

Darwin Plus: Overseas Territories Environment and Climate Fund Annual Report

Important note *To be completed with reference to the Reporting Guidance Notes for Project Leaders:
it is expected that this report will be about 10 pages in length, excluding annexes*

Submission Deadline: 30th April 2019

Darwin Plus Project Information

Project reference	DPLUS055
Project title	Saving the Iguana Islands of Turks and Caicos
Territory(ies)	Turks and Caicos Islands
Lead organisation	Royal Society for the Protection of Birds (RSPB)
Partner institutions	San Diego Zoo Global (SDZG), Turks & Caicos National Trust (TCNT), Department for Environment and Coastal Resources (DECR), Department of Agriculture (DoA), Ambergris Cay Facilities Ltd
Grant value	£199,620
Start/end date of project	1 st April 2017 – 31 st March 2020
Reporting period and number	Apr 2018 - Mar 2019; AR 2
Project leader name	Sarah Havery
Project website/blog/Twitter	http://ww2.rspb.org.uk/community/ourwork/b/biodiversity/archive/2018/10/10/saving-the-iguana-islands-of-turks-and-caicos.aspx
Report author(s) and date	Sarah Havery, Shelley Bridgewater, Charlie Butt, Giuliano Colosimo, Glenn Gerber, Ethlyn Gibbs-Williams, Della Higgs, B Naqqi Manco, Eric Salamanca, Karen Varnham and Lormeka Williams. April 2019.

1. Project overview

Invasive alien vertebrates (IAV) are one of the greatest threats to native reptiles in the UK Overseas Territories (Dawson et al., 2014); and biosecurity controls that prevent new arrivals are the most effective way of reducing this threat and sustaining any IAV eradication efforts. The project aims to address the need for effective biosecurity plans for two offshore islands in the Turks and Caicos Islands (TCI) where there is an urgent need to protect threatened native wildlife, particularly globally important reptile populations.

TCI are a UK Overseas Territory consisting of eight main islands and about 30 smaller islands split into two groups, the Turks Islands and the Caicos Islands, separated by the Turks Island Passage. The islands are situated to the south of the Bahamas in the West Indies and geographically form the southern end of the Bahamas Lucayan archipelago.

The Critically Endangered Turks and Caicos rock iguana (*Cyclura carinata*) is found only in TCI and a small sub-population on Booby Cay in the Bahamas (IUCN, 2004). The combined area of islands supporting viable iguana populations is approximately 13 km² (IUCN, 2004). Ongoing habitat loss and spread of IAV (feral cats, dogs and rodents) are contributing to the continued

population declines of this species. Two of the largest remaining populations of rock iguana are found on Little Water Cay (LWC) and Big Ambergris Cay (BAC), see Fig. 1, where iguanas are at significant risk from rat and feral cat predation and further rat incursion.

The overall objective of the project is to secure the population of the rock iguana through the establishment of effective biosecurity plans/IAV control on LWC and BAC, and the identification of islands for future restoration.

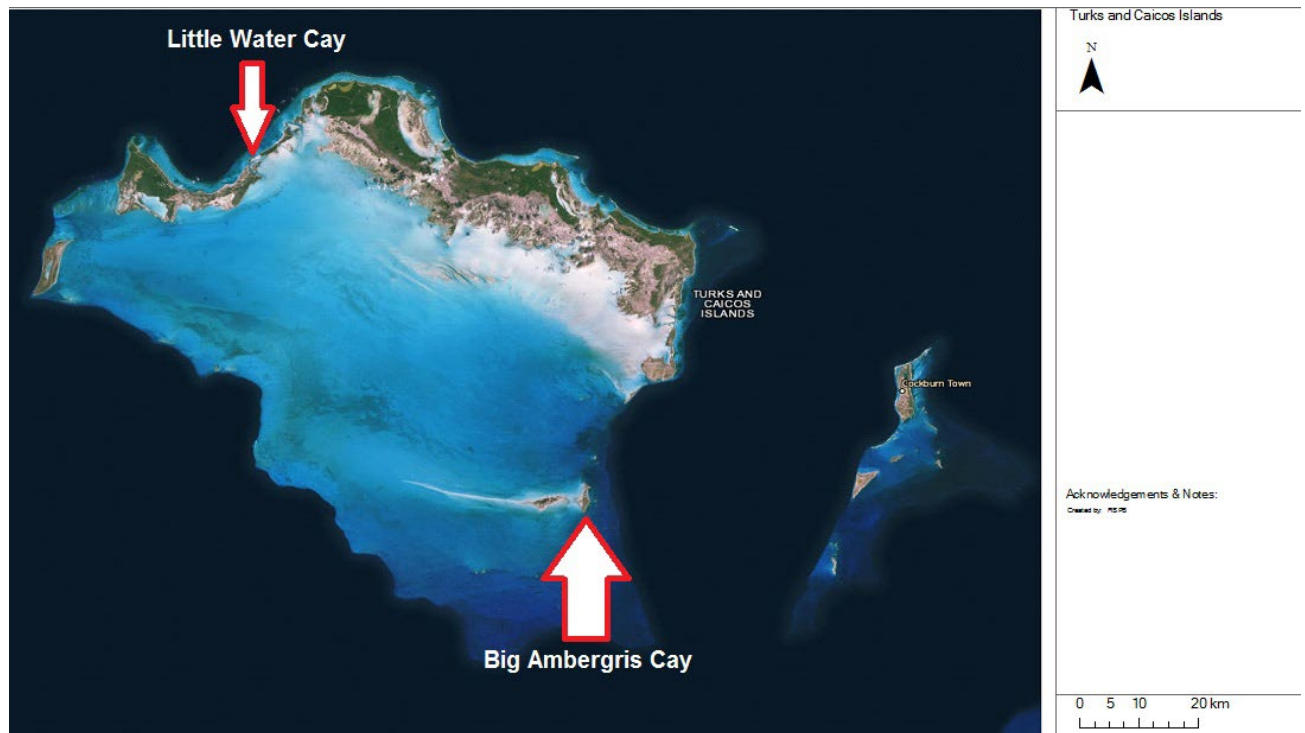


Figure 1: A satellite image of the Turks and Caicos indicating the locations of the two project sites, Little Water Cay and Big Ambergris Cay.

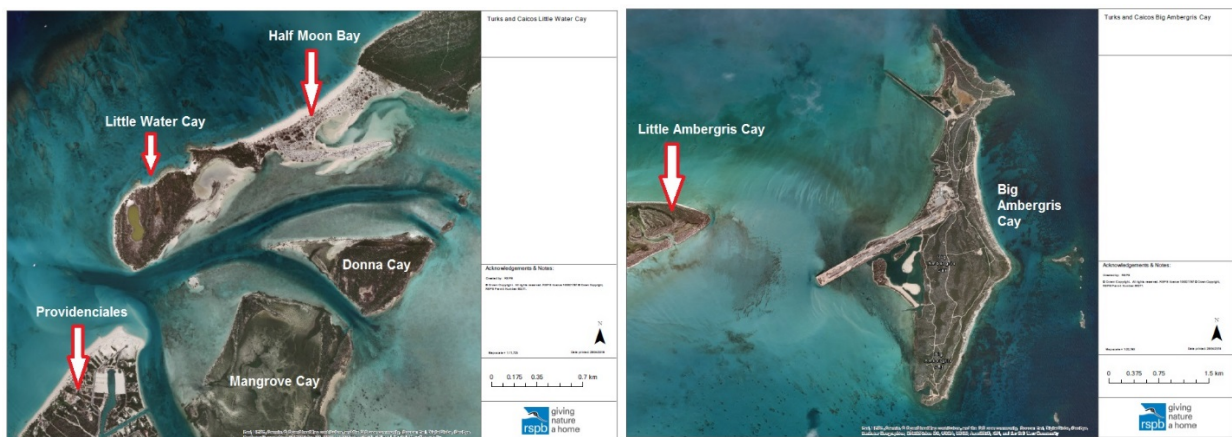


Figure 2: (LEFT) A satellite image of Little Water Cay and the surrounding cays and (RIGHT) A satellite image of Big Ambergris Cay indicating its proximity to Little Ambergris Cay.

2. Project stakeholders/partners

This is a cross-organisational partnership-based project aiming to build capacity and collaboration between the in-Territory partners, **Turks and Caicos National Trust (TCNT), Department of Environment and Coastal Resources (DECR), Department of Agriculture (DoA), and Ambergris Cay Facilities Ltd** and the international partners **Royal Society for the Protection of Birds (RSPB)** and **San Diego Zoo Global (SDZG)**.

All partners bring specialist technical skills and experience, in a variety of different disciplines that complement each other and together provide a strong partnership for project delivery. All

partners have been involved in project planning, monitoring and evaluation and decision-making, formally through the two biannual steering group meeting conference calls on 3rd July 2018 and 12th February 2019 (meeting minutes in **Annex 3.2**) with each partner delivering their own set of arising actions. A project partners meeting was held on the 31st October 2018 which formed the mid-term evaluation, where the progress of the project to date was reviewed by all partners and direction set for the remainder of the project (agenda and minutes in **Annex 3.3**).

Trip schedules are drafted and circulated with the partnership with plenty of notice to allow for work programme planning to fully utilise the expertise of the partners and to allow for more skill-sharing between partners. Examples of collaboration during project activities (detailed in Section 3.1) include: SDZG and TCNT staff collected data on the iguanas at Half Moon Bay in August 2018 and March 2019; TCNT set up and independently led biosecurity trails on LWC with guidance from RSPB; DoA and RSPB jointly coordinated the South Dock stakeholder meeting; DECR and TCNT staff are jointly leading public awareness activities in TCI (as part of concurrent EU BEST project, but the partnership-working has been facilitated through this Darwin project); and BAC staff worked alongside the team contracted to complete the island-wide rodent assessment of BAC in October - November 2018.

A significant stakeholder achievement was that additional significant co-funding to this project was provided by Waterloo Investment Holdings Ltd (the company that owns BAC) to support an island-wide rodent assessment (report in **Annex 3.4**) in response to the incursions of both rats and mice on BAC in YR1 (see **AR1** for details). A meeting was held between WIHL, RSPB and TCNT on 31st October 2018 where the importance of effective biosecurity was discussed.

Another significant stakeholder achievement was that, through this project partnership, additional funds were provided by RSPB, SDZG, **Forth Worth Zoo** and the **International Iguana Foundation** to expand the synergistic 'Pine Cay Save the Iguana' eradication project planned for April – August 2019; to include four additional cays and two islets that were surveyed in YR1 of this project for invasive predators and reptile species (Activity 3.1, see **AR1**). This means that the eradication project will now cover a total of seven cays and two islets (Pine, Water, Little Water, Mangrove, Donna, Fort George, Grouper; islets = Lizard & Bird); from the Princess Alexandra National Park and, if successful, will provide an additional 922ha of invasive predator free habitat for the rock iguanas.

Additional stakeholders have been brought into the project in YR2, the **Environmental Health Department (EHD)** of Turks and Caicos Government and the **Turks & Caicos Islands Ports Authority**. Staff from EHD and the Ports Authority attended the South Dock biosecurity stakeholder meeting.

Synergies with this Darwin project and the **GB Non-Native Species Secretariat (GB NNSS)**'s project on 'Tackling Invasive Non-Native Species in the UK Overseas Territories' have been identified, and the team are currently exploring if this GB NNSS project can support the drafting of biosecurity legislation for TCI.

Additional funds have also been provided by the **University of North Carolina** and the San Diego Zoo Institute for Conservation Research to expanded SDZG's study of TCI boas by initiating a radio-telemetry project on BAC.

Equipment have been purchased for TCNT as support following the impacts of Hurricane Irma (photographs in **Annex 3.5**). A new boat engine and lock have been purchased enabling the staff to use a slightly larger boat, which not only improves access to LWC but is safer for staff to use on a daily basis. A trailer and boat safety equipment have also been purchased. Some capacity issues for boat maintenance have arisen, see Section 3.4.

In TCI there is currently no consortium of tour operators, therefore their engagement is generally ad-hoc and opportunistic, mostly with SDZG staff completing fieldwork and TCNT staff based on LWC. An objective for YR3 is to find more effective ways of engagement with tour operators.

3. Project Progress

3.1 Progress in carrying out project Activities

The activities which have not commenced to date, as per the project timeline, have not been reported on below.

Output 1: Baseline and trend data for iguanas and boas, humans and predators

Activity 1.1: Detailed surveys of iguanas on Little Water Cay

In YR2, four transects were completed on LWC. In total, the project now has three sets of repeated transect data for LWC (2017, 2018 and 2019) see Fig.3(a). No significant differences were observed in the relative abundance, sex ratio, or age structure of iguana populations on LWC. See **Annex 3.6** for more details.

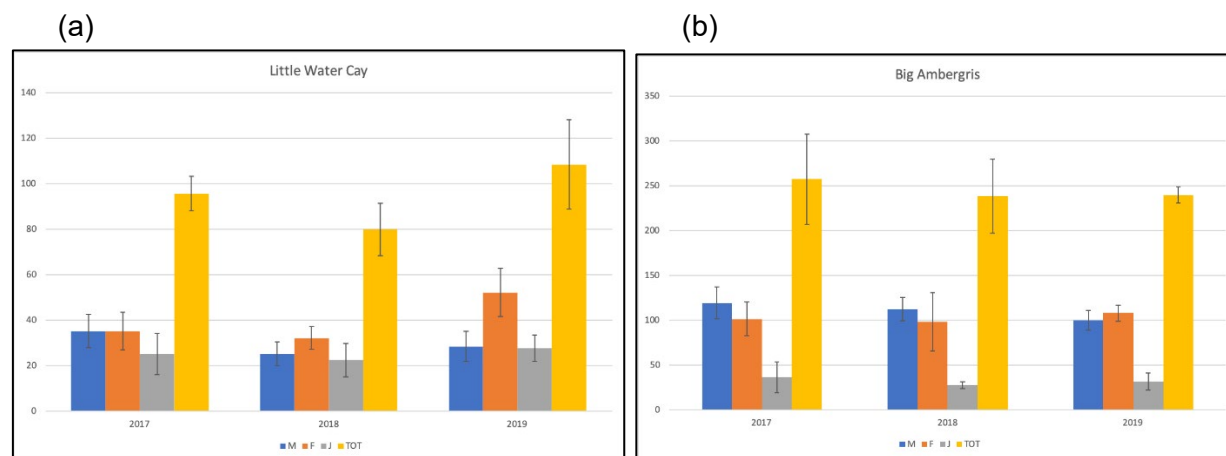


Figure 3: The repeated transect data for TCI rock iguanas from 2017 – 2019 for (a) Little Water Cay and (b) Big Ambergris Cay indicating the number of males, females, juveniles and total number of iguanas observed.

Activity 1.2: Monitoring of cats deployed to establish presence/absence on Little Water Cay

Opportunistic monitoring for feral cats on LWC was completed in October 2018 through beach searches, where no sign was found. The synergistic 'Pine Cay Save the Iguana' project will intensively monitor for feral cats across Pine, Water and Little Water Cay during Q1 of YR3 which will be reported on in YR3.

Activity 1.3: Impact assessment of human activity on iguanas

On BAC, data has been collected on road mortality, and have found that the number of road-killed iguanas doubled in 2018 compared to 2017. This is attributed to the resurgence of construction on BAC beginning in late 2017 resulting in an influx of construction workers and associated vehicles and machinery. Two road mortality surveys were completed in YR2, which again found an increase in road mortality compared to prior surveys, although not greatly, presumably due to the continuation and expansion of construction activities.

In August 2018, a total of 98 iguanas were captured and marked at four new sites on BAC for the investigation of human impacts. In addition, on LWC the sampling of iguanas at our high impact site (Half Moon Bay) was expanded by capturing and marking an additional 108 iguanas. The additional data collected on both BAC and LWC significantly increased sample sizes and reinforced the conclusion that iguanas from high impact sites are significantly larger than iguanas from low impact sites.

In March 2019, 84 adult iguanas were caught, marked, and released at four sites in the LWC area across one high human impact (n=20) and three low human impact sites (n=64). In addition to collecting morphological data on all animals, we collected blood from 10 adult males and 10 adult females at each of these sites for blood chemistry assays.

Activity 1.4: annual survey of native iguanas and boas on Big Ambergris Cay

In YR2, four transects were completed on BAC. In total, the project has three sets of transect data for BAC (2017, 2018 and 2019) see Fig.3(b). No significant differences were observed in

the relative abundance, sex ratio, or age structure of iguana populations on BAC. See **Annex 3.6** for more details.

In YR2, we captured 144 TCI boas on BAC. Based on SDZG's 11-year capture-mark-recapture data set, we estimate the population size of boas on BAC to be 4,765 individuals (95% confidence interval 3,804–6,094). In August, with additional funds provided by the University of North Carolina and the San Diego Zoo Institute for Conservation Research, we expanded our study of TCI boas by initiating a radio-telemetry project on BAC to learn more about the movement and behaviour and these nocturnal and cryptic snakes. It was found that boas did not range more than 500 meters from their initial location, although one snake moved out to a mangrove island for 24 hours - a habitat that has not been previously documented to be used by this species. Most snakes used different refugia each day, although the same refugium was occasionally revisited during the 16 days of the study. See **Annex 3.6** for more details.

Output 2: Development of biosecurity plans

Activity 2.1: Develop a biosecurity plan for Little Water Cay

In July 2018, a meeting of biosecurity experts in the UK was facilitated through this project; with the aim to provide biosecurity advice on the appropriate approach for biosecurity following the delivery of the synergistic 'Pine Cay Save the Iguana' project. Meeting minutes are in **Annex 3.7**. The group suggested implementing trials of biosecurity techniques, specifically to determine rat and iguana interactions with Good Nature traps (A24s); and rat interactions with wooden vs plastic bait stations, and of raised vs ground bait stations. Biosecurity trials of these techniques have been led by TCNT with support from RSPB (see drafted report **Annex 3.8**). The results will be reported on in YR3.

The first version of the biosecurity plan was drafted for LWC (see draft in **Annex 3.9**) and will be updated with the results of the biosecurity trails. A Biosecurity Plan for Pine, Water and LWC has also been drafted as part of the 'Pine Cay Save the Iguana' project. Due to the timings of this project, with the operations commencing in April 2019, and significant support from various stakeholders required in the initial stages of the project, the circulation of the plans for comment/consultation have been delayed to YR3.

Activity 2.3: Develop a biosecurity plan for Big Ambergris Cay

In response to the rodent incursions in YR1, WIHL co-funded an island-wide rodent assessment of BAC (see Section 2) to determine whether rodents were still present, if so, how widely distributed they were and what, if anything, could be done to remove them. A team of four consultants were contracted, all with extensive rodent monitoring and eradication experience, to complete this assessment. The report is in **Annex 3.4**.

Over a four-week period, one male rat was detected and humanely killed. It is most likely that the rat detected was either: (1) present for several weeks before showing sign, emphasising the difficulty in locating rodents at low population densities, or (2) that the rat arrived on the previous barge and was detected three days later, showing the vulnerability of the island to an incursion. It is not possible to conclude that the rat found was the only rodent on the island, but if rodents are present, they are currently at a very low density, which indicates that rodents have not managed to establish a population from the incursions in February 2018. This fortunately means that a full eradication is not needed at this stage, however, the rat detected highlights the importance of biosecurity and the urgency for the recommendations outlined in the assessment report to be properly implemented as soon as possible.

Activity 2.4: Consultation on plan, adaptation, modification, write up and sign off by DECR and Big Ambergris Cay management

Five meetings were held between the BAC Island Manager, RSPB and SDZG to discuss the implementation of the biosecurity recommendations in August, October, November 2018 and March 2019. A meeting between WIHL, RSPB and TCNT was held in October 2018 to discuss the importance of implementing biosecurity. The recommendations of the rodent assessment will be included within the formal plan to be signed off by DECR in YR3.

Activity 2.5: Write cabinet paper for the approval of the biosecurity plans and a draft biosecurity policy with the aim of approval/sign off by TCI Government

Links have been made with GB NNS (see Section 2) in respect to drafting TCI biosecurity legislation. For the TCI context, it was agreed with the Government partners that it would be appropriate for biosecurity legislation to fit within TCI's quarantine legislation and would be the responsibility of DoA but will require a multi-disciplinary approach to deliver. GB NNS's Project Manager will be in TCI in May 2019 and it has been agreed to explore possible drafting support for TCI Government during this upcoming visit. The cabinet paper has been delayed to YR3 following the outputs of this visit.

Activity 2.7: Signage developed and installed for landing areas on LWC and BAC

Signage has been designed by TCNT and two iguana etiquette signs (design in **Annex 3.14**) are currently being printed in TCI and will be installed during Q1 of YR3.

Activity 2.8 Publicity materials on biosecurity produced for tour operators

Two project posters were printed and laminated, one was installed in the visitor centre on LWC and the other was installed at TCNT's Heritage Site on Middle Caicos.

Activity 2.9: Biosecurity awareness meeting held for South Dock staff, clients and companies

A stakeholder meeting was jointly coordinated between DoA and RSPB and was held in March 2019 and was attended by 12 people from eight organisations/departments. The project, the importance of biosecurity at South Dock (the main risk pathway for rodents to get to BAC as identified in the rodent assessment, **Annex 3.4**), and how to implement Integrated Pest Management (IPM) was presented (presentation in **Annex 3.10**). All stakeholders agreed to implement IPM at South Dock in YR3.

Output 3: Rapid survey of offshore cays

Activity 3.4: Collect baseline iguana population data on additional cays

In February and March 2019 surveys were conducted for the presence/absence and abundance of iguanas on cays targeted in the synergistic 'Pine Cay Save the Iguana' project. Fort George Cay, which has rats and cats (See **AR1**), was found to have a single iguana believed to be a recent introduction from LWC. Grouper Cay, which also has rats and cats, was found to have no iguanas. Four driving transects were completed on Pine Cay, which has rats and cats, and only recorded two iguanas. Four walking transects were completed on Donna Cay as well as on Mangrove Cay, both of which have rats but no cats, and where we found iguanas to be as abundant as on LWC. The 'Pine Cay Save the Iguana' project team will collect pre-eradication data on iguanas from Water Cay during YR3.

Output 4: Training and capacity building

Activity 4.1: Experts in each area within the project team train others to undertake the tasks needed for successful implementation of biosecurity plans.

See Section 2. Over YR2 project team members have been involved in project activities aiming to improve cross-organisational collaborative working and to share skills and experiences, photographic evidence is provided in **Annex 3.11**. Twelve people learnt about IPM and how this could be applied to South Dock and feedback was collated from all attendees (completed feedback forms in **Annex 3.12**). Targeted IPM training will be delivered in YR3. Training of BAC staff on rodent monitoring and incursion response was delivered as part of the rodent assessment, report in **Annex 3.4**. Training of TCNT staff by RSPB staff on biosecurity methods and monitoring of biosecurity tools was delivered in October and November 2018 and March 2019.

Activity 4.2: Questionnaires for team members and line managers /collation of ad hoc performance feedback/ no. of new initiatives started

Feedback was collected from all 12 participants of the South Dock stakeholder meeting, feedback forms received in **Annex 3.12**. Feedback from project partners via email and biannual meetings regarding trip planning has been incorporated into ways of working within project partnership, see Section 2. Feedback will be continually sought throughout project with questionnaires for specific events.

Output 5: Project management/ Monitoring

Activity 5.1: At project start-up develop and agree project monitoring plan and use it as a project management tool to monitor implementation progress

The project monitoring plan has been prepared with input from project partners and is now an active document which is updated quarterly as a tool to monitor project implementation progress (current version of plan in **Annex 3.1**).

Activity 5.2: Bi-annual skype or conference call for core project team

Two steering group meeting conference calls were held in YR2 on 3rd July 2018 and 12th February 2019 (meeting minutes in **Annex 3.2**) with each partner delivering their own set of arising actions. A project partners meeting was held on the 31st October 2018 which formed the mid-term evaluation, where the progress of the project to date was reviewed by all partners and direction set for the remainder of the project (agenda and minutes in **Annex 3.3**).

Activity 5.3: Bi-annual internal (project team) technical and financial reporting to RSPB

Bi-annual reporting has improved over YR2 with technical reports received in advance of reporting requirements for Darwin. Some of the project partners financial reports are still outstanding, meaning that Section 10 could not be completed of this report prior to report submission.

Activity 5.4: 3x annual meeting of project team and management in TCI (Providenciales)

A project partners meeting was held in October 2018, which formed the mid-term evaluation (Activity 5.5) which discussed results and fieldwork/activities for upcoming year, agenda and minutes in **Annex 3.3**.

Activity 5.5: Mid-term evaluation with project team

A mid-term evaluation was held in October 2018 which was attended by all project partners; agenda and minutes in **Annex 3.3**.

3.2 Progress towards project Outputs

The indicators not reported on below have not commenced as per the project timeline of activities. See Annex 1 for details. The progress against the indicators are recorded in the Project Monitoring Plan (**Annex 3.1**).

Output 1: Baseline and trend data for iguanas and boas, humans and predators

See Section 3.1, Output 1. Output 1 is on track to be delivered by the end of the project. The project has made positive progress against indicators 1.1 and 1.2 in YR2, see Annex 1. One set of four transects have been completed on both LWC and BAC in YR2, meaning the project now has three sets of repeated transect data (2017, 2018 and 2019) see Fig.3(a). No significant differences were observed in the relative abundance, sex ratio, or age structure of iguana populations on either island. Comparative sites of low and high human activity established on LWC and BAC.

Output 2: Development of biosecurity plans

See Section 3.1, Output 2. Output 2 is on track to be delivered by the end of the project. The project has made positive progress against indicators 2.2 and 2.3, 2.4 and 2.7 in YR2, see Annex 1. There has been a delay in indicator 2.1, quantifying feral cat presence on LWC, because of the synergistic 'Pine Cay Save the Iguana' project which is monitoring for feral cats in Q1 of YR3. A biosecurity plan has been drafted for LWC, **Annex 3.9**, and TCNT staff have been leading on biosecurity trials. The results of the rodent assessment of BAC have shown that indicator 2.3 is still valid.

Output 3: Rapid survey of offshore cays

See Section 3.1, Output 3. Output 3 is on track to be delivered by the end of the project. The project has made positive progress against indicators 3.4 in YR2, see Annex 1. Additional data have been collected to enable iguana population estimates to be calculated for five cays (Pine, Fort George, Grouper, Mangrove & Donna) as a comparative baseline to indicate the impacts of the 'Pine Cay Save the Iguana' eradication project. With the data from Output 1, six of the

seven cays now have baseline iguana population estimates. The missing data is from Water Cay, which will be provided by the 'Pine Cay Save the Iguana' project team in YR3.

Output 4: Training and capacity building

See Section 3.1, Output 4 and Section 2. Output 4 is on track to be delivered by the end of the project. The project has made positive progress against indicators 4.1, 4.2 and 4.3 in YR2, see Annex 1. Project team members involved in all project activities improving cross-organisational collaborative working, photographic evidence in **Annex 3.11**.

Output 5: Project management/ Monitoring

See Section 3.1, Output 5 and Section 2. Output 5 is on track to be delivered by the end of the project. The project has made positive progress against indicators 5.1, 5.2, 5.3, and 5.4 in YR2, see Annex 1. The Project Monitoring Plan is now an active document and updated quarterly (**Annex 3.1**). The project leader is in regular contact with project partners via email, phone, skype, WhatsApp and Zoom. Two steering group meetings were held, in July 2018 and February 2019 (minutes in **Annex 3.2**). Although progress has been made against indicator 5.4, partner financial reporting has not been received in time. YR3 will continue to aim for the whole project partnership to be reporting on schedule.

3.3 Progress towards the project Outcome

Outcome: *The critically endangered Turks and Caicos Iguana is secured through the establishment of effective biosecurity plans/invasive vertebrate control on two offshore islands, and the identification of islands for future restoration.*

Overall, the project is currently on track to achieve the Outcome by the end of the project and the indicators above remain adequate for measuring the achievement of the project. The second part of the outcome has already been exceeded, as four cays and two islets identified in YR1 for restoration, are now included within the 'Pine Cay Save the Iguana' project as a direct result of the project partnership (see Section 2) and will be restored through the eradication of feral cats and rats during YR3.

Outcome indicators:

- Number of iguanas is stable and/or increasing on two target cays from the baseline:* Baselines of relative abundance of iguanas on LWC and BAC has been collected in YR1 and repeated in YR2. No significant differences were observed in the relative abundance, sex ratio, or age structure of iguana populations on LWC or BAC between YR1 and YR2; therefore, the populations are currently stable, and this indicator is currently holding true (see technical report **Annex 3.6**).

The infrastructure development activities on BAC are significant however, and the impact of increased road mortality observed in YR2 could impact the population status of iguanas on BAC during or beyond the project. Additional communication and planning with project partners and stakeholders for BAC is required to identify means to reduce the impacts of habitat loss and road mortality in YR3. It remains unknown how this will impact the projects' ability to achieve this indicator.
- Incursions of invasive predators on Big Ambergris Cay are reduced in frequency and managed effectively:* In YR1, in response to the invasion of rats and mice within the 6 months following the hurricanes, an incursion response was initiated by BAC staff with support from RSPB and SDZG. In YR2, an island-wide rodent assessment was completed (report in **Annex 3.4**), which indicated that fortunately a rodent population has not yet established because of the invasions in YR1. Addressing and implementing the recommendations outlined in this assessment is essential for delivering this indicator, see Section 3.1 Output 2 and Section 5; which is achievable in the project timeframe.
- Management plans IAV component strengthened with clear methodologies for ground staff and timetable for IAV control activities:* Biosecurity training completed and staff time on BAC dedicated to rodent assessment in YR2. Biosecurity trials are being led by TCNT staff on LWC. Still needs to be mainstreamed into staff work programmes and site management

plans, which is achievable in the project timeframe. This is an important indicator that will be vital in ensuring the sustainability of the project.

3. *Biosecurity plans agreed by TCNT Council, BAC management, tourist operators and developers and approved by TCI Cabinet:* The BAC biosecurity plan needs to be updated and finalised incorporating the recommendations from the rodent assessment in YR2. The LWC biosecurity plan needs to be completed, incorporating the results of the biosecurity trials. Engaging all stakeholders involved with the biosecurity plans to ensure they are fully endorsed and incorporated into the management of the respective islands is essential for achieving this indicator; which is achievable in the project timeframe.
4. *Strategy for priority island restoration/protection published with actions agreed by the project team:* There has been significant progress towards identifying offshore cays suitable for restoration/protection, with 11 offshore cays surveyed in YR1 for rodents, cats and reptiles, see **AR1**. The results of these surveys will be used to inform this strategy with endorsement from the IUCN iguana specialist group during a workshop in YR3. It is likely that this indicator will be fully delivered by the end of the project. Opportunistically, due to the timings of the 'Pine Cay Save the Iguana' project, four cays and two islets identified in YR1 for restoration will be restored through the eradication of feral cats and rats during YR3.

3.4 Monitoring of assumptions

All the key assumptions are outlined in the log frame, Annex 2. Of these, over YR2 there is one assumption that has not fully held true, details of future mitigation below.

Staff retention and progression allows them to implement and share skills: Unfortunately, TCNT has continued to have high staff turnover of wardens on LWC and, due to capacity issues and staff turnover at TCNT, they are understaffed on LWC. As a result, there is currently little oversight of the use or maintenance of the boat equipment purchased (see Section 2). Fortunately, the project management staff have remained the same throughout YR2, which has enabled TCNT to take a lead on delivering the biosecurity trials. Priorities for YR3 are to ensure that means are put in place to provide oversight of the use of the boat equipment and to support the recruitment of appropriate staff to work on the project activities and to lead on biosecurity beyond the scope of this project.

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

The project is addressing the following TCI government priorities:

- Revised National Parks Ordinance (2016); management of protected areas;
- The National Tourism Policy and Strategic Implementation Plan (2015); enhancing ecotourism; and
- The Environment Charter (2001, principle 7); control invasive species.

All team members, but particularly the more inexperienced members, are benefiting from the cross-team training and development, increasing the number of personnel in TCI who can carry out techniques required for implementing high quality biosecurity (monitoring, surveillance, analysis, adaptive management and action), and how to integrate this into day-to-day management of sites and work programmes of staff. This is an important outcome for all the partners involved.

This project is the first time such a cross government department/private-public partnership for IAV management has been attempted in TCI. If successful this will set a precedent for future collaboration of this nature as it potentially allows more cost-effective use of government resources to achieve national conservation goals, which benefit the environment and tourism.

4. Monitoring and evaluation

The Activities and Indicators for Output 5 (Project management/monitoring) cover the methods for monitoring and evaluation, see Section 3 for project progress. The Project Monitoring Plan, **Annex 3.1**, was prepared with input from all partners and is updated quarterly by the Project leader. It clearly outlines the roles of the partners, deadlines, timeframes and indicates progress. Currently M&E is the role of one partner, RSPB, which is continually monitoring progress through referring to the log frame and project timetable, sharing the information with the partners via email and skype/phone calls.

5. Lessons learnt

The most successful element of YR2 has been the strengthening of the project partnership, as outlined in Section 2, which has significantly increased the impact of this project and has resulted in significant additional resource input from the partners.

One of the greatest challenges for the team is capacity within already busy work schedules, which is a challenge for all partners, particularly the local TCI partners. As the project has developed and expanded over YR2, and additional projects have been successfully funded, more time is required from the already very busy staff. A future consideration is to ensure that project-funded staff positions are included to allow for the additional work load to be supported and would buffer for the time required for the additional work to become mainstreamed into normal working practices (for both LWC and BAC).

Boat maintenance remains a challenge for SDZG and TCNT. Allowing for more budget for boat equipment maintenance and repairs; funding for boat security, and more time in the field trips to get these equipment issues resolved; is an important future consideration.

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

The feedback and comments from AR1R were discussed in the project steering group meeting in July 2018 (minutes in **Annex 3.2**). This was a very positive review and was received well by the partnership. There were five comments arising from the review, all of which have been addressed over YR2. Of relevance to this report:

1. *Please provide project monitoring plan*: See **Annex 3.1**.
2. *Please revise outcome indicator "BAC remains predator free"*: A change request was submitted in January 2019 following the results of the island-wide rodent assessment (detailed in **Annex 3.4**) and was approved, amending this outcome indicator to: "Incursions of invasive predators on Big Ambergris Cay are reduced in frequency and managed effectively".
3. *Please discuss with DI the need of full-scale island wide rodent eradication project (additional funding)*: The project team agreed that it was too early to determine if a full-scale island wide eradication was required following the incursion of rodents on BAC in YR1 (see **AR1**). WIHL provided the needed co-funding to enable an island-wide rodent assessment in October – November 2018 (see Section 2 and Section 3.1 Output 2; and report in **Annex 3.4**), which has indicated that fortunately rodents have not established populations on BAC. It has, however, further highlighted the crucial need for effective biosecurity.
4. *Please provide feedback form from all training participants*: The missing completed feedback forms from the biosecurity training in YR1 have been received and are provided in **Annex 3.13**. Partners provided ideas on how to ensure feedback from all participants are received.

7. Other comments on progress not covered elsewhere

The supporting EU BEST funded 'Protecting Pockets of Paradise' project has successfully delivered a school outreach programme and a public awareness campaign, which has been led by TCNT. This work aims to improve the local awareness of TCI biodiversity and the impact of

invasive species. As a result, the Iguana Islands project has been well communicated locally over YR2. The EU BEST project completes in April 2019.

Following the accepted change request in January 2019, DoA's involvement with the project has been adapted to leading improving biosecurity on the main island of TCI, Providenciales at South Dock; which has expanded the remit of this project.

8. Sustainability and legacy

The profile of the project and the support for the work (locally and internationally) has increased over YR2, as demonstrated in Section 2. The TCI project partners remain committed to implementing the biosecurity measures and invasive alien vertebrate controls after the project is completed, and new stakeholders are also being involved in this commitment. This will include ongoing surveillance and monitoring; which will be integrated into existing management and research activities. The equipment purchased will be used by project partners beyond the scope of the project, notably the monitoring tools and the boating materials for TCNT to enable staff to get safely to and from LWC.

The greatest challenge for the sustainability of this project is to ensure that all stakeholders involved with LWC and BAC have the long-term capacity to effectively implement the biosecurity plans and fully integrate activities into staff work programmes beyond the scope of the project. The main recommendation following the island-wide rodent assessment of BAC was that a dedicated biosecurity position is required. Over YR2 it has become apparent that to sustain the outcome of this project and the 'Pine Cay Save the Iguana' project, dedicated biosecurity positions are required on both BAC and LWC, for which additional funding needs to be found.

9. Darwin identity

Over YR2 there have been several communications both locally and internationally using a mix of different tools and media. Locally, the project has continued to be communicated through the public awareness campaign and school outreach led by TCNT (funded by EU BEST Initiative). Project posters have been printed and installed in the LWC visitor centre and TCNT's heritage site on Middle Caicos (Conch Bat Caves). Signage has been produced by TCNT (design in **Annex 3.14**) and is currently being printed and will be installed in YR3. An [article on the project](#) was published online and TCNT have been posting updates on project activities on their [Facebook page](#) (Fig. 4).



Figure 4: Examples of the Facebook posts by TCNT showing the project activities on LWC.

Internationally, two blogs have been posted online on RSPB and SDZG's websites:
<https://community.rspb.org.uk/ourwork/b/biodiversity/posts/saving-the-iguana-islands-of-turks-and-caicos>

<https://institute.sandiegozoo.org/science-blog/it%E2%80%99s-tough-being-lizard-tci>

A magazine article was published in Birdlife International's magazine (article provided in **Annex 3.15**). The project was presented at the Amphibian and Reptile Conservation Trust (ARC) and British Herpetological Society's Joint Scientific Meeting on 1st December 2018 in the UK (presentation provided in **Annex 3.16**).

10. Project Expenditure

We have not yet received all financial information from project partners, so a complete detail of expenditure will follow in the expense claim for the fourth quarter of the project.

Table 1: Project expenditure during the reporting period (1 April 2018 – 31 March 2019)

Project spend (indicative) in this financial year	2018/19 D+ Grant (£)	2018/19 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others (Please specify)				
TOTAL				

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2018-2019 – if appropriate

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
<p>Impact</p> <p>Improved implementation of Invasive Alien Vertebrate management in TCI and increased capacity to sustain the improvement, resulting in better protection of TCI's natural assets that support the tourist industry.</p>		<p><i>YR1: Building a strong cross government department/private-public partnership for IAV management.</i></p> <p>YR2: Partnership expanding and developing. Remit of project has expanded to improve biosecurity on main island of TCI.</p>	
<p>Outcome The critically endangered Turks and Caicos iguana is secured through the establishment of effective biosecurity plans/invasive vertebrate control on two offshore islands, and the identification of islands for future restoration</p>	<p>No. of iguanas is stable and/or increasing on two target cays from the baseline measured in the first year</p> <p>Incursions of invasive predators on Big Ambergris Cay are reduced in frequency and managed effectively</p> <p>Management plans IAV component strengthened with clear methodologies for ground staff and timetable for IAV control activities</p> <p>Biosecurity plans agreed by TCNT Council, BAC management, tourist operators and developers and approved by TCI Cabinet</p> <p>Strategy for priority island restoration/protection published with actions agreed by the project team</p>	<p>See Section 3.3.</p> <p><i>YR1: Baseline data of iguana numbers collected on both LWC and BAC, evidence in AR1 Due to the impacts of hurricanes and increased development, BAC now has rats and mice present, evidence in AR1. Biosecurity Plan for BAC has been drafted, evidence in AR1. 11 offshore cays surveyed for rodents/cats/reptiles, results to be used in management strategy, evidence in AR1</i></p> <p>YR2: Data analysis has shown iguana populations stable on both LWC and BAC, evidence in Annex 3.6.</p> <p>Island-wide rodent assessment completed on BAC and recommendations made, evidence in Annex 3.4.</p> <p>Biosecurity Plan drafted for LWC, Annex 3.9.</p> <p>Four cays and two islets identified for restoration in YR1 now included within concurrent restoration project</p>	<p><u>Key actions for YR 3 2019/20:</u></p> <p>Update BAC Biosecurity Plan and implement as many of the biosecurity recommendations on BAC as possible.</p> <p>Full engagement of all BAC & LWC stakeholders to endorse and sign off biosecurity plans.</p> <p>Eradication of feral cats and black rats from Donna, Mangrove, Fort George, Grouper, Lizard, & Bird cays completed through the 'Pine Cay Save the Iguana' project.</p> <p>Iguana Species Action Plan workshop in July.</p> <p>Plan for additional fundraising for biosecurity positions on LWC and BAC</p>

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
<p>Output 1. Baseline data established and short term trends identified for Little Water Cay and Big Ambergris Cay for iguanas, boas, humans and predators</p>	<p>1.1 Transect lines, capture-mark-recapture sites and camera networks in place on both islands and data collected for 3 consecutive years on selected reptile and predator species</p> <p>1.2 Effects of humans on iguanas is documented</p> <p>1.3 Recommendations for managing tourists accessing Little Water Cay from neighbouring unmanaged access points made to DECR</p> <p>1.4 Recommendations on conserving reptiles made to Ambergris Cay Facilities Ltd.</p>	<p>1.1 <i>YR1: Two sets of four transects completed on both LWC and BAC providing baseline relative abundance of iguanas, evidence provided in AR1.</i> YR2: One set of four transects completed on both LWC and BAC, evidence in Annex 3.6</p> <p>1.2 <i>YR1: Comparative sites of low and high human activity established on LWC and BAC and two Capture-Mark-Recapture surveys completed, evidence in AR1.</i> YR2: road mortality surveys on BAC shown road killed iguanas doubled in 2018 compared to 2017. CMR studies expanded on LWC and BAC, evidence in Annex 3.6.</p> <p>1.3 <i>Not started - as per project timeline</i></p> <p>1.4 <i>Not started - as per project timeline</i></p>	
<p>Activity 1.1 Detailed surveys of iguanas on Little Water Cay: including setting up transects with camera traps</p>		<p><i>YR1: Two sets of four walking transects on LWC have been completed giving a baseline estimate of relative abundance of iguanas, evidence in AR1.</i></p> <p>YR2: One set of four transects completed, indicating stable iguana population on LWC, evidence in Annex 3.6.</p>	<p>Will be repeated over YR3.</p>
<p>Activity 1.2 Monitoring of cats deployed on Little Water Cay, using a variety of detection methods (including motion cameras), establish presence/absence on Little Water Cay</p>		<p><i>YR1: Camera trap trials have been completed which found baiting during the day ineffective, evidence in AR1.</i></p> <p>YR2: Opportunistic monitoring for feral cats on LWC was completed in October 2018.</p>	<p>The synergistic 'Pine Cay Save the Iguana' project will intensively monitor for feral cats across Pine, Water and Little Water Cay during Q1 of YR3 which will be reported on in YR3.</p>
<p>Activity 1.3 Impact assessment of human activity on iguanas</p>		<p>YR2: Repeated road mortality surveys completed on BAC, Annex 3.6. CMR</p>	<p>Will be repeated over YR3. Results of blood assays to be reported.</p>

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
		studies expanded in high and low human impact areas on LWC and BAC.	
Activity 1.4 Annual survey of native iguanas and boas on Big Ambergris Cay: iguanas, boas, including setting up transects with monitoring cameras		<p><i>YR1: Two sets of four driving transects on BAC have been completed giving a baseline estimate of relative abundance of iguanas, evidence in AR1.</i></p> <p>YR2: One set of four transects completed, indicating stable iguana population on BAC, evidence in Annex 3.6.</p>	Will be repeated over YR3.
Activity 1.5 Management recommendations on tourist management and reptile conservation for LWC and BAC written and management plans		<i>Not started - as per project timeline</i>	
Activity 1.6 Research paper on human-iguana interactions		<i>Not started - as per project timeline</i>	
Output 2. Biosecurity/ IAV plans developed, approved and implemented for Little Water Cay and Big Ambergris Cay	<p>2.1 Cat presence/absence quantified by the end of the second year of fieldwork</p> <p>2.2 Additional control and monitoring activities recommended in the biosecurity plan are undertaken by local staff on Little Water Cay</p> <p>2.3 Rodent incursion protocol in place as part of biosecurity plan on Big Ambergris Cay</p> <p>2.4 Rodent incursion protocol and biosecurity signage in place, and knowledge of importance of biosecurity increased amongst key stakeholder groups specifically tour operators on Little Water Cay</p>	<p>See Section 3.2.</p> <p>2.1 YR2: Opportunistic monitoring completed, no sign seen on LWC. The synergistic 'Pine Cay Save the Iguana' project will intensively monitor for feral cats across Pine, Water and Little Water Cay during Q1 of YR3 which will be reported on in YR3.</p> <p>2.2 YR1: <i>10 project partner staff attended biosecurity training on LWC on 10th March 2018, evidence in AR1.</i> YR2: TCNT staff leading on biosecurity trials on LWC, evidence in Annex 3.8</p> <p>2.3 YR 1: <i>Biosecurity plan drafted, evidence in AR1. Incursion response initiated in response to rat and mouse invasion, evidence in AR1.</i> YR2: Island wide rodent-assessment completed, indicating rodent populations have not established. Biosecurity recommendations made to be implemented.</p> <p>2.4 YR2: Signage designed, evidenced in Annex 3.14, and currently being printed. Posters installed on LWC and other TCNT sites.</p> <p>2.5 YR2: Drafted BAC biosecurity plan shared with DECR. Recommendations to be updated prior to sign-off following island-wide rodent assessment.</p>	

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
	2.5 Island biosecurity plans signed off by DECR and TCNT Council. 2.6 Biosecurity policy drafted by DECR with input from the project team 2.7 Improved awareness of biosecurity among dock staff, clients and companies at South Dock 2.8 Integrated Pest Management initiated at South Dock	2.6 YR2: Links made with GB NNSS to explore possibility for support with legal drafting of biosecurity legislation. 2.7 YR2: South Dock stakeholder meeting and presentation on biosecurity and Integrated Pest Management delivered to 12 participants from eight organisations/departments; evidence in Annexes 3.10 & 3.12 2.8 <i>Not started</i>	
Activity 2.1. Develop a biosecurity plan for Little Water Cay - a model for a publicly accessible island		YR2: Biosecurity plan drafted, evidence in Annex 3.9 ; biosecurity trails underway, evidence in Annex 3.8 with results to be integrated into Plan	Complete biosecurity trails and analyse results Integrate results into Plan
Activity 2.2. Consultation on plan across the DECR and DoA with Ambergris Cay, planning and developers: modification as necessary and write up		<i>Not started - as per project timeline</i>	Complete consultation on LWC Biosecurity Plan
Activity 2.3. Develop a biosecurity plan for Big Ambergris Cay – a model for private islands subject to development pressure		<i>YR1: BAC biosecurity plan drafted, evidence in AR1. Meetings held with BAC Island Manager to discuss the rat and mouse invasion and a response has been initiated, evidence in AR1. Significant progress of implementing biosecurity in YR2 required for BAC to become a model for private islands subject to development pressure.</i> YR2: Island wide rodent-assessment completed, indicating rodent populations have not established. Biosecurity recommendations made to be implemented.	Biosecurity recommendations made to be implemented into Plan.

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
Activity 2.4 Consultation on plan, adaptation, modification, write up and sign off by DECR and Big Ambergris Cay management		<p>YR1: <i>Eight project partner staff attended biosecurity training on BAC, evidence in AR1</i></p> <p>YR2: Five meetings held with BAC Island Manager, one meeting held with CEO of WIHL. Draft plan shared with DECR.</p>	Finalise and sign-off of Biosecurity Plan
Activity 2.5. Write cabinet paper for the approval of the biosecurity plans and a draft biosecurity policy with the aim of approval/sign off by TCI Government		<i>Not started – as per project timeline</i>	Following GB NNSS visit in May, determine appropriate approach and draft and submit cabinet paper
Activity 2.6. Presentation of the biosecurity plans to Planning Department, tourist operators, boat captains, developers and home owners		<i>Not started – as per project timeline</i>	Delivery of presentations on biosecurity plans to key stakeholder groups
Activity 2.7. Signage developed and installed for landing areas on LWC and BAC		YR2: Signage designed, Annex 3.14 , currently being printed	Install signage on LWC
Activity 2.8. Publicity materials on biosecurity produced for tour operators		YR2: Posters installed in LWC visitor centre and other TCNT heritage sites	Design and disperse more publicity materials
Activity 2.9. Biosecurity awareness meeting held for South Dock staff, clients and companies		YR2: stakeholder meeting and presentation on biosecurity and Integrated Pest Management delivered to 12 participants from eight organisations/departments; evidence in Annexes 3.10 & 3.12	Planning for delivery of IPM in July
Activity 2.10. Rodent control through Integrated Pest Management initiated at South Dock		<i>Not started – as per project timeline</i>	Implement IPM at South Dock in July
Output 3. Restoration/protection strategy for offshore islands following 'rapid survey' for reptiles and rodents.	<p>3.1 Rapid survey methods devised by end of year 1</p> <p>3.2 Rapid surveys implemented on 10 offshore cays through first, second and third project year and data shows</p>	<p>See Section 3.2.</p> <p>3.1 <i>YR1: Trial of monitoring methods completed on LWC and a protocol produced, evidence in AR1. YR2: Complete.</i></p> <p>3.2 <i>YR1: 11 offshore cay surveys completed for rodents, cats and iguanas, five around LWC and six around BAC. Night surveys for boas were completed on</i></p>	

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
	<p>extent of reptile and rodent populations.</p> <p>3.3. Updated IUCN TCI Iguana conservation management plan – to include the iguana restoration strategy agreed by DECR/TCNT/IUCN Iguana specialists group</p> <p>3.4. Baseline iguana population estimates collected on additional cays (Pine, Water, Donna, Mangrove, Fort George, Grouper, Lizard, Bird).</p>	<p><i>Little Ambergris and Long Cay. evidence in AR1.</i> YR2: Iguana presence/absence surveys completed on two cays.</p> <p>3.3 <i>Not started – as per project timeline</i></p> <p>3.4 YR2: A set of four transects were completed on Pine, Mangrove, Donna, evidence in Annex 3.6. Only 2 iguanas were recorded on Pine Cay, iguanas were abundant on Mangrove and Donna. Baseline iguana population estimates are now available for six of the seven cays targeted for eradication in the ‘Pine Cay Save the Iguana’ project.</p>	
<p>Activity 3.1. Devise and deploy rapid survey methodology for rodents and iguanas to apply across at least 10 cays surrounding target sites (Donna, Mangrove, Lizard, Bird, Fort George, Grouper, Dellis, Water, Pine, Bush, Little Ambergris, Fish, Six Hills, Long, and Middleton)</p>		<p><i>YR1: Trial of monitoring methods completed on LWC. Protocol for Offshore Cays surveys produced, see AR1. 11 offshore cay surveys completed for rodents, cats and iguanas, five around LWC and six around BAC. Night surveys for boas were completed on Little Ambergris and Long Cay. Evidence in AR1.</i></p> <p>YR2: Iguana presence/absence surveys completed on two cays (Fort George, Grouper), Annex 3.6.</p>	<p>Complete night surveys for boas</p>
<p>Activity 3.2. Use the results to update the IUCN conservation management plan for TCI iguanas – to include consultation with the IUCN SSC Iguana Specialist Group</p>		<p><i>Not started – as per project timeline</i></p>	<p>Plan and deliver a Species Action Plan workshop in July</p> <p>Sign off and approval by SSC by end of project</p>
<p>Activity 3.3. Research paper on effects of rats on iguanas</p>		<p><i>Not started – as per project timeline</i></p>	<p>Paper to be drafted by the end of the project</p>

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
Activity 3.4. Collect baseline iguana population data on additional cays (Pine, Water, Donna, Mangrove, Fort George, Grouper, Lizard, Bird) prior to 2019 rodent eradication		YR2: A set of four transects were completed on Pine, Mangrove, Donna, evidence in Annex 3.6 . Only 2 iguanas were recorded on Pine Cay, iguanas were abundant on Mangrove and Donna.	The 'Pine Cay Save the Iguana' project will provide baseline data on Water Cay to provide pre-eradication baseline data. Repeat surveys following eradication.
Output 4: Capacity and efficacy of personnel with the project team (in TCI and the UK) to implement essential monitoring and biosecurity activities to address invasive vertebrates increased	<p>4.1 Project team members develop competencies outside areas of specialism at the beginning of project</p> <p>4.2 Project team members confidence to address IAV issues increases through them independently developing plans/applications for future work</p> <p>4.3 Improved unsupervised performance of team members</p>	<p>See Section 3.2.</p> <p>4.1 <i>Project team members involved in all project activities improving cross-organisational collaborative working, evidence in AR1.</i> YR2: Project team members involved in all project activities improving cross-organisational collaborative working, evidence in Annex 3.11.</p> <p>4.2 <i>Biosecurity training from experts delivered on LWC and BAC to 10 project partner staff on LWC and 8 project partner staff on BAC, evidence in AR1.</i> YR2: TCNT have led on public awareness and schools outreach sharing the knowledge they have learnt through the project, see Section 9. South Dock stakeholder meeting was delivered to 12 participants from eight organisations/departments, see Annexes 3.10 & 3.12.</p> <p>4.3 YR2: TCNT staff have led on biosecurity trials on LWC with guidance from RSPB, as evidenced in Annex 3.8.</p>	
Activity 4.1. Experts in each area above train others within the project team to undertake the tasks needed for successful implementation of biosecurity plans: monitoring (native wildlife and predators), ongoing surveillance, minimising the risk of introducing rodents through the transport of goods and people, and implementing incursion plans should rodents or other invasive alien vertebrates be detected on Big Ambergris Cay		<p><i>YR1: Project team members involved in all project activities improving cross-organisational collaborative working, evidence in AR1. Biosecurity training from experts delivered on LWC and BAC to 10 project partner staff on LWC and 8 project partner staff on BAC, evidence in AR1.</i></p> <p>YR2: Project team members involved in all project activities improving cross-organisational collaborative working, evidence in Annex 3.11.</p>	<p>In YR3 there will be more of a focus on stakeholder engagement/endorsement required for implementing biosecurity plans.</p> <p>Delivery of IPM at South Dock with local staff leading control efforts.</p>

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
Activity 4.2. Questionnaires for team members and line managers /collation of ad hoc performance feedback/ no. of new initiatives started		<p>YR1: <i>Feedback collected from the biosecurity training course held on LWC, evidence in AR1. Feedback via email and biannual conference calls, evidence in AR1.</i></p> <p>YR2: Feedback collected from the South Dock stakeholder meeting, evidence in Annex 3.12. Feedback from mid-term evaluation and biannual conference calls, evidence in Annex 3.2.</p>	Feedback will be continually sought, including with questionnaires for specific events.
Output 5: Project managed and monitored effectively	<p>5.1 Project monitoring plan developed in first 3 months and reviewed quarterly</p> <p>5.2 Regular communication maintained between the team; biannual skype calls and annual visits and reports from managers</p> <p>5.3 Annual face to face project meetings take action to address any challenges and maintain engagement of senior managers within project partners</p> <p>5.4 Technical and financial reporting to RSPB and Darwin accurate and on time and to high standard.</p>	<p>See Section 3.2.</p> <p>5.1 YR1: <i>Not completed. Will be completed during first quarter of YR2.</i> YR2: Completed in Q1 with partner input and updated quarterly (Annex 3.1)</p> <p>5.2 YR1: <i>Project leader in regular contact with project partners via email. First bi-annual call completed in May 2017, evidence in AR1. Second bi-annual conference call cancelled due to hurricane impacts.</i> YR2: Project leader in regular contact with project partners via email, WhatsApp, phone and skype calls. Two conference call steering group meetings were held; in July 2018 and Feb 2019, evidenced in Annex 3.2.</p> <p>5.3 YR1: <i>Face-to face meetings completed with all project partners in April 2017 by previous project leader, Elizabeth Radford, and in March 2018 by current project leader.</i> YR2: Face-to face meetings completed with all project partners in October 2018 and March 2019, evidenced in Annex 3.3.</p> <p>5.4 YR1: <i>Project technical reporting from project partners for YR1 have been received by RSPB, evidence in AR1. Some financial reporting from project partners is still outstanding. Darwin reporting completed and submitted by the deadline.</i> YR2: Project technical reporting from project partners for YR1 have been received by RSPB. Some financial reporting from project partners is still outstanding. Darwin reporting completed and submitted by the deadline.</p>	

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
Activity 5.1. At project start-up develop and agree project monitoring plan and use it as a project management tool to monitor implementation progress		YR1: <i>Not completed. Will be completed during first quarter of YR2.</i> YR2: Completed plan in Q1 with partner input and updated quarterly (evidence in Annex 3.1)	Project lead to update monitoring plan quarterly.
Activity 5.2. Bi-annual skype or conference call for core project team to plan forthcoming work schedule ensuring boats and personnel availability coincide		YR1: <i>First bi-annual call completed in May 2017, evidence in AR1. Second bi-annual conference call cancelled due to hurricane impacts.</i> YR2: Two conference call steering group meetings were held; in July 2018 and Feb 2019, in addition to Activity 5.5. These meetings were minuted (evidence in Annex 3.2) and actions for each partner identified.	In YR3 plan to have two steering group meetings in Q1 and Q3.
Activity 5.3. Bi-annual internal (project team) technical and financial reporting to RSPB		YR1: <i>First bi-annual reporting for in-Territory partners postponed due to hurricane impacts Project technical reporting from project partners for YR1 have been received by RSPB, evidence in AR1. Some financial reporting from project partners is still outstanding. However, some were not received until significantly after the deadline set within the contract, which increases the pressure on the project leader and finance manager.</i> YR2: Project technical reporting from project partners for YR1 have been received by RSPB. Delays in financial reporting.	Continue to work to tighten the partnership in terms of reporting to schedule
Activity 5.4. 3x annual meeting of project team and management in TCI (Providenciales) just prior to the spring fieldwork session (March/April each		YR1: <i>The Project launch was completed in April 2017 (AR1). An annual meeting was not planned prior</i>	A meeting will be planned at the start of the next trip in July 2019.

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
year) for planning and sharing of data between all project partners from subsequent years.		<p><i>to the March 2018 trip due to the impacts of Hurricanes Irma.</i></p> <p>YR2: A project partners meeting was held in October 2018, which formed the mid-term evaluation (Activity 5.5) which discussed results and fieldwork/activities for upcoming year, evidence in Annex 3.3.</p>	
Activity 5.5. Mid-term evaluation with project team		YR2: A mid-term evaluation was held in TCI on 31 October which was attended by all project partners (Annex 3.3)	<i>Completed</i>
Activity 5.6. Final evaluation with external consultants		<i>Not started - as per project timeline</i>	Book an external consultant to complete project evaluation in March 2020.

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

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: (Max 30 words)			
Improved implementation of Invasive Alien Vertebrate management in TCI and increased capacity to sustain the improvement, resulting in better protection of TCI's natural assets that support the tourist industry.			
<p>Outcome:</p> <p>The critically endangered Turks and Caicos iguana is secured through the establishment of effective biosecurity plans/invasive vertebrate control on two offshore islands, and the identification of islands for future restoration.</p>	<p>No. of iguanas is stable and/or increasing on two target cays from the baseline measured in the first year</p> <p>Incursions of invasive predators on Big Ambergris Cay are reduced in frequency and managed effectively</p> <p>Management plans IAV component strengthened with clear methodologies for ground staff and timetable for IAV control activities</p> <p>Biosecurity plans agreed by TCNT Council, BAC management, tourist operators and developers and approved by TCI Cabinet</p> <p>Strategy for priority island restoration/protection published with actions agreed by the project team.</p>	<p>Updated IUCN Conservation status assessment for Turks and Caicos. Iguana/boa/reptile database for TCI Government</p> <p>Biosecurity plan reports from Big Ambergris Cay.</p> <p>Revised site management plans, annual work plans and budgets</p> <p>TCNT Council meeting minutes, cabinet paper, attendance at tourist and developers seminars and minutes of cabinet meeting</p> <p>Strategy contained within the updated IUCN TCI Iguana conservation management plan.</p>	<p>IAV control and Biosecurity plans are properly implemented by management authorities</p> <p>TCI Government continue to see importance of biosecurity to TCI's native wildlife and related industries</p> <p>Tour operators and developers ready to engage in discussions about biosecurity</p>
<p>Outputs:</p> <p>1. Baseline data established and short-term trends identified for Little Water Cay and Big Ambergris Cay for iguanas, boas, humans and predators</p>	<p>1.5 Transect lines, capture-mark-recapture sites and camera networks in place on both islands and data collected for 3 consecutive years on selected reptile and predator species</p> <p>1.6 Effects of humans on iguanas is documented</p> <p>1.7 Recommendations for managing tourists accessing Little Water Cay from neighbouring unmanaged access points made to DECR</p>	<p>1.1 Fieldwork reports, Iguana, boa and rat monitoring data</p> <p>1.2 Peer reviewed publications on iguana-human interactions.</p> <p>1.3 Tourism management recommendation report.</p> <p>1.4 Reptile conservation on Big Ambergris Cay - report</p>	<p>Fieldwork is not further rendered impossible through hurricanes or other natural phenomena</p> <p>DECR, TCNT, Ambergris Cay developers adopt and implement management recommendations for Little Water Cay and Big Ambergris Cay</p>

	1.8 Recommendations on conserving reptiles made to Ambergris Cay Facilities Ltd.		
2. Biosecurity/ IAV plans developed, approved and implemented for Little Water Cay and Big Ambergris Cay	<p>2.1 Cat presence/absence quantified by the end of the second year of fieldwork</p> <p>2.2 Additional control and monitoring activities recommended in the biosecurity plan are undertaken by local staff on Little Water Cay</p> <p>2.3 Rodent incursion protocol in place as part of biosecurity plan on Big Ambergris Cay</p> <p>2.4 Rodent incursion protocol and biosecurity signage in place, and knowledge of importance of biosecurity increased amongst key stakeholder groups specifically tour operators on Little Water Cay</p> <p>2.5 Island biosecurity plans signed off by DECR and TCNT Council.</p> <p>2.6 Biosecurity policy drafted by DECR with input from the project team</p> <p>2.7 Improved awareness of biosecurity among dock staff, clients and companies at South Dock</p> <p>2.8 Integrated Pest Management initiated at South Dock</p>	<p>2.1 Results from survey data.</p> <p>2.2 Management plan, annual work plan, field officer log books</p> <p>2.3 Developers include biosecurity measures within applications.</p> <p>2.4 Tourist operators alert tourists to importance of biosecurity using signs, publicity materials and tour scripts as part of boat trips to Little Water Cay.</p> <p>2.5 MOU/statement of ongoing collaboration to maintain biosecurity DECR/TCNT/DoA</p> <p>2.6 DECR submits Cabinet paper and Council minutes</p> <p>2.7 Reports and feedback forms from biosecurity awareness meetings from DoA and partners</p> <p>2.8 Report and photographs of pest control efforts at South Dock from DoA and partners</p>	<p>IAV control and biosecurity plans are properly implemented by management authorities – i.e. local technical capacity is not lost</p> <p>Tourist and developers continue current engagement levels with project team</p> <p>Feral cat eradication is fully achieved in 2019</p>
3. Restoration/protection strategy for offshore islands following 'rapid survey' for reptiles and rodents.	<p>3.1 Rapid survey methods devised by end of year 1</p> <p>3.2 Rapid surveys implemented on 10 offshore cays through first, second and third project year and data shows extent of reptile and rodent populations.</p> <p>3.3. Updated IUCN TCI Iguana conservation management plan – to include the iguana restoration strategy agreed by DECR/TCNT/IUCN Iguana specialists group</p>	<p>3.1 Iguana and rodent rapid survey methodology written and distributed to IAV community through IUCN Invasive Species Specialist Group 'Aliens' list server and other similar distribution mechanisms/networks.</p> <p>3.2. Report on effects of rodents on reptiles</p> <p>3.3. Published IUCN TCI iguana conservation plan</p>	<p>Islands are accessible by project team</p> <p>Specialist group members (volunteers) willing to engage in plan development</p>

	3.4. Baseline iguana population estimates collected on additional cays (Pine, Water, Donna, Mangrove, Fort George, Grouper, Lizard, Bird).	3.4. Report summarising baseline population estimates for additional cays	
4. Capacity and efficacy of personnel with the project team (in TCI and the UK) to implement essential monitoring and biosecurity activities to address invasive vertebrates increased	<p>4.1 Project team members develop competencies outside areas of specialism at the beginning of project</p> <p>4.2 Project team members confidence to address IAV issues increases through them independently developing plans/applications for future work</p> <p>4.3 Improved unsupervised performance of team members</p>	<p>4.1 Project team feedback forms on fieldwork</p> <p>4.2 Team member plans/applications for future work.</p> <p>4.3 Team leaders/line managers assessment and annual appraisals.</p>	<p>Team members are always available for fieldwork and willing to learn new techniques.</p> <p>Staff retention and progression allows them to implement and share skills</p>
5. Project managed and monitored effectively	<p>5.0. Project monitoring plan developed in first 3 months and reviewed quarterly</p> <p>5.1 Regular communication maintained between the team; biannual skype calls and annual visits and reports from managers</p> <p>5.2 Annual face to face project meetings take action to address any challenges and maintain engagement of senior managers within project partners</p> <p>5.3 Technical and financial reporting to RSPB and Darwin accurate and on time and to high standard.</p>	<p>5.0 Monitoring plan and updates.</p> <p>5.1 Skype meeting minutes and project manager's reports.</p> <p>5.2 Meeting action points completed, attendance list for annual meetings.</p> <p>5.3 Technical and financial reports and approval notes from Darwin.</p>	

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 Baseline and trend data for iguanas and boas, humans and predators

1.1 Detailed surveys of iguanas on Little Water Cay: including setting up transects with camera traps

1.2 Monitoring of cats deployed on Little Water Cay, using a variety of detection methods (including motion cameras), establish presence/absence on Little Water Cay

1.3 Impact assessment of human activity on iguanas

1.4 annual survey of native iguanas and boas on Big Ambergris Cay: iguanas, boas, including setting up transects with monitoring cameras

- 1.5 Management recommendations on tourist management and reptile conservation for LWC and BAC written and management plans updated
- 1.6 Research paper on human-iguana interactions

2 Development of biosecurity plans

- 2.1 Develop a biosecurity plan for Little Water Cay - a model for a publicly accessible island
- 2.2 Consultation on plan across the DECR and DoA with Ambergris Cay, planning and developers: modification as necessary and write up
- 2.3 Develop a biosecurity plan for Big Ambergris Cay – a model for private islands subject to development pressure
- 2.4 Consultation on plan, adaptation, modification, write up and sign off by DECR and Big Ambergris Cay management
- 2.5 Write cabinet paper for the approval of the biosecurity plans and a draft biosecurity policy with the aim of approval/sign off by TCI Government
- 2.6 Presentation of the biosecurity plans to Planning Department, tourist operators, boat captains, developers and home owners
- 2.7 Signage developed and installed for landing areas on LWC and BAC
- 2.8 Publicity materials on biosecurity produced for tour operators
- 2.9 Biosecurity awareness meeting held for South Dock staff, clients and companies
- 2.10 Rodent control through Integrated Pest Management initiated at South Dock

3 Rapid survey of offshore cays

- 3.1 Devise and deploy rapid survey methodology for rodents and iguanas to apply across at least 10 cays surrounding target sites (Donna, Mangrove, Lizard, Bird, Fort George, Grouper, Dellis, Water, Pine, Bush, Little Ambergris, Fish, Six Hills, Long, and Middleton)
- 3.2 Use the results to update the IUCN conservation management plan for TCI iguanas – to include consultation with the IUCN SSC Iguana Specialist Group
- 3.3. Research paper on effects of rats on iguanas
- 3.4 Collect baseline iguana population data on additional cays (Pine, Water, Donna, Mangrove, Fort George, Grouper, Lizard, Bird) prior to 2019 rodent eradication

4. Training and capacity building

- 4.1 Experts in each area above train others within the project team to undertake the tasks needed for successful implementation of biosecurity plans: monitoring (native wildlife and predators), ongoing surveillance, minimising the risk of introducing rodents through the transport of goods and people, and implementing incursion plans should rodents or other invasive alien vertebrates be detected on Big Ambergris Cay
- 4.2 Questionnaires for team members and line managers /collation of ad hoc performance feedback/ no. of new initiatives started

5. Project management/ Monitoring

- 5.1. At project start-up develop and agree project monitoring plan and use it as a project management tool to monitor implementation progress
- 5.2 Bi-annual skype or conference call for core project team to plan forthcoming work schedule ensuring boats and personnel availability coincide
- 5.3 Bi-annual internal (project team) technical and financial reporting to RSPB
- 5.4 3x annual meeting of project team and management in TCI (Providenciales) just prior to the spring fieldwork session (March/April each year) for planning and sharing of data between all project partners from subsequent years.

5.5 Mid-term evaluation with project team
5.6 Final evaluation with external consultants

Annex 3 Onwards – supplementary material (optional but encouraged as evidence of project achievement)

Please refer to the supplementary materials. These are:

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.	Y
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.	N
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.	Y
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.	N
Have you involved your partners in preparation of the report and named the main contributors	Y
Have you completed the Project Expenditure table fully?	N
Do not include claim forms or other communications with this report.	