans after the grant period (a further GBP 448,945 was secured by FFI in Year 1 from the Prince of Wales's Charitable Fund and US Fish & Wildlife Service).

Solid progress has also been made towards all the other indicators. For example, a grand total of 23 nationals (13 male, 10 female) in ANT, government agencies and the private sector received training in Year 1 (re indicator 3.4) and the new boat for national partners has been built and will be launched shortly (Indicator 3.7, Annex 3: 1p). We therefore anticipate this output, and all the agreed indicators, will be achieved during the grant period.

3.3 Progress towards the project Outcome

The intended Outcome is that "globally threatened species in Anguilla are more resilient to climate change through climate-informed recovery interventions, strong management competencies, and more supportive civil society".

The project team still expects to achieve this outcome by the end of the grant period, building on the considerable progress made in Year 1, including training and mentoring, outreach and the participatory development of the region's first climate-smart recovery plans for endangered plants and reptiles. We have established the necessary baselines (population size, number of populations and/or distribution ranges) against which species recovery can be measured and monitored. Furthermore, seven ANT staff are now well equipped and proficient at routinely monitoring all seven target species themselves. While it is too soon to repeat the competences assessment that was conducted in early Year 1 (Activity 3.1; Annex 3: 11 and 12), it is clear that after a very intensive year of training and field work, the entire ANT team has made huge advances in terms of their knowledge of all seven target species, their capacity to detect, identify and handle them, and their grasp of a range of conservation management theories and practices.

Naturally it remains to be proven whether the conservation actions that were identified in Year 1 and that are to be implemented in Years 2 and 3 will genuinely boost the survival of the target species, but we do believe the new plans are robust, practical, appropriate to Anguilla and based on sound science. Perhaps for the first time, the plans were informed by Population Viability Analyses using Vortex models (Activity 1.4) that were specially programmed to incorporate the detailed climate change forecasts from Activity 1.3. These species-specific models will be used to test and compare the effects of project actions on their genetic diversity, distribution and extinction probabilities in Anguilla (see examples in Annex 3: 6). The new PVA models can provide projections for many generations into the future as well as annual forecasts, which we will test and calibrate using field monitoring during the remaining grant period.

All four indicators still appear valid. The project is already well on track to achieving 0.1 (Climate change-informed Population Viability Analysis modelling demonstrates at least 50% improvement in the viability of target species over the next 50 years by implementing action plans), and we are confident of achieving the other three indicators by the project end.

3.4 Monitoring of assumptions

The identified risks and assumptions in the project proposal still hold true, but the level of risk has been reduced for some. We have just added a ninth assumption in answer to the unforeseen Covid-19 pandemic.

Assumption 1. Climate change impacts, including human land use, are forecast within sufficiently accurate bounds

The most up-to-date climate change projections have been used to determine potential impacts on the Caribbean region. Models consistently show that Anguilla's lowest lying areas (on both the mainland and the offshore cays) will be inundated through sea level rise and/or storm surges. While recognising that such models are only as accurate as the data that inform them, the storm surge models developed by Environment Systems Ltd. for DPLUS091 (also in Anguilla) show similar results to ours.

Anguilla is already feeling the effects of climate change, including a conspicuously shrinking coastline and more severe hurricanes, and both humans and wildlife are bound to be impacted by this. But while it is relatively easy to predict and map the physical effects of sea level rise and

more severe hurricanes, what is less certain is how people of Anguilla will respond to the new challenges. Many wish to believe that tourism – the mainstay of Anguilla's economy for many years – will continue in some form, but will tourists continue to fly to Anguilla when its famous white-sand beaches have all but vanished and perhaps their own countries are in turmoil? The Covid-19 pandemic has provided a timely insight into what happens when tourism falters, prompting the Organisation of Eastern Caribbean States to encourage its members to explore ways to diversify their economies and, in particular, revitalise agriculture to improve their food security. The exact form and extent of such responses remain to be seen, but we believe the new species action plans are probably correct to expect increasing development pressure further inland on Anguilla and probably Scrub island, leaving only small, strictly protected areas and some of the offshore cays as the safest havens for endangered and endemic wildlife.

Assumption 2. Action plans correctly identify and address the main threats, capacity needs and resources to achieve true species recovery and resilience

Action plans have been developed and are now under review with input from a diverse array of stakeholders, including government and non-government agency representatives, community members, and technical experts. The planning process has been highly participatory and among the exercises used, stakeholders and technical experts were asked to compile problem tree analyses for each species and each island, detailing not only the direct threats or constraints to recovery but their underlying causes (see Annex 3: 8 for a description of the planning process). Next, the participants developed and discussed solution trees to identify potential actions to halt or work around the problems. The planning process incorporated presentations and training on various aspects of species conservation biology, such as the risks and effects of bottlenecks and inbreeding depression, the findings from the climate change analyses and PVAs, and factors to consider when planning reintroductions.

By combining technical expertise on the target species, climate change and conservation biology with local knowledge of this territory, its people and resources, and how things really work here, we were able to identify a wide array of remedial actions, filter out those that were too idealistic or impractical, and pinpoint where more training and resources are needed. The validity of this approach will be clearer towards the end of the project, but we believe the action plans are based on the best available scientific information, practical, tailored appropriately to Anguilla and, based on PVA modelling, sufficient to make a significant difference.

This is not to say our knowledge of the target species and their threats is perfect. For example, we have not yet identified the main pollinator(s) of the Anguilla bush or know how many Anguilla Bank skinks remain in Anguilla. The PVAs and action plans are not set in stone, however, and should be reviewed and updated if important new information or opportunities arise.

Assumption 3. Major field activities can be rescheduled if extreme weather events occur during grant period

Year 1 of the project focuses heavily on extensive fieldwork nationwide to assess the status and distribution of the seven target species. Happily no severe weather events impacted the project during this time. Projections for the 2020, however, point to a more active hurricane season, with as many as 16 named storms in the Atlantic, including four Category 1 and 2 hurricanes and four Category 3, 4 and 5 hurricanes (with sustained winds of 111 mph or greater). As usual, we will generally avoid conducting major field activities during the peak hurricane season (September through October) and continue to be vigilant for any storm warnings. Impending tropical storms are typically announced several days in advance. A safe area will be identified for the project's nursery plants and any animals in captivity, should a major storm arise.

Having already dealt with the aftermath of the Category 5 Hurricane Irma and other severe hurricanes, our project team has experience coordinating and implementing post-disaster conservation action, including monitoring and evaluating environmental impacts and biosecurity monitoring. Some of the new equipment purchased by the project in Year 1, including solar-powered generators, radios and two InReach satellite communication units, could help ANT and other partners to continue to function and keep in touch in the event of a major storm.

Assumption 4. Sufficient data exist to support consensus within Anguilla on the likely impacts of climate change

Government, non-government, the private sector, and the general public have been engaged from the beginning of this project through involvement in workshops and meetings as well as through surveys and questionnaires. Results of the public awareness survey at the start of the project indicate that while most residents are unfamiliar with most of our target species, they do perceive hurricanes as a major threat to Anguilla's wildlife (Annex 3: 13). Government ministries have accepted the Department of Environment-led climate change policy, and the private sector and community members agree that Anguilla is being and will continue to be affected by climate change, including sea level rise and more severe storm surges and hurricanes. Converting such knowledge and awareness into improved behaviour towards wildlife and natural habitats, however, is more challenging (see Assumption 8).

Assumption 5. National and regional stakeholders continue willingness to cooperate on biodiversity conservation initiatives

Year 1 of this project focused on collecting data and developing action plans, while Years 2 and 3 are to focus on implementing these plans. The action plans were developed in collaboration with the Government of Anguilla and landowners and community representatives, with results communicated to the public through presentations, meetings, and one-on-one conversations.

Community members now regularly contact ANT staff about sightings of endangered reptiles and have permitted staff to survey their properties for endangered reptiles and plants. Many of the planned conservation actions are concentrated on Anguilla's privately-owned offshore cays. Excellent relationships have already been established with the owners of Prickly Pear East and West, who are also members of a Marine Park Management Planning Committee formed through DPLUS 060. They have already endorsed habitat restoration actions and the reintroduction of Lesser Antillean iguanas. Project partners will use this established relationship to build support for additional species translocations. Other sites that have been identified for habitat restoration and species conservation include two crown-owned protected areas: Sombrero Island and Fountain National Park. Permission to conduct work on Sombrero Island has already been secured and the ANT will continue to engage in discussions with the Ministry responsible for Fountain National Park in Years 2 and 3.

Assumption 6. Young plants can be successfully transplanted from high risk areas to protected sites

FFI and ANT have discussed methods for growing and translocating lignum vitae with natural resource managers in St. Barths who have experience in relocating saplings and trees of this rare species as part of development offsetting projects. Our first attempts at growing seedlings in the ANT nursery have proved successful (Annex 3: 1m).

Less is known about the biology and requirements of the endemic Anguilla bush. Project staff have successfully trialled translocating young plants from high risk sites in the wild to the ANT nursery (Annex 3: 1n), experimenting with different soil types and watering regimes. As it is not yet clear whether the Anguilla bush can be grown from seed in a nursery, our work in Years 2 and 3 will focus on translocating young plants from sites earmarked for development to the safety of Fountain National Park and suitable offshore cays. Such translocations will need to be monitored closely to learn and improve our practices for conserving this rare shrub.

Assumption 7. Trained expertise remains in Anguilla

Some 23 individuals (13 male, 10 female) have benefitted from training in Year 1, including all the ANT staff and other island-based agency staff and residents, boosting the overall capacity of this small territory to plan and implement conservation actions. While we cannot prevent key persons from going overseas, the fact that multiple people and agencies are being trained and actively involved will reduce the risk of a critical loss of expertise.

Assumption 8. Improved knowledge leads to improved behaviour to conserve biodiversity

The available evidence suggests that increasing public awareness about the importance of Anguilla's biodiversity and endangered species does lead to a change in behaviour, at least to

some extent. Even during Year 1, the ANT was frequently contacted by community members to report sightings of snakes and lizards, and even called on to rescue racers and iguanas. Many people in Anguilla dislike and fear reptiles, especially snakes, and it is a very positive sign that more people are calling the ANT to advise, rather than simply killing the animals or spraying them with bleach. Community members also donated lignum vitae seedlings to the ANT in Year 1 as a way of contributing to their long term conservation, and one major landowner invited the project team to relocate Anguilla bushes from an area that is liable to be destroyed for a new access road.

While there is still a way to go, these are encouraging signs of a growing awareness that these are endangered species and should be treated with more respect. The project will continue to build on this through Years 2 and 3, especially through engaging stakeholders in implementing conservation actions to foster a vested interest and pride in their native species.

Assumption 9. The Covid-19 pandemic does not critically disrupt or diminish the project Outcome [NEW]

When this project was conceived, none of us foresaw the Covid-19 pandemic that emerged in the last quarter of Year 1. Happily, none of the project team members or their families have fallen ill thus far and the outbreak did not significantly affect any project activities or outputs in Year 1, during which a very large amount of fieldwork, training and several major workshops were accomplished successfully (Annex 3: 1). The repercussions for Years 2 and 3, however, will depend on how long the pandemic persists, how our respective governments respond, and any additional precautions that FFI and our partners take to ensure the safety of our staff and communities.

FFI and our partners held meetings in March (in person) and April (by Skype) to discuss and review the project work plan for Year 2 in light of the pandemic. Anguilla closed its ports on 17th March 2020 and, upon discovering two positive cases on 26th March, ordered a lockdown that began on 27th March. Project Coordinator Dr Louise Soanes chose to remain with her family in Anguilla where she, the ANT and other local team members continued working from home. As there have been no further cases in Anguilla at the time of writing, Dr Soanes and the ANT staff returned to their office on 22nd April but are maintaining social distancing. Anguilla's ports might remain closed to international travellers for months, but ANT is optimistic that most internal restrictions will be lifted soon and project fieldwork can resume, potentially before the end of May.

Even with a less optimistic timeframe, the project work plan for Year 2 is essentially unchanged from the original proposal. We believe we can still accomplish all the planned tasks on time, with just one notable exception: FFI and our partners concur that the operation to eradicate invasive alien mice *Mus musculus* from Sombrero Island (Activity 2.5) cannot take place in Year 2 Q1 as originally planned. This important activity will require a dozen personnel to stay on the remote island for 10-12 weeks and, to ensure the work is conducted safely and effectively, needs trainers from the UK with specialist expertise on rope access climbing and eradicating mice (such expertise does not exist in Anguilla yet). Furthermore, the expedition should be timed to occur between April and July to avoid the rough sea conditions earlier in the year and the peak hurricane season that follows. We therefore propose moving Activity 2.5 – and hence Indicator 2.3 – to early Year 3, with the hope that international travel will resume by May 2021: We will submit a Change Request form to Darwin Initiative to explain this. Because the mouse eradication operation is covered by matched funding the FFI Species Fund and other sources, however, this does not alter the Darwin Plus budget for Year 2.

Other activities are expected to proceed largely as planned, especially if internal travel (including travel to the offshore islands) can resume by Year 2 Q3 and international travel by Year 2 Q4. In the meantime, we can shift many of the planned meetings – even key staff training sessions and school classes – to online platforms and take advantage of being able communicate with almost every household on Anguilla using social media and WhatsApp. There are no plans for FFI or ANT staff involved in this project to be furloughed. In short, the project team is determined to adapt to the situation to ensure this will not jeopardise the quality and effectiveness of the conservation programme. Nevertheless, FFI will continue to liaise with our partners, abide by government instructions and medical advice, and notify Darwin Plus promptly if we are forced to alter or postpone any other activities or outputs in Year 2.

4. Project support to environmental and/or climate outcomes in the UKOTs

The primary purpose of this project is to enhance the resilience of Anguilla's threatened biodiversity and to inspire other islands to incorporate climate change in species action planning, potentially using similar methods and approaches. This project directly supports Anguilla's ability to achieve strategic long-term outcomes for the natural environment, including delivering commitments made by the Government of Anguilla under the various national strategies, policies and legislation listed below. This project is also contributing towards the 2030 Agenda and the Convention on Biological Diversity Aichi Targets (although not explicitly extended to Anguilla).

More specifically, through producing stakeholder- and climate-change informed species actions plans in Year 1, this project has already contributed to:

- The National Biodiversity Strategy and Action Plan, which calls for the gathering of data on "activities that have significant adverse impact on the conservation and sustainable use of biodiversity" and "conservation and sustainable use of biodiversity *in situ* and *ex situ*."
- The National Environmental Management Strategy, which calls for the "meaningful participation of civil society in decision making," "addressing the causes and impacts of climate change," "protecting cultural and natural heritage," and "protecting and conserving biodiversity."
- The Climate Change Policy, which calls for the implementation of "a national strategy for conservation and sustainable use of biodiversity."
- The Biodiversity and Heritage Conservation Act, which provides the legislative requirement for action plans listed as threatened or endangered within Schedule 1 of the Act.
- Agenda 2030, which calls for "urgent action to combat climate change and its impacts" and the protection, restoration, and promotion of "sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss."
- The Convention on Biological Diversity, which calls for improving our "knowledge, science base, and technologies relating to biodiversity its values, functioning, status and trends, and the consequences of its loss."

This project is also building the capacity of natural resource managers and decision makers to take an evidence-based approach to plan and mitigate climate change impacts on Anguilla's species and habitats, engage public support and coordinate actions on both the mainland and offshore cays. Thus, the first year of this project has also contributed to additional aspects of:

- The National Biodiversity Strategy and Action Plan, which calls for "research and training" as well as "exchange of information" as it relates to natural resources management.
- The Climate Change Policy, which calls for "improved understanding of the factors that influence adaptation decision-making."
- The Convention on Biological Diversity, which calls for increasing public awareness "of the values of biodiversity and the steps they can take to conserve and use it sustainably."

This project is making good use of existing partnerships, networks, and relationships. Through involving multiple stakeholders in project implementation and monitoring, technical skills and knowledge will be shared and national capacity to manage Anguilla's most threatened species will continue to grow.

5. Consideration of gender equality issues

Day to day management of the project is handled by an all-female team comprised of the Project Leader Dr Jenny Daltry, Project Coordinator Dr Louise Soanes and the ANT Executive Director Farah Mukhida. The Project Steering Committee has changed in composition through the year but has remained around 50% female, and the project to date has trained 23 persons, 10 (43.5%)

of them female. Overall, we believe females are very well represented in this project, as decision makers, trainers and as beneficiaries of the new training and learning opportunities.

6. Monitoring and evaluation

The monitoring and evaluation plan has been implemented as described in our proposal. FFI and ANT—specifically, Dr Jenny Daltry (Project Leader), Farah Mukhida (Co-Project Leader) and Dr Louise Soanes (Project Coordinator)—are responsible for ensuring that the project is on schedule and being monitored, and report to the Project Steering Committee and collaborating organisations and relevant stakeholders. The FFI Project Leader met with ANT, Durrell, RSPB and government partners numerous times in person and by Skype during Year 1 of the project, and the Project Coordinator was based in Anguilla (specifically in the ANT office) all year. This has allowed frequent collaborative reviews of project activities and outputs by FFI and our partners. We have maintained and followed a detailed monthly work plan and financial plan, which is reviewed and updated at least once a quarter. Both FFI and ANT share responsibility for keeping records of activities, outputs and the indicators in the project logframe.

The large body of data gathered on the status and distribution of all seven target species in Year 1 (summarized in Annex 3: 3) will serve as the baseline for monitoring and measuring project impact on these endangered animals and plants across Anguilla. Target populations will be surveyed at least twice during the grant period to evaluate any changes and are intended to be routinely monitored by trained local personnel every few years thereafter. Species- and site-specific indicators were developed as part of the action plans in Year 1 (Output 1 – to be peer-reviewed and launched in Year 2 Q1), along with associated reintroduction and biosecurity protocols (Output 2) to ensure our methods are robust and follow best practice. In addition to participating in fieldwork, the project's Information Manager Clarissa Lloyd has set up the necessary databases at ANT to handle the growing body of data generated. Also in Year 1, we gathered baseline data on the competences of trainees using self-assessment questionnaires (Annex 3: 11 and 12) and surveyed local knowledge and attitudes towards endangered species (Annex 3: 13), which will be repeated in Year 3 to assess project impact on national capacity and awareness. ANT is also collating and documenting verbal and other feedback from the public to gauge any evidence of improved understanding, willingness and capacity to conserve endangered species, such as individuals offering to be volunteers or helping to conserve the wildlife on their lands.

7. Lessons learnt

Overall the project has gone very smoothly to date, which can be credited to building on the existing strong working relationships among FFI, ANT, Durrell and RSPB, our prior experience with many of the project sites and some of the target species, and perhaps most importantly, the fact that this project was greatly wanted by our national hosts from the start. Even though FFI was the lead applicant for the Darwin Plus grant, ANT in particular was closely involved in formulating the proposal and its staff evidently feel a real sense of ownership and commitment to ensuring it succeeds. Field staff notably went above and beyond the call of duty to devote a vast number of person-hours searching for and mapping the locations of the target species nationwide throughout the year, both on mainland Anguilla and all of the offshore cays.

Recognising that most of the team members were involved in more than one project (including DPLUS060, which has just completed its third year), another key to success was good coordination and adopting a detailed monthly work plan that covered all activities of this Darwin Plus project as well as other projects in Anguille. This consolidated work plan directly informed our individual staff work plans and targets through Year 1, and will be continued through Year 2.

One of the highlights of Year 1 was successfully integrating detailed climate change forecasts into Population Viability Analyses using Vortex to model the likely impact on each species and to test and evaluate possible solutions. When we developed our proposal, we were optimistic this approach would work but to the best of our knowledge it had never been tried before. We developed PVA models for four of the seven target species (omitting only the skink and the plant species due to insufficient data on their reproductive biology) and all showed that while 'doing

nothing' would result in ongoing decline and even extinction in the near future, all the species have very good prospects of survival if we undertake some practical interventions. These include eradicating alien rodents and restoring habitat on Sombrero, reintroducing racers to the Prickly Pear Cays, and adding more individuals to the depleted Lesser Antillean iguana population (see examples in Annex 3: 6). We will begin implementing the priority actions in Year 2. The action planning process also greatly benefited from the large body of data gathered by the team in Year 1 with help from the general public (Activity 1.1), coupled with expertise and insights from all the partners and local stakeholders. The steps we have devised to develop these climate-smart species action plans will be submitted to an appropriate journal in Year 2 because they could prove helpful for other conservation programmes.

There is nothing substantial we would have changed in Year 1.

8. Actions taken in response to previous reviews (if applicable)

Not applicable.

9. Other comments on progress not covered elsewhere

The project went very smoothly in Year 1, with no significant difficulties, and our approaches and methods worked even better than anticipated. This was, however, a period focused on the intensive but relatively straightforward tasks of gathering information, analysing data, developing the species action plans, and training and mentoring some very willing and enthusiastic nationals.

Looking ahead, the project faces several challenges. First is the Covid-19 pandemic, which could potentially disrupt some activities in Year 2, including communication and implementation of the new action plans. As discussed under the newly added Assumption 9 above, however, it appears our project team can still usefully complete most of the planned activities and outputs in Year 2, even if international travel is prevented for most of the year.

Second, our plan to translocate some Lesser Antillean iguanas from St. Barths to bring fresh blood lines and boost the tiny population in Anguilla (Activity 2.1) has hit a snag with the recent discovery of a novel bacterial disease, *Devriesea agamarum*, affecting iguanas in St. Barths. We have begun urgent discussions with colleagues in Dominica and St. Eustatius to determine whether suitable stock can be sourced from either of these islands instead. This looks promising, unless the disease has reached these countries as well. Our partner Durrell has applied for funding from Morris Animal Foundation to study the disease and develop a more advanced method for detecting it. If is proves impossible to source reliably healthy stock during the grant period, we may have to postpone this activity and replace it with other top priority measures from the iguana action plan. Naturally any such changes would be discussed with Darwin Initiative beforehand.

Third, as discussed under Assumption 1, a very active hurricane season is forecast for 2020. The FFI and ANT team members are already very experienced in coping with hurricanes and fully familiar with the safety measures to take in the event of a hurricane warning. We had factored the risk of hurricanes into the original project work plan (avoiding major field activities between August and October) and have recently procured some useful equipment, such as a solar powered generator and satellite communications, that will help ANT get back on its feet more quickly should a major storm strike again. Nevertheless, we don't underestimate the power of a hurricane to endanger and disrupt life on Anguilla. There is also a risk that some of the target species (in particular the Sombrero ground lizard and Little Scrub ground lizard) could see their numbers plummet if the hurricane season brings severe storm surges before we have had the chance to implement the recovery plans.

10. Sustainability and legacy

The project was designed to give Anguilla the best chance of conserving its rare and endemic species. In Year 1, we invested considerable time and effort into researching and designing

actions to save Anguilla's most threatened species and their habitats, explicitly taking account of climate change projections, other threats and constraints (such as invasive species), and national interests and capacity (Output 1). Using state-of-the-art modelling, the project has identified practical actions to make the best use of the limited space and resources available in Anguilla, both now and realistically in the future. As the new plans become rolled out in Years 2 and 3 using funds from Darwin Plus and other sources, we are optimistic that by the project end, the target species will become significantly more resilient. This will be evaluated using PVA modelling [see examples in Annex 3: 6] as well as by monitoring population sizes, distribution ranges and habitat quality (Output 2).

Good progress was also made towards Output 3 in Year 1, to identify and address local capacity needs. Twenty-three persons have benefitted from training to date, including all ANT staff, who have advanced rapidly in terms of their knowledge and know-how at identifying and monitoring the target species and even applying conservation approaches such as translocating and growing the rare plants, planning reintroductions and preventing incursions by invasive rodents. The project has also successfully begun to capture the interest and support of the public, and ANT is encouraged by the sudden increase in the number of calls to report sightings of the endangered species. Calls from homeowners and landowners to rescue and relocate reptiles and plants at risk are especially promising because they indicate a rising awareness that these species matter. We were able to capitalise on widespread publicity and a surge of interest and national pride when local man Stanley Rogers was recognised as a Disney Conservation Hero for his efforts to help the Little Scrub ground lizard – one of the most vulnerable of the project's target species, and an endemic animal that most Anguillans had never heard of before). The impacts of the capacity building and outreach programmes will be evaluated more thoroughly towards the end of the project by repeating the staff competences survey and community awareness survey (Annex 3: 11, 12 and 13).

While the capacity building programme has largely followed the original proposal, we are delighted to have been able to add another major contribution through building a 34' boat (Activity 3.8 and Indicator 3.7, added in November 2019 with consent from Darwin Initiative). This will dramatically reduce costs for ANT and government agencies, which were previously dependent on hiring costly and often unsuitable tour boats to travel to and manage Anguilla's offshore islands. Having an affordable means of transport that is available whenever needed will be a major, lasting legacy of this project. We are very grateful to Darwin Initiative for permitting us to reallocate some of our budget for boat hire to purchasing the new boat.

11. Darwin identity

The Darwin Initiative has been recognised on all materials produced through this project, including press releases and social media posts (e.g. Annex 3: 15) and presentations (e.g. see powerpoints in Annex 3) and has been recognised as a distinct project being conducted by FFI and its partners.

Having linked this project to Darwin Initiative in all our public awareness activities, we believe that there is some understanding of Darwin Initiative within Anguilla although the level of awareness and understanding has not been formally measured. The Darwin Initiative is certainly very well known to the Government of Anguilla and its agencies, particularly as this is only one of several high-profile DPLUS projects underway in Anguilla.

All project partners have Facebook pages and Instagram accounts, and both FFI and RSPB also have active Twitter accounts. Darwin Plus has been linked to Instagram posts related to this project through using #DPLUS, #DarwinPlus and @defrauk.

12. Safeguarding

Prior to transferring any Darwin Plus funds to Anguilla National Trust in Year 1, we conducted due diligence for the organisation (see below), and FFI's Safeguarding Children and Adults at Risk Policy & Procedure formed part of all project contracts and agreements with all third party contractors and sub-grantees, including our partners ANT, RSPB and Durrell, and contracted

personnel including Dr Louise Soanes and Elizabeth Bell: The contracts and agreements require all parties to read and abide by these policies. We noted that ANT also has its own Child and Vulnerable Adult Protection Policy.

No safeguarding issues were reported during Year 1.

FFI's suite of safeguarding policies and protocols are summarized as follows:

FFI's **Safeguarding Children and Adults at Risk Policy & Procedure** was developed in December 2014 and last updated in March 2018. The policy applies to Members of Council and its sub-committees, FFI employees, temporary staff provided through agencies, volunteers and interns, contractors, consultants, service providers and any third parties who carry out work on behalf of FFI, in partnership with FFI or in conjunction with FFI. The policy demonstrates the organisation's commitment to safeguarding children and adults at risk and to complying with the UN Convention on the Rights of the Child; confirms the arrangements and procedures in place to safeguard children and adults at risk, including FFI's code of conduct; and provides clear guidance on how to raise, and how FFI responds to, concerns and allegations regarding the maltreatment of children and adults at risk. The policy expressly states that FFI does not tolerate sexual exploitation and abuse of any kind.

FFI's **Anti-bullying and Anti-harassment Policy** was developed in March 2018. The policy applies to Members of Council and it sub committees, FFI employees, temporary staff provided through agencies, volunteers and interns, contractors, consultants and any other third parties who carry out work on FFI's behalf. The stated purpose of the policy is to ensure a safe, welcoming and inclusive working environment, which is free from intimidation, threats, discrimination, bullying or harassment; to communicate clearly FFI's zero-tolerance of any form of bullying or harassment; to define the terms 'bullying' and 'harassment' and provide examples, so that there is a clear understanding of the types of conduct that are prohibited; to communicate the importance of reporting incidents of bullying and harassment; and to communicate the procedures in place to manage incidents of bullying and harassment. The policy expressly states that bullying or harassment of any kind against a person or group of people, whether persistent or an isolated incident, will not be tolerated under any circumstances.

FFI's **Whistleblowing Policy** was developed in June 2013 and last updated in December 2019. The policy applies to FFI employees. The stated purpose of the policy is to encourage employees to report suspected wrongdoing in the organisation as soon as possible, in the knowledge that their concerns will be taken seriously and investigated as appropriate, and that their confidentiality will be respected. It provides guidance on how to raise those concerns and aims to reassure employees that they can raise genuine concerns in good faith without fear of reprisals, even if they turn out to be mistaken.

FFI's **partner due diligence** procedures include checking whether any safeguarding concerns have arisen with the partner concerned and the Safeguarding Children and Adults at Risk Policy & Procedure forms part of contracts and agreements with third party contractors and sub-grantees. We are also currently researching LMS platforms (Learning Management Systems) which would enable online training in policies & procedures.

We monitor updates in Government and Charity Commission guidance and review our policies and procedures accordingly.

In terms of **social safeguards**, FFI has publicly available position papers on our approach to **Free, Prior and Informed Consent Position**, **Gender in Conservation, Displacement and Restrictions on Access to Resources** and **Conservation, Livelihoods and Governance** (links below). Our specialist Conservation, Leadership and Governance team supports regional FFI staff and partners to take a holistic, people-centred approach to biodiversity conservation, and ensure project activities are strongly aligned with these principles.

13. Project expenditure

Table 1: Project expenditure <u>during the reporting period</u> (1 April 2019 – 31 March 2020)

Project spend (indicative) in this financial year	**2019/20 D+ Grant (£)**	**2019/20 Total actual D+ Costs (£)**	**Variance %**	**Comments (where there are significant variances of +/- 10%)**
Staff costs				
Project Leader: Dr Jenny Daltry				
Finance Administrator: Isabel Vique				
Project Coordinator: Dr Louise Soanes				
Project Field Staff: Tashim Flemming				
Project Field Staff: Giovanni Hughes				
Herpetology Adviser: Matt Goetz				
Policy Adviser and UKOT Liaison: Lyndon John				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Boat				
Lizard traps and extendable pole				
Universal PIT tag reader				
Tents and mats				
First aid kits				
GPS (Garmin)				
Project laptop (with MS Office software)				
Projector				
Daypacks for field staff				
Others (Please specify)				
Consumables				
ArcView GIS software				
TOTAL				

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2019-2020 – <u>if applicable</u>

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
Impact Significantly enhanced resilience of Anguilla's threatened biodiversity directly informs and inspires other islands to incorporate climate change in species action planning.		Too soon to see results (pending action plan priorities to be carried out in Years 2 and 3)	
Outcome Globally threatened species in Anguilla are more resilient to climate change through climate-informed recovery interventions, strong management competencies, and more supportive civil society	0.1 Climate change-informed Population Viability Analysis modelling demonstrates at least 50% improvement in the viability of target species over the next 50 years by implementing action plans. 0.2 At least four critically threatened species achieve at least a 10% increase in population size and/or number of populations by end of Year 3. 0.3 Work plans and budgets of the responsible national agency and supporting partners demonstrate intention to continue implementing action plans beyond the life of this project. 0.4 At least 7 natural resources managers and conservation officers demonstrate increased capacity (at least a 30% improvement in capacity level	0.1 Good progress was made in Year 1 Population Viability Analysis models established and indicate good prospects of recovery pending actions to be taken in Year 2 and 3 (see Annex 3: 6). 0.2 Too soon for results. Changes are expected after action plan interventions are implemented in Years 2 and 3. 0.3 Good progress made in Year 1. FFI has secured additional funds to continue conservation work until the end of 2022 and ANT has begun formulating new proposals to continue implementing the action plans. 0.4 Good progress made in Year 1. Changes will be quantified by repeating the competences assessment in Year 3.	The main focus of Years 2 and 3 will be on implementing priority measures from the new species action plans, choosing those that will boost the resilience of the target reptiles and plants to climate change. This will entail a range of activities (listed under Output 2) that will also further build the skills and experience of ANT and other nationals, and create new opportunities and stories to engage the public (Output 3). Monitoring of biodiversity will continue through Years 2 and 3 under Output 2, and any significant changes will be measured against baseline data from Year 1 (and pre-project data where applicable).

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
	using standardised scoring method) to adaptively manage species conservation needs.		
Output 1. Climate change-informed species action plans produced by a participatory process for Anguilla's terrestrial Endangered species that are most at-risk to climate change	1.1 Baseline information on distribution, status, and life history of 7 target Endangered and Critically Endangered species updated by Q3Y1.	1.1 Baseline information on the distribution, status, and life history of the 7 target Endangered and Critically Endangered species was collected in Year 1 and used to guide species conservation action planning (Annex 3: 3)	
	1.2 Projected effects of climate change on Anguilla in general - and the target species in particular - reviewed and updated by Q3Y1.	1.2 Projected effects of climate change on Anguilla in general, and the target species in particular, were reviewed and updated by Q3. Findings were presented in the *Climate Change Vulnerability Assessment of Anguilla's Endangered Terrestrial Species* (Annex 3: 4) and *Climate Change Predictions for Anguilla: Considerations for Endangered Species Management* (Annex 3: 5)	
	1.3 Action planning workshops conducted with at least 30 stakeholders in Q4Y1, taking account of short- and long-term climate change predictions.	1.3 Seven days of action planning workshops were conducted in Q3 and Q4, taking account of short- and long-term climate change predictions. Over 30 participants were invited but actual attendees numbered 22. However, additional persons will take part in reviewing the plans.	
	1.4 Action plans finalised and disseminated to all stakeholders within Anguilla by Q1Y2.	1.4 Action plans for endangered reptiles and plants have been drafted and are on track to be finalised and disseminated in Q1Y2.	
Activity 1.1 Complete literature review and rapid field surveys of the status, distribution and ecology of the seven target species (*Iguana delicatissima,* CR; *Pholidoscelis corvinus*, CR*; P. corax,* CR; *Spondylurus powellii,* EN; *Alsophis rijgersmaei,* EN; *Guaiacum officinale,* EN; *Rondeletia anguillensis*, CR).		Literature review (Annex 3: 2) and field surveys were completed for all seven target species. Database populated and findings mapped and compiled in the report "*Distribution and Population Estimation of Anguilla's Endangered Reptiles and Plants*" (Annex 3: 3).	Completed
Activity 1.2 Complete analysis and report on the climate change vulnerability assessments for Anguilla's globally threatened terrestrial species.		Climate change vulnerability assessments for Anguilla's globally threatened terrestrial species have been completed and presented in the report *Climate Change Vulnerability*	Completed

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
		Assessment of Anguilla's Endangered Terrestrial Species (Annex 3: 4).	
Activity 1.3 Collate and analyse climate change data and forecasts for the northern Lesser Antilles to elucidate likely climate change impacts on species and habitats in Anguilla, including offshore cays.		Climate change data and forecasts were collated, analysed, and presented in the report *Climate Change Predictions for Anguilla: Considerations for Endangered Species Management* (Annex 3: 5).	Completed
Activity 1.4 Drawing on findings from 1.1–1.3, conduct Population Viability Analyses (PVAs) of the seven target species to calculate extinction risk (repeated at project end to measure impact on viability).		Population Viability Analyses have been conducted for all island populations of four target reptiles - the Lesser Antillean iguana, Anguilla Bank racer, Sombrero ground lizard and Little Scrub ground lizard. The new PVA models incorporate population biology and climate data from preceding activities. Population sizes and extinction probabilities have been calculated for all populations under various scenarios, including no action being taken versus activities under Output 2 being implemented (e.g. see Annex 3: 6).	PVA models are to be calibrated and refined as and when new monitoring information arises, and used in Year 3 to assess the impact of project activities (especially those listed under Output 2) on population viability. PVAs for the remaining three species (Anguilla Bank skink, lignum vitae and Anguilla bush) will be conducted if we can obtain more data or advice on their reproductive biology.
Activity 1.5 Hold stakeholder workshops to present and discuss findings from 1.1-1.4 and, using a participatory process, develop action plans for the target reptiles and plants (one plan per group).		A total of seven days of stakeholder workshops, plus some additional field exercises, were held in November 2019 and March 2020 to present and discuss findings from the previous activities and develop action plans for the five target reptiles and two target plans. Action planning following a highly participatory approach (see Annex 3: 8).	Completed

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
Activity 1.6 Write up, peer-review and publish the climate change-informed conservation action plans for the threatened reptiles and plants.		Climate change-informed conservation action plans for all seven reptiles and plants have been drafted.	Conservation action plans to be reviewed and finalised in Year 2, Q1.
Output 2. At least six priority interventions prescribed by the action plans to increase climate change resilience are implemented, monitored and evaluated	2.1 *Iguana delicatissima* population size increased by at least 20% through creation of artificial nest sites and release of at least 30 additional stock by end of project.	2.1 Action to be implemented in Year 2 and monitored in Year 3.	
	2.2 At least 300 seedlings of two endangered plant species planted and thriving by end of project.	2.2 Trials to grow seedings began ahead of schedule in Year 1, with 43 seedlings thriving so far. Target expected to be reached by Year 3.	
	2.3 Invasive mice eradicated from Sombrero island by end of Q2Y2	2.3 Good progress made to prepare for this activities, including completing the operational plan (Annex 3: 20), selecting personnel and procuring equipment. This indicators must be postponed to Year 3, Q2, however, because international travel has been disrupted by the Covid-19 pandemic. Change request form to be submitted to Darwin to change target deadline from “Q2Y2” to “Q2Y3”.	
	2.4 Four offshore cays that are essential refuges for threatened species are actively kept free from harmful invasive alien vertebrates (rats, mice, green iguana).	2.4 Good progress made in Year 1, with three important offshore cays (Dog Island, Prickly Pear East and Prickly Pear West) being actively and successfully kept free of harmful invasive rodents and green iguanas. Project on track to safeguard at least four and probably five cays by Year 3.	
	2.5 At least one Endangered or Critically Endangered reptile reintroduced successfully to a secure offshore cay, increasing its range by at least 30 hectares by end of project.	2.5 Action to be implemented in Year 2 and monitored in Year 3.	
	2.6 At least one additional key intervention from the action plans identified and implemented by end of project (the specific measure[s]	2.6 At least one additional key intervention from the action plans will be identified and implemented by end of project (the specific measure[s] will be submitted for approval by Darwin by Year 2 progress report). We have a good idea of what this will be.	

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
	will be submitted for approval by Darwin by Year 2 progress report).		
Activity 2.1 Translocate at least 30 *Iguana delicatissima* from Forchue Island, St. Barths, to reinforce the colony on Prickly Pear Cays, Anguilla, with the necessary CITES permits, health assessments and genetic records.		Scheduled for Year 2. PVA modelling (Activity 1.4) confirmed the need to bring new blood lines to Anguilla's depleted population of Lesser Antillean iguanas, but preparations hit a snag in Year 1 when the bacterial disease *Devriesea agamarum* was discovered in some populations of Lesser Antillean iguanas in St. Barths. Because it would be too risky to translocate any individuals that might infect Anguilla's small population, we have begun discussions with other islands to identify alternative sources.	Continue to engage in discussions with the Government of Dominica Department of Forestry and the Government of St. Eustatius to determine feasibility of translocating individuals from either or both islands to Anguilla. Change request form to be submitted to Darwin to change the named source from "Forchue Island, St. Barths" to "a healthy source population outside of Anguilla".
Activity 2.2 Establish and monitor artificial sandy nesting sites in *Iguana delicatissima* habitat on the Anguilla mainland (to enhance reproductive success and enable juveniles to be relocated to safer areas in accordance with Output 1).		Scheduled for Year 3. The project team has received advice, and offers of practical help, from ATE, which has experience of building artificial nesting areas on St. Barths.	Because surveys suggest no Lesser Antillean iguanas remain on the mainland, we proposed building artificial nesting sites on Prickly Pear East between Q2Y2 and Q3Y2. Monitoring of these sites will then begin during the nesting season in Q4Y2 and continue into Q1Y3. Change request form to be submitted to Darwin to change the named location from "Anguilla mainland" to "Prickly Pear East".
Activity 2.3 Plant seeds and seedlings of *Guaiacum officinale* and *Rondeletia anguillensis,* including those translocated from sites at high risk, in the Department of Agriculture nursery and suitable habitats identified by Output 1, and provide follow up care as needed.		Ahead of schedule, 40 seedlings of lignum vitae *Guaiacum officinale* are currently being grown in the ANT nursery and satellite nursery at the Albena Lake Hodge Comprehensive School for reintroduction purposes. Three Anguilla bushes *Rondeletia anguillensis* were rescued from a	Additional lignum vitae saplings will be grown in nurseries from seed and/or 'wildlings' for planting in suitable areas. Anguilla bushes will continue to be relocated from a threatened area in East End village and grown in the ANT nursery and/or directly transplanted to a safe site

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
		proposed development site and trials underway to learn how to propagate and grow the species *ex situ* for reintroduction purposes.	(e.g. Fountain National Park). In addition, a land acquisition report will be drafted by ANT for a small but irreplaceable Anguilla bush site on the Anguilla mainland.
Activity 2.4 Monitor the growth and survival of planted *G. officinale* and *R. anguillensis* populations, including reintroduction sites.		N/A – Planting to commence in Year 2.	Growth and survival of reintroduced and translocated plants will be monitored through Years 2 and 3. Growth and survival of both species in the nurseries will also be monitored throughout.
Activity 2.5 Eradicate invasive alien mice from Sombrero Island in accordance with the 2018 eradication feasibility study and operational plan to facilitate recovery and resilience of *Pholidoscelis corvinus* and other Sombrero endemics.		Useful preparatory work was conducted in Year 1, including completing the operational plan (Annex 3: 20), procuring equipment and selecting national and international personnel.	The c. 10-week eradication operation was scheduled to take place in early Year 2 but must be postponed to early Year 3 due to the Covid-19 pandemic. We shall complete the remaining preparatory work in Year 2, including shipping the rodenticide to Anguilla (donated gratis by the manufacturer, Syngenta Crop Protection plc).
Activity 2.6 Implement biosecurity surveillance and rapid response protocols to prevent further incursions by harmful invasive alien species on priority islands for endangered species (Dog Island, Prickly Pear Cays, Little Scrub, and Sombrero).		Biosecurity monitoring on Dog Island and the Prickly Pear Cays was implemented by trained ANT staff and volunteers throughout Year 1 as planned. Happily no incursions were detected.	Biosecurity monitoring on Dog Island and Prickly Pear cays will continue through Year 2 and 3. Biosecurity monitoring on Little Scrub will begin in Year 2, and on Sombrero in Year 3 (as soon as the mice have been eradicated: Activity 2.5).
Activity 2.7 Translocate at least 30 *Spondylurus powelli* (and/or another target reptile species) from mainland Anguilla to reintroduce this species to Prickly Pear West in accordance with Output 1 and IUCN Reintroduction Specialist Group guidelines.		N/A.	Anguilla Bank skinks *Spondylurus powellii* are scheduled to be reintroduced to the Prickly Pear Cays in Year 3, but we will conduct the feasibility study in Year 2 and may

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
			bring the translocation forward to Year 2 if conditions are favourable.
Activity 2.8 Implement at least one additional conservation measure prescribed by the action plans (Output 1), to be discussed with and approved by Darwin.		N/A	Scheduled for Year 3 but may be brought forward to Year 2. Many actions have been identified but the most urgent one in the new reptile action plan is to conduct a conservation translocation of Little Scrub ground lizards to Prickly Pear West (because Little Scrub island is rapidly becoming uninhabitable due to climate change). We propose conducting a feasibility study for this action in Year 2, Q2, and potentially begin translocating lizards by Q3, following IUCN best practice. We will seek approval to use Darwin funds for this activity if the feasibility study is favourable.
Activity 2.9 Establish and launch long term monitoring programme for the target reptile and plant species to evaluate project impacts on status and distribution.		Monitoring of project impact on the species is not scheduled to begin until Years 2 and 3. However, the methods used to survey all seven target species (Activity 1.1), and the data collected in Year 1, form the main basis of the monitoring programme. We have also begun developing additional methods for monitoring the growth and survival of animals and plants to be translocated or reintroduced in Years 2 and 3.	Monitoring methods will be refined and implemented through Years 2 and 3.
Output 3. National capability to plan, manage, implement and monitor climate change-informed species conservation actions is raised, supported by enhanced technical skills	3.1 Communications and public awareness plan developed by Q2Y1.	3.1 Communications and public awareness plan was developed by the Anguilla National Trust in Year 1 (Annex 3: 14).	

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
and greater public awareness and cooperation			
	3.2 At least 70% of nationals (c. 8,500 people) know about the project and can articulate why the target species merit conservation.	3.2 Baseline public awareness survey conducted in Year 1 with 134 respondents (86 females, 47 males). This will be used as one of the methods for measuring project impact in Year 3 (Annex 3: 13).	
	3.3 At least 40 Anguillan residents volunteer their time and resources towards implementing the conservation actions by end of project.	3.3 8 Anguillian residents (5 male, 3 female) assisted with biosecurity monitoring on Dog Island and the Prickly Pear Cays, and 6 male students and teachers from the Albena Lake Hodge Comprehensive School voluntarily assisted with endangered plant care at the nursery located on the School's campus (ANT satellite nursery).	
	3.4 At least 30 nationals gain advanced technical skills and experience in developing action plans and implementing conservation actions by end of project.	3.4 20 nationals (12 male, 8 female) have received and applied advanced training in a range of relevant conservation techniques. 10 local project team members and volunteers were trained in wildlife survey planning and data analysis in Year 1. These include: 4 ANT staff (3 male, 1 female) trained by FFI and EAG on racer survey methods in Antigua; 4 ANT staff (3 male, 1 female) received advanced training from ATE on iguana survey methods (including how to take mouth and cloacal swabs to test for disease) in St. Barths; 1 male project team member trained in iguana conservation and biology in Honduras (Annex 3: 1e); 9 ANT staff and other nationals (6 male, 3 female) were trained in and applied biosecurity methods on the offshore islands; 6 local male students trained in and applied basic plant nursery methods. Furthermore, all ANT staff and other nationals also participated in the action planning workshops, learning participatory planning approaches (Annex 3: 8), relevant conservation management approaches (e.g. Annex 3: 9) and gaining greater knowledge of the target species (e.g. Annex 3: 10).	
	3.5 Project methods and lessons learned disseminated to relevant natural resource managers within all Caribbean UKOTs and other sub-regional islands by end of project.	3.5 Underway. In Year 1, Project methods and findings were presented at three international conferences: The *4th Annual Caribaea Initiative Research and Conservation Conference* in the Dominican Republic, the *Inter-Island Environment Meeting and Wilder Islands Conference* in Alderney, Channel Islands (Annex 3: 19), and the *World Congress of Herpetology* in Dunedin, New Zealand. Collectively, these meetings reached over 400 conservation practitioners, scientists and students from over 40 countries, including most Caribbean UKOTs.	

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
	3.6 At least GBP 100,000 generated in cash and/or in-kind to continue implementing action plans after the grant period. 3.7 Boat procured, maintained and in active use by the ANT and Government of Anguilla for conservation work on offshore islands and other coastal areas.	3.6 FFI has already secured a further £from the Prince of Wales's Charitable Fund (three year grant, January 2020 through December 2022) as well as a two year grant of US (approx. £) from the US Fish and Wildlife Service to support conservation work on the offshore islands. 3.7 One 34' boat has been procured (Annex 3: 1p). This is to be launched in Year 2 and used by the ANT and the Government of Anguilla for conservation work on offshore cays and other coastal areas. *This indicator was added in November 2019, with approval from Darwin Initiative*.	
Activity 3.1 ANT staff and other participating nationals complete self-assessment competences questionnaires to identify training needs (repeated at project end to measure impact on capacity).		Self-assessment questionnaire forms were prepared by FFI and completed by all ANT staff in Q1 (Annex 3: 11, Annex 3: 12)	Self-assessments to be completed by ANT volunteers and other personnel, as required (and repeated in Year 3)
Activity 3.2 Plan and undertake training and on-the-job mentoring of ANT staff and other nationals in applied conservation management.		Training and on-the job mentoring of all ANT staff, ANT volunteers and other nationals have been ongoing throughout Year 1, guided by the results of Activity 3.1 but also taking advantage of additional, external training opportunities where possible (e.g. ANT staff Tashim Flemming undertook training in Honduras on iguana biology and survey methods: Annex 3: 1e).	Training and on-the job mentoring of ANT staff, volunteers and other nationals will continue. We will pay increasing attention to other practical aspects of species conservation, including tree planting and lizard reintroductions, in line with the species action plans. At least one ANT staff will gain advanced boat captaincy skills by understudying with an experienced DFMR captain.
Activity 3.3 Conduct public survey to evaluate knowledge, attitudes and behaviour towards endangered wildlife and climate change (repeated at project end to evaluate impact).		A public survey was completed (with 134 respondents: 86 females, 47 males) and results analysed (Annex 3: 13). Though this is a small sample, the findings are consistent with previous observations.	Survey to be repeated in Year 3 to quantify project impact. The project team will also continue to gather *qualitative* examples and evidence of local knowledge, attitudes and behaviour.
Activity 3.4 Develop and implement an advocacy and public awareness campaign (including but not limited to, newspaper articles, press releases, presentations, CCSleuth, and social media).		Advocacy and public awareness campaign plan devised, focusing on the public and decision-makers in Anguilla (Annex 3: 14), and many planned tasks	The campaign will continue to be implemented through Years 2 and 3, drawing on news and stories from the project and actively involved the

Project summary	Measurable Indicators	Progress and Achievements April 2019 - March 2020	Actions required/planned for next period
		were implemented in Year 1 (see Annex 3: 1 and 15–18).	public in fieldwork where it is safe and appropriate to do so.
Activity 3.5 Publicise and report on project progress and results through national and international media and directly to national groups, cross-territory stakeholders, international scientific community, and Executive Council.		The project was reported in national and international media, social media platforms, and national meetings (see main text).	This activity is ongoing.
Activity 3.6 Share and discuss project methods, results, lessons learned and opportunities for replication through regional and international forums (including regional conferences of Caribaea Initiative and BirdsCaribbean).		Project objective and methods presented at *The 4th Annual Caribaea Initiative Research and Conservation Conference* in the Dominican Republic, the *Inter-Island Environment Meeting and Wilder Islands Conference* in Alderney, Channel Islands (Annex 3: 19), and the *World Congress of Herpetology* in Dunedin, New Zealand. Collectively, we reached over 400 conservation practitioners, scientists and students from over 40 countries, including most Caribbean UKOTs.	We will continue to explore opportunities to share project objectives, methods, and interim results. While some international conferences are likely to be cancelled this year due to the pandemic, there are likely to be more opportunities to share information with other practitioners through online webinars.
Activity 3.7 Produce and disseminate case studies outlining methods, results and lessons learned from designing and implementing the climate change-informed action plans for the target species.		N/A	Case studies to be completed in Year 3.
Activity 3.8 Procure equipment to enhance national conservation capacity, including purchasing a boat to facilitate the management of offshore islands and other coastal areas by ANT and Government of Anguilla.		The project procured over £18,000-worth of equipment in Year 1 plus £2,900-worth of consumables for conservation work in Anguilla, including office equipment, field survey tools, camping gear and nursery equipment. In addition, the project commissioned a 34’ boat (total cost approximately £112,000) (Annex 3: 1p).	Some additional equipment and consumables for the plant nursery, mouse eradication, and reptile and plant reintroductions/translocations are to be purchased in Year 2, as required. The new boat to be completed and launched as soon as possible in Year 2.

Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed) - <u>if applicable</u>

N.B. if your application's logframe is presented in a different format in your application, please transpose into the below template. Please feel free to contact Darwin-Projects@ltsi.co.uk if you have any questions regarding this.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: Significantly enhanced resilience of Anguilla's threatened biodiversity directly informs and inspires other islands to incorporate climate change in species action planning.			
Outcome: Globally threatened species in Anguilla are more resilient to climate change through climate-informed recovery interventions, strong management competencies, and more supportive civil society	0.1 Climate change-informed Population Viability Analysis modelling demonstrates at least 50% improvement in the viability of target species over the next 50 years by implementing action plans. 0.2 At least four critically threatened species achieve at least a 10% increase in population size and/or number of populations by end of Year 3. 0.3 Work plans and budgets of the responsible national agency and supporting partners demonstrate intention to continue implementing action plans beyond the life of this project. 0.4 At least 7 natural resources managers and conservation officers demonstrate increased capacity (at least a 30% improvement in capacity level using standardised scoring method) to adaptively manage species conservation needs.	0.1 Population Viability Analysis reports. 0.2 Species distribution maps and monitoring reports. 0.3 Institutional work plans, staff work plans, institutional budgets. 0.4 Trainer's reports; line manager observations; Self-assessment scores using competency questionnaire.	Climate change impacts, including human land use, are forecast within sufficiently accurate bounds. Action plans correctly identify and address the main threats, capacity needs and resources to achieve true species recovery and resilience.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Output 1 Climate change-informed species action plans produced by a participatory process for Anguilla's terrestrial Endangered species that are most at-risk to climate change	1.1 Baseline information on distribution, status, and life history of 7 target Endangered and Critically Endangered species updated by Q3Y1. 1.2 Projected effects of climate change on Anguilla in general - and the target species in particular - reviewed and updated by Q3Y1. 1.3 Action planning workshops conducted with at least 30 stakeholders in Q4Y1, taking account of short- and long-term climate change predictions. 1.4 Action plans finalised and disseminated to all stakeholders within Anguilla by Q1Y2.	1.1 Species databases; status reports; habitat and species population maps; species population reports. 1.2 Climate change species impact maps and reports. 1.3 Workshop agendas; workshop participants sign-in sheet; PowerPoint presentations; climate change-informed species conservation strategies and action plans (one for reptiles and one for plants), including (current and expected) species distribution maps. 1.4 Action Plan for reptile species; Action Plan for plant species.	Major field activities can be re-scheduled if extreme weather events occur during grant period. Sufficient data exist to support consensus among conservationists within Anguilla on the likely impacts of climate change. National and regional stakeholders continue willingness to cooperate on biodiversity conservation initiatives.
Output 2 At least six priority interventions prescribed by the action plans to increase climate change resilience are implemented, monitored and evaluated	2.1 *Iguana delicatissima* population size increased by at least 20% through creation of artificial nest sites and release of at least 30 additional stock by end of project. 2.2 At least 300 seedlings of two endangered plant species planted and thriving by end of project. 2.3 Invasive mice eradicated from Sombrero island by end of Q2Y2.	2.1 CITES export permits; artificial iguana nesting sites; iguana release and monitoring data sheets and database; habitat and species populations maps; monitoring and evaluation reports. 2.2 Reforestation/planting protocols; monitoring data on plant survival and growth 2.3 Sombrero Island rodent eradication progress reports and final technical report.	Field activities can be re-scheduled if extreme weather events occur during grant period. National and regional stakeholders continue to be willing to cooperate on habitat and species conservation/ resiliency initiatives. Young plants can successfully be transplanted from high risk areas to protected sites.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	2.4 Four offshore cays that are essential refuges for threatened species are actively kept free from harmful invasive alien vertebrates (rats, mice, green iguana).	2.4 Biosecurity protocols, monitoring datasheets and database for each island; invasive species incursion response reports (if any incursions occur).	
	2.5 At least one Endangered or Critically Endangered reptile reintroduced successfully to a secure offshore cay, increasing its range by at least 30 hectares by end of project.	2.5 Translocation protocols, datasheets and database; Monitoring datasheets, database, and reports; species distribution maps.	
	2.6 At least one additional key intervention from the action plans identified and implemented by end of project (the specific measure[s] will be submitted for approval by Darwin by Year 2 progress report).	2.6 Darwin Plus correspondence; Project reports.	
Output 3 National capability to plan, manage, implement and monitor climate change-informed species conservation actions is raised, supported by enhanced technical skills and greater public awareness and cooperation	3.1 Communications and public awareness communications plan developed by Q2Y1.	3.1 Communications and public awareness plan.	Trained expertise remains in Anguilla. Improved knowledge leads to improved behaviours to conserve biodiversity.
	3.2 At least 70% of nationals (c. 8,500 people) know about the project and can articulate why the target species merit conservation.	3.2 Knowledge-Attitudes-Performance (KAP) surveys at start and end of project; newspaper articles; social media posts; radio press releases; PowerPoint presentations; social media analytics; CCSleuth kit.	
	3.3 At least 40 Anguillan residents volunteer their time and resources towards implementing the conservation actions by end of project.	3.3 Minutes of meetings; names and details of participating residents.	
	3.4 At least 30 nationals gain advanced technical skills and experience in developing action plans and	3.4 Training evaluation sheets; training workshop agenda; workshop	

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	implementing conservation actions by end of project. 3.5 Project methods and lessons learned disseminated to relevant natural resource managers within all Caribbean UKOTs and other sub-regional islands by end of project. 3.6 At least GBP 100,000 generated in cash and/or in-kind to continue implementing action plans after the grant period. 3.7 Boat procured, maintained and in active use by the ANT and Government of Anguilla for conservation work on offshore islands and other coastal areas.	attendance sheet; monitoring protocol; biodiversity datasheets. 3.5 Case studies; presentation abstracts; PowerPoint presentations; Minutes of meetings. 3.6 Memoranda of Understanding; grant proposals and funding agreements; merchandise sales; habitat and species adoption schemes. 3.7 Boat registration, log book and other documents; Photographs and video of vessel in use.	

Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)

1.1 Complete literature review and rapid field surveys of the status, distribution and ecology of the seven target species (*Iguana delicatissima,* CR; *Pholidoscelis corvinus*, CR*; P. corax,* CR; *Spondylurus powellii,* EN; *Alsophis rijgersmaei,* EN; *Guaiacum officinale,* EN; *Rondeletia anguillensis*, CR).
1.2 Complete analysis and report on the climate change vulnerability assessments for Anguilla's globally threatened terrestrial species.
1.3 Collate and analyse climate change data and forecasts for the northern Lesser Antilles to elucidate likely climate change impacts on species and habitats in Anguilla, including offshore cays.
1.4 Drawing on findings from 1.1–1.3, conduct Population Viability Analyses (PVAs) of the seven target species to calculate extinction risk (repeated at project end to measure impact on viability).
1.5 Hold stakeholder workshops to present and discuss findings from 1.1-1.4 and, using a participatory process, develop action plans for the target reptiles and plants (one plan per group).
1.6 Write up, peer-review and publish the climate change-informed conservation action plans for the threatened reptiles and plants.

2.1 Translocate at least 30 *Iguana delicatissima* from Forchue Island, St. Barths, to reinforce the colony on Prickly Pear Cays, Anguilla, with the necessary CITES permits, health assessments and genetic records.
2.2 Establish and monitor artificial sandy nesting sites in *Iguana delicatissima* habitat on the Anguilla mainland (to enhance reproductive success and enable juveniles to be relocated to safer areas in accordance with Output 1).

Project summary	Measurable Indicators	Means of verification	Important Assumptions
2.3 Plant seeds and seedlings of *Guaiacum officinale* and *Rondeletia anguillensis,* including those translocated from sites at high risk, in the Department of Agriculture nursery and suitable habitats identified by Output 1, and provide follow up care as needed. 2.4 Monitor the growth and survival of planted *G. officinale* and *R. anguillensis* populations, including reintroduction sites. 2.5 Eradicate invasive alien mice from Sombrero Island in accordance with the 2018 eradication feasibility study and operational plan to facilitate recovery and resilience of *Pholidoscelis corvinus* and other Sombrero endemics. 2.6 Implement biosecurity surveillance and rapid response protocols to prevent further incursions by harmful invasive alien species on priority islands for endangered species (Dog Island, Prickly Pear Cays, Little Scrub, and Sombrero). 2.7 Translocate at least 30 *Spondylurus powelli* (and/or another target reptile species) from mainland Anguilla to reintroduce this species to Prickly Pear West in accordance with Output 1 and IUCN Reintroduction Specialist Group guidelines. 2.8 Implement at least one additional conservation measure prescribed by the action plans (Output 1), to be discussed with and approved by Darwin. 2.9 Establish and launch long term monitoring programme for the target reptile and plant species to evaluate project impacts on status and distribution. 3.1 ANT staff and other participating nationals complete self-assessment competences questionnaires to identify training needs (repeated at project end to measure impact on capacity). 3.2 Plan and undertake training and on-the-job mentoring of ANT staff and other nationals in applied conservation management. 3.3 Conduct public survey to evaluate knowledge, attitudes and behaviour towards endangered wildlife and climate change (repeated at project end to evaluate impact). 3.4 Develop and implement an advocacy and public awareness campaign (including but not limited to, newspaper articles, press releases, presentations, CCSleuth, and social media). 3.5 Publicise and report on project progress and results through national and international media and directly to national groups, cross-territory stakeholders, international scientific community, and Executive Council. 3.6 Share and discuss project methods, results, lessons learned and opportunities for replication through regional and international forums (including regional conferences of Caribaea Initiative and BirdsCaribbean). 3.7 Produce and disseminate case studies outlining methods, results and lessons learned from designing and implementing the climate change-informed action plans for the target species. 3.8 Procure equipment to enhance national conservation capacity, including purchasing a boat to facilitate the management of offshore islands and other coastal areas by ANT and Government of Anguilla. Other Project Management activities:- X.1 Establish Project Steering Committee and meet quarterly (remote members to participate by Skype). X.2 Project inception meeting. X.3 Project biannual reports/ donor technical and financial reports. X.4 Monthly financial accounts. X.5 End of project audit.			

Annex 3 Onwards – supplementary material

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	X
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	X
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	
Have you involved your partners in preparation of the report and named the main contributors	X
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	