Darwin Plus Main: Annual Report

To be completed with reference to the "Project Reporting Information Note" (https://darwinplus.org.uk/resources/information-notes)

It is expected that this report will be a **maximum of 20 pages** in length, excluding annexes)

Submission Deadline: 30th April 2024

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

Darwin Plus Project Information

Project reference	DPLUS164
Project title	Conservation Actions for Seabirds on the Turks and Caicos Cays
Territory(ies)	Turks and Caicos Islands
Lead Partner	University of Liverpool, UK
Project partner(s)	Turks and Caicos National Trust (TCNT) Royal Society for the Protection of Birds (RSBP) Turks and Caicos Reef Fund (TCRF) BirdLife International SAERI Falklands Ltd (SFL) Collaborators – TCIG's Department of Coastal Resources (DECR)
Darwin Plus grant value	£516,398
Start/end dates of project	1st May 2022 – 28th Feb 2025
Reporting period (e.g. Apr 2023-Mar 2024) and number (e.g. Annual Report 1, 2)	Apr 2023 – Mar 2024
Project Leader name	Dr Rhiannon [redacted]
Project website/blog/social media	www.caribbeanseabirds.weebly.com @tciseabirds Twitter: TCISeabirds
Report author(s) and date	Dr Rhiannon [redacted] and project partners.

1. Project summary

The Turks and Caicos Islands, where this project is based, is an archipelago of over 40 islands and small cays located in the Caribbean region of the Atlantic Ocean to the southeast of the Bahamas (Fig 1)

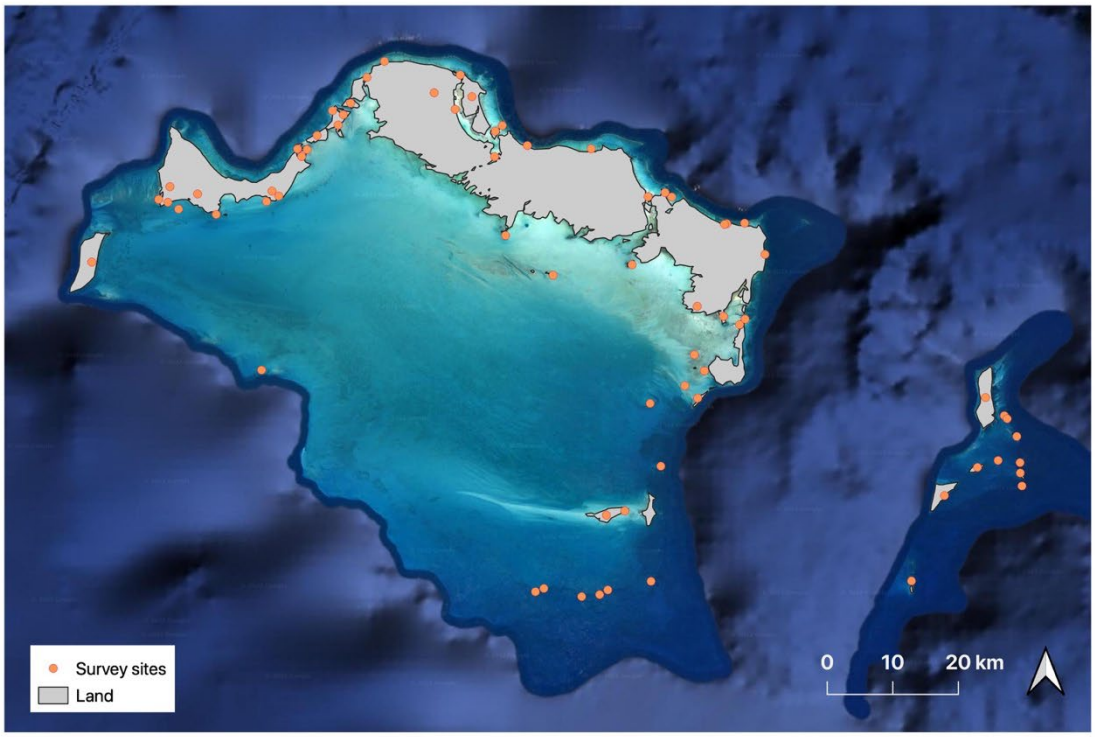

Fig 1. Map of the Turks and Caicos Islands and main study sites of DPLUS164.

Coastal development is taking place at an unprecedented rate in many of the Caribbean's UK Overseas Territories, and most notably within the Turks and Caicos Islands (TCIs), which has one of the fastest growing populations and economies in the region. This has become a major concern for the environment in this UKOT, with a growing number of pressing wildlife and resource use conflicts. Furthermore, local tourism and associated human activity in coastal areas is growing at an unprecedented rate (EDSA et al. 2005; TCIG 2021). There are a wide range of stakeholders working in the TCIs, and development and resource extraction are predicted to intensify, at a time when climate change impacts are a pressing concern (Pienkowski, 2009). Knowledge of key ecosystem components and conservation threats is therefore essential for effective management of this complex suite of environmental issues, yet many data gaps remain. This is the case for seabirds, which play important roles in marine and coastal ecosystems on which island communities and economies rely, and represent valuable indicators of ecosystem health. This is particularly true in tropical environments through their connective role between reef and terrestrial systems (Graham et al. 2018).

The Cays and Islands of Turks and Caicos are believed to be one of the most important breeding areas for seabirds in the Caribbean, with 15 species thought to regularly use this territory (Pienkowski et al 2005), 13 of which we have now confirmed breeding in (this project). The main breeding sites are remote cays of the Caicos and Turks Banks (>40 sites), where tens of thousands of seabirds are thought to nest (Pienkowski, 2008 & 2009). Prior to this project, the last effort-based assessment undertaken in 2002 suggested that these islands hosted internationally and regionally important populations of at least 8 species, including ~5% of the global population of brown noddies and ~33% of the regional population of bridled terns (Pienkowski et al 2005). However, these estimates, which themselves were based on limited survey effort and relatively primitive methodologies, are severely outdated and likely highly

inaccurate. As a result, information remains coarse and precautionary for most species, with formal confirmations of breeding in some species still not achieved.

Many known sites on which seabirds breed remain unprotected and are vulnerable to unregulated development, and there are no active routine monitoring activities. Threats from predation by invasive species, and harvesting pressure are completely unknown at most sites. Furthermore, knowledge of the current distribution of TCI's seabird populations is extremely poor, and any existing management is based on highly outdated information.

Project aims

This project aims to deliver locally driven population monitoring programmes to provide up-to-date seabird assessments that will enable threats to be identified and appropriate management strategies to be implemented. Furthermore, it will equip local stakeholders with tools to sustainably monitor and manage seabirds, while engaging communities.

Project objectives

1. *Determine the size, distribution, and health of breeding seabird populations on the cays and main islands of the TCI archipelago*
2. *Aid development of local NGOs, Government and community partners in skills, knowledge and capacity to operate self-sustaining seabird monitoring programmes*
3. *Improve knowledge of the main threats to key seabird populations, to enable identification of appropriate conservation strategies*
4. *Identify and delineate IBAs for seabird breeding sites on the cays and islands of TCI*
5. *Develop a 'seabird cays policy' that will inform development of 'site management plans' for both Protected Areas within IBAs, and IBAs proposed for protection, and steps taken to initiate identified conservation actions*
6. *Increase understanding, support and engagement of local communities and stakeholders, and regional and global audiences, with avian conservation actions in the TCIs*

2. Project stakeholders/partners

This project is a direct partnership between the University of Liverpool, Turks and Caicos National Trust (TCNT), Turks and Caicos Reef Fund (TCRF), Royal Society for the Protection of Birds (RSPB), and Birdlife International and SAERI Falklands International (SFL), with additional support from of the Government of the Turks and Caicos Islands' Department of Environment and Coastal Resources (DECR), and School of Field Studies, South Caicos (SFS).

The project application stemmed from initial conversations between Dr Austin, DECR and TCNT, and developed with involvement from all project partners during the project application procedure. Therefore, all partners have been involved in the project's development since its conception. While the DECR were not able to sign up as official project partners, owing to existing project commitments, they have been highly supportive of the project since its early stages (see supporting letters in the application), and have continued to actively participate in Y2 through both fieldwork involvement and meetings to discuss how project data can be used within management processes. For example, the DECR, in collaboration with the UoL and RSPB, are now engaged in the processes of reviewing and recommending important sites as KBAs and IBAs.

To ensure independent monitoring and evaluation of project progress, Steering Group Meetings between all project partners were held in May 2023 and January 2024 (Annex 4.1). The third Steering Group Meeting is planned for July/August 2024 following completion of project data gathering activities. Regular face-to-face meetings between TCI-based staff at UoL, RSPB and TCNT have taken place during Y2. Project partners have remained in touch remotely throughout Y2. Nevertheless, staff retainment issues at the TCNT have continued into Y2, resulting in the onus being put on the project leader to deliver the bulk of the project outputs.

Collaborations have continued to be fostered to add value to the project. The collaboration with 'Conservation AI' and 'Conservation Drones' through Liverpool John Moores University is running

successfully. Professor Serge Wich, who leads these organizations, will be joining the project team in the TCIs in late 2024 in the TCIs to help run a drone-focused workshop to train partner organisations in the use of UAV technology for ecological surveys (see section 3.1). The School of Field Studies on South Caicos, a local environmental research and teaching organization, has also engaged notably in the project by providing in-kind accommodation, T&S and safety support, in addition to field staff. Professor John Arnould at Deakin University has also supported the projected by providing additional funding to purchase biologgers to track seabirds, which began in Y2. Tracking of at-sea movements of seabirds will extend knowledge beyond the colony into the marine realm, represent a proof-of-concept for future work, and provide information on connectivity and conservation considerations. Lastly, we have continued to engage local communities and ecotourism vendors through community events and involvement in survey work (see section 3.1 and 3.2).

3. Project progress

3.1 Progress in carrying out project Activities

Output 1. Population surveys and estimates

1.1 Boat-based, land-based, aerial and acoustic surveys undertaken on the seabird cays and main TCI islands, and population estimates obtained for 15 resident species

In Y2, 84 visual surveys (foot or boat/kayak based) comprising an estimated 524 hours of team effort were undertaken across 50 sites on the Cays and main islands across the Caicos and Turks Banks (see table in Annex 4.2). This equates to 169 surveys and 1169 hours of team effort across Y1 and Y2. In June 2023, we also undertook 13 drone surveys across 20 sites using both visual spectrum and thermal infrared UAVs. Some sites were visited over multiple days and visits, to undertake repeat surveys, collect breeding success data and deploy and collect monitoring devices.

Acoustic monitoring for Audubon's Shearwaters took place in Q1 and Q2 Y2, with collection of the acoustic array of song meters from Six Hills Cays in July 2023. In May 2023, an additional 8 audiomoths were deployed on small cays around Providenciales in areas of high human activity to investigate the presence of shearwaters at these sites. Six of these devices were recovered in July 2023 (one device was missing and presumably stolen, and the 8th device was not retrieved due to bad weather during boat recovery trips and subsequently missing).

Data processing took place throughout Y2, when demanding field schedules allowed, and many data from subsampling regimes have been analysed to extrapolate to full counts (see Evidence in Annex 4.2). However, with 50 sites surveyed across two years, this large task remains ongoing. Project leadership attempted to recruit students to assist with processing the extensive dataset of generated UAV imagery in the second half of Y2. We have recently recruited two volunteers who have gone through rounds of training with the project leader prior to beginning to process images within the platform on the 'Conservation AI' website (https://www.conservationai.co.uk; evidence in Annex 4.2). We will attempt to complete this take for a small number of sites to be able to start building models for the most abundant and relevant species (sooty terns, brown noddies, royal terns, Cabot's terns, neotropical cormorants) by the end of the project. However, due to the extensive time commitment and processing effort of this task, we no longer believe it is feasible to analyse the entire database across 13 sites and 2 years with the limited staff available on the project for data tasks. It is not realistic for the project leader to do this herself given the heavy work load she already has, and it requires a dedicated full-time staff member, and most likely a further funding application. Nevertheless, population estimates will be obtained from count data collected using other methods in Y1 and Y2 (visual and acoustic surveys). The models that we hope to build, even if this outdates the project, will provide a proof of concept for use of automated processes across the wider dataset, and other species, in the future.

We noticed notable differences in the timing of breeding in several species (sooty terns, brown noddies, bridled terns) between years and island groups in Y2 raising questions about the level

of isolation, exchange and connectivity between islands in the TCIs. Therefore, to add additional value to the project and help understand how the Caicos and Turks Banks may be ecologically linked for seabirds, we began tracking birds in Y2 with biologgers under permit from the TCIG's DECR. Collaborators of Dr Austin's at Deakin University in Australia (Prof. John Arnould) provided funding for the biologgers for the project in-kind totalling over €13,000 EUROS. In 2023, 10 Audubon's Shearwaters were tagged and foraging trips from 4 birds were recovered (see Annex 4.2). Further tracking in planned on a wider range of species in Y3.

1.2 Technical report (Seabird Management Recommendation Report) produced summarising population estimates and data generated in 1.1

This activity is scheduled to take place in Y3 following processing and interpretation of Y2 survey data.

1.3 Array of time-lapse cameras deployed on priority seabird cays (up to 7 sites) to collect image data for publicity purposes and biosecurity monitoring, and biosecurity risks assessed from combined data and presented in the Seabird Management Recommendation Report

Biosecurity materials (wax traps) were deployed at 5 priority sites during Y2. 10 traps were recovered, with no signs of rats detected (see table in Annex 4.2).

The biosecurity risk assessment is scheduled to be completed in Y3 following processing and interpretation of Y2 survey data. All trail cameras were collected by the end of Q3 in Y2. Data were downloaded and are awaiting analysis for biosecurity risks which will take place in Y3. Photos and video of breeding birds were used for project publicity in Y2 during public talks, and are present on project webpages and social media (Evidence in Annex 4.6).

Output 2. Capacity building for population monitoring

2.1 *Population monitoring methods and data outputs assessed and compared, and best-practice methods for ongoing monitoring of specific sites and species outlined in the technical report (Seabird Management Recommendation Report)*

Despite the heavy field commitments in Y2, progress was made to process and analyse population data, particularly in the second half of the year. The project leader has continued to add population data to the database, and is working to extrapolate from subsampled counts to full population estimates, site-by-site, to present in management reports (Evidence in Annex 4.2). Details of suitable monitoring protocols and threats at each site are being collated and will be incorporated into the Seabird Management Recommendation Report. In addition, guidance documents, field recording sheets and seabird photo cards were refined and used for field staff training and data collection in Y2 surveys (Evidence in Annex 4.3).

2.2 *Population database created and maintained*

The population database was added to as surveys took place in Y2 and will be updated continuously as analyses are completed for the ~40 sites monitored in the project (Evidence in Annex 4.3). This database will be hosted by DECR under their bird monitoring programme following the end of the project, and the information will be assessable with permission through the DECR's Marine Spatial Planning Platform.

2.3 *Local partner staff trained in seabird identification, monitoring methods and data handling during survey work and tailored training sessions*

The core project team provided 16 staff/voluntary members from partner organisations with training in seabird identification and monitoring methods, including 4 from TCNT, 4 from DECR, 2 from TCRF, 5 from RSPB and 1 linked to SFL (Evidence in Annex 4.3).

2.4 *Small number of islander volunteers trained in seabird identification and monitoring during field periods*

In addition to the partner staff trained above, 11 captains/crew from ecotour operators, and 11 enthusiastic dedicated members of the public were provided with bespoke on-the-ground training in seabird identification and monitoring (see list of participant organisations in Annex 4.3). In Y3, tailored training events for ecotour operators will be run to further educate about seabirds. A BirdsCaribbean-led workshop with the TCNT in October 2023 also helped to train a range of local people in bird identification and guiding skills, and the interest generated during this course has continued through avenues such as a WhatsApp 'birdwatchers' chat (48 members), where interested parties discuss birds and can seek advice on species identification.

***2.5** Seabird monitoring guide produced and distributed amongst local partners and stakeholders*

We refined the seabird monitoring guide after reviewer recommendations in AR1 to add images of birds in flight for each species. If was not possible to gain adequate images during fieldwork for this purpose. However, we engaged a professional artist to produce these images and delayed printing of the guides until the artwork was completed. This was finished in March 2024 and the final touches are being made to the guides in April/May 2024 before printing (Evidence in Annex 4.3). The guides will be disseminated later in Y3 at seabird training events.

***2.6** Drone workshop run during Y3*

This activity is now scheduled to take place in Q3 of Y3. 10 representatives from the TCIG's DECR, TCNT, TCRF, SFS, RSPB and other local conservation NGOs will participate. The workshop will provide local staff with the necessary skills to design, plan and execute ecological surveys using drones, and be able to process and handle the imagery that are generated. It will also cover aspects such as safety, permitting and regulation requirements relevant to TCI. It will be co-led by the project leader and Professor Serge Wich from Liverpool John Moore's University who is the co-founder of Conservation Drones and Conservation AI (http://conservationdrones.org and http://www.conservationai.co.uk). The main component of the course will be classroom based, but it will include some one-on-one drone practice with experienced drone pilots

Output 3. Seabird threat assessment

***3.3.1** Using data generated during population surveys, threat assessment undertaking to identify threats to seabird populations and added to Seabird Management Recommendation Report*

This output and its activities are not scheduled until Y3. However, any notable threats observed during seabird surveys have been recorded and will be collated in the SMRR in Y3.

Output 4. IBA network identification

***3.4.1** Key breeding and roosting sites of seabird species identified, and maps and map layers produced*

Y2 marked the second round of identifying key breeding and roosting sites of seabirds in TCI based on improved surveys that were informed by information gained in Y1. We substantially extended the population database in Y2, generating a wealth of new data and information on the distribution of nesting sites for 13 species. This was made possible through a massive, combined effort of project staff and volunteers (see Output 1 and 2). Many data have been processed and input into the population database and mapping software (evidence in Annex 4.2 and 4.3).

***3.4.2** Review and update of TCI's IBAs undertaken, and the BirdLife International IBA list updated*

In Y2, much progress has been made to review seabird populations within 9 existing IBAs in the TCIs. This review could not be undertaken until Y2 population data were collected so it is an ongoing process that remains incomplete for some sites. We initially planned to incorporate all data into a BirdLife International IBA and KBA updates in March 2024. However, progress with this output was delayed during the second half of Y2 following discussions with the TCIG's DECR. In November 2023, a strategy meeting was held between core project staff and DECR to discuss application and suitability of the DPLUS164 project data for management (see Evidence in Annex

4.5). This was followed by a second meeting in February 2024 between the UoL, DECR and the RSPB to discuss plans for integrating data into the IBA/KBA networks (see Annex 4.5). From this meeting, the project leader and in-country RSPB staff drafted a 4-page Cabinet report with recommendations for 3 new KBAs in the TCIs based on avian trigger features (see Annex 4.4). KBA recommendation forms have been drafted (see Annex 4.4) and the project team await authorisation from the TCIG before they can be submitted and formal IBA/KBA updates can proceed. This has delayed the initial plan for undertaking the IBA update with BirdLife International in March 2024, and we now plan for data to be integrated into the IBA update in Sept 2024.

Output 5. Species and site management recommendations

3.5.1 *Recommendations for seabird management presented in Seabird Management Recommendation Report*

Activities associated with Output 5 are scheduled to take place in Y3 following processing and interpretation of Y2 survey data. However, during strategy meetings in November 2023 and February 2024, core project staff and the TCIG's DECR discussed the project data and a plan for packaging these into a format that will be of highest use for management (see Evidence in Annex 4.5). Two immediate recommendations were discussed during the meeting in November: Firstly, the preparation and distribution of 'seabird awareness' leaflets, and secondly preparation of 'nesting awareness' signs to be posted near important seabird breeding sites at risk from human disturbance on the islands and cays. Both were produced in Q4 of Y3 and are with the DECR for approval before being printed (see Evidence in Annexes 4.5 and 4.6).

Output 6. Community engagement and education

3.6.1 *Community meetings and school / youth group events run to engage local communities and young people (Y1 – Y3)*

A number of community engagement activities and events were run in Y2. These included talks to Primary and Middle Schools on Providenciales (November 2024) and South Caicos (April and June 2023). Awareness for seabirds and project activities was also raised as the FORTIS Science Fair in March 2024, and two mini films that were produced for the project in Y2 were showcased at the TCI Film Festival in November 2023, before being disseminated on project and partner websites (see Evidence in Annex 4.6). The project also participated in community meetings on Grand Turk and Providenciales focused on a proposed wildlife viewing accreditation scheme for ecotour operators in TCI. Meetings were led by the DECR and Marine Management Organisation, UK in November 2023 (See Annex 4.6). A presentation was also given onboard the Explorer Research Vessel in July 2023 to research cruise participants from the Reef Fund and other local organisations. School events were originally scheduled in North and Middle Caicos, and Grand Turks at the end of 2023, but were cancelled due to busy school schedules and are now planned to take place in Y3. The project team also plans to give talks to a wider range of schools in Providenciales in Y3.

3.6.2 *A 'TCI Seabird Fest' event run during Y3*

The Seabird Fest event was replaced in Y2 by a stand with engagement activities for school children at the TCI FORTIS Science Fair in March 2024 (see Evidence in Annex 4.6). The project will continue to promote seabirds and outputs during community events and school visits in Y3, although a stand-alone seabird fest event will not be the possible with limited staff capacity to organise and host the event.

3.6.3 *Dedicated project webpages created and maintained on the www.caribbeanseabirds.weeblly.com website, and regular quarterly project updates given on this and other partner social media feeds*

During Y2, updates were posted periodically on the project webpage (www.caribbeanseabirds.weeblly.com) and social medial feeds (twitter: @TCISeabirds). More widely, the project has been advertised regularly through partner and collaborating organisation

social media feeds, including @tcreef_fund, @tcnationaltrust_, @decrtci, @deepblue_tci, @bigbluecollective, and @jedichartersandkite, and through a talk at a regional BirdCaribbean online symposium in January 2024 (https://youtu.be/ZvePB7f2n9w).

The project has also been the focus of various blogs and newsletter articles in Y2, including:

1. A short update in BirdsCaribbean Seabird Working Group newsletter (project features on cover photo! https://www.birdscaribbean.org/wp-content/uploads/2023/07/seabird-wg-newsletter-3-2023-07-en-rev.pdf)
2. A press release produced to provide update on project and disseminated to the central news service in TCI (see Annex 4.6)
3. An article of breeding seabirds released in Turks and Caicos Sun newspaper by project collaborator DECR (see Annex 4.6)
4. A beach clean-up article by collaborator Big Blue Collective in 'Turks and Caicos Sun' newspaper advertises project and problems of plastic pollution for seabirds on islands and Beach clean-up takes place (see Annex 4.6)

3.6.4 *Seabird code-of-conduct produced and disseminated amongst local ecotour operators and other stakeholders*

The seabird code-of-conduct was drafted in Q3 - Q4 of Y2 and has been send to DECR for comments (see Annex 4.6). Upon finalisation of this document, it will be presented at community and training events focused on ecotour companies, and fed collaboratively into activities taking place under the Blue Belt MMO programmes with the TCIG's DECR that are ongoing in TCI.

3.2 Progress towards project Outputs

We believe that great progress has been made towards the project Outputs in Y2, and we are on track overall to meet the project Objective by the end of the project, with substantial improvements in knowledge and understanding of TCI's seabird populations against the baseline situation prior to this project.

Output 1. Population surveys and estimates

Prior to this project, no effort-based monitoring had been undertaken on seabirds in the TCIs since survey work in 2002. Surveys and survey methods used in 2002 were relatively primitive and data were collected over both the Turks and Caicos Banks over a period of approximately 2 weeks, largely from boat. Some small-scale surveys were undertaken in 2011, but predominantly from boat-based platforms. These data were never processed nor made available for managers and organisations in the TCIs.

The data generated during Y1 and Y2 of this project have therefore substantially improved the state of knowledge of the size, distribution, and health of populations across 15 species of seabirds in the TCIs, compared to a baseline of extreme data deficiency. Many sites were visited for the first time in Y1, and visual, aerial, and acoustic sampling methods were tried and tested across >40 sites, prior to then being applied in Y2 to generate population estimates for use in management. Additional information on the health of populations and their breeding behaviour has been gained through remote monitoring and biosecurity activities. These massive, combined efforts have allowed project staff to begin to identify threats to colonies, undertake IBA/KBA assessments and collate recommendations to apply this new knowledge to management (see Evidence in Annex 4.2 - 4.4).

A notable number of partner staff and volunteers were also training in seabird identification and population monitoring methods, and many are now able to execute these surveys independently providing a long-lasting legacy for seabird management and conservation in the TCIs. This is compared to the state prior to the project where few staff of key conservation and management organisations were able to identify the full range of seabird species that inhabit TCI. We have no reason to think that this Output will not be achieved by the end of the project.

Output 2. Capacity building for population monitoring

No regular seabird monitoring activities took place in the TCIs prior to the initiation of this project, and there was almost no skill base nor capacity for implementing appropriate monitoring techniques within partner organisations. This was largely due to the remoteness of many breeding populations, and logistical constraints in assessing sites, as well as an associated lack of knowledge for seabirds in most offshore areas. The project has given considerable effort to addressing these capacity issues by training local partner staff and volunteers, and developing appropriate population monitoring methods tailored to different sites and species. This knowledge can be used in a systematic way going forward (see Evidence in Annex 4.2 and 4.3). The structured standardized recording framework in the form of field forms, count parameter guidelines, monitoring guides and a population database (see Evidence in Annex 4.2 and 4.3), was used and applied to full-scale seabird surveys in Y2, and has resulted in substantial change from the baseline condition. At the end of Y2, trained staff from local NGOs, Government, and community partners possess the skills, knowledge and capacity to operate self-sustaining seabird monitoring programmes in the long term across the TCIs. Furthermore, the DECR initiated plans to start a Government Bird Programme that will result in a long-term legacy for avian monitoring in the TCIs.

Output 3. Seabird threat assessment

There is notable concern surrounding development conflicts and predation risk at seabird colonies as human populations continue to grow in the TCIs, and historically seabirds have been threatened from harvesting, with concern that these practices may continue on a small scale at certain sites. Prior to this project there was little to no knowledge on threats to seabird populations owing to extreme data gaps for this group. In combination. surveys during Y1 and Y2 have transformed knowledge on seabird distributions against the baseline of a data deficiency. These new insights, including additional information gained from tracking work, will allow a formal threat assessment to be undertaken in Y3, and key conflicts to be highlighted for management action. We believe that by the end of the project, knowledge of the main threats to key seabird populations will be greatly improved, allowing identification of appropriate conservation strategies.

Output 4. IBA network identification

The current IBA network in TCI is highly outdated having been delineated based on limited seabird population data collected over short periods of time between 2002-2005. Furthermore, these data do not align with the peak breeding season of many species nor account for inter-island and interannual variability in breeding. In Y2, we made great progress in collating population data for the existing IBA network to aid an update of IBAs, as well as identify new potential IBAs and KBAs based on count data that trigger undesignated sites. Collection of the vast combined dataset of count and distribution data from Y1 and Y2 has transformed the prior state of knowledge, and map layers are being produced at varying resolution. A KBA/IBA recommendation report is in production, recommendations have been presented to the TCIG's DECR, and a report has been produced with recommendations for approval by the TCI Government's Cabinet (Evidence in Annex 4.4). While there are some delays in the recommended KBAs/IBAs being submitted to the KBA secretariat and Birdlife International, we believe that this Output and its indicators will be achieved by the project's end.

Output 5. Species and site management planning

Large gaps in knowledge of the distribution and status of seabird populations in the TCIs until this project started have resulted in this group being largely ignored in management and conservation actions in the TCI to date, and therefore receiving little protection. The data that we have now generated over the last two years of this project represent a massive change in our understanding of the country/s seabird populations. The threat assessments and IBA updates that will be delivered should notably change the ability of the TCIG and TCNT to include seabirds in spatial planning and management processes in the future. The implementation of appropriate species and site management plans should result in improved protection for seabirds and their

habitats over the long term. Progress with this Output and its indicators is scheduled to take place towards the end of the project in Y3. We rescaled this Output during M&E activities in Y2 to make it more realistic, and believe it is now achievable by the end of the project.

Output 6. Community engagement and education

Knowledge of seabird populations and their ecological value, and community awareness of associated conservation was deemed to be poor in TCI prior to the start of this project. This was largely associated with the remoteness of breeding locations on the offshore cays for most large seabird populations in TCI. Nevertheless, seabirds are an important cultural symbol in TCI, with the Brown Pelican holding status as TCI's National bird. In Y2, we continued community outreach and engagement through school visits, science fairs, film festivals and social media coverage (Evidence in Annex 4.6). We also engaged with many crew members on boats and other interested community members while at docks and marinas preparing for surveys, which we deem as a valuable form of informal engagement. More widely, we continued to promote the work being undertaken here through regional seabird conservation channels at BirdsCaribbean. We believe that the Output and its indicators will be achievable by the end of the project.

3.3 Progress towards the project Outcome

The overall Outcome statement of our project is that 'Protection and health of TCI's seabird populations will improve through locally-driven monitoring programmes that determine the current status of populations, tackle threats through increased stakeholder capacity, and allow targeted management'.

In Y2, population monitoring programmes were further developed and refined using information gained in Y1. Extensive survey and monitoring efforts were undertaken to gain robust population estimates for the 15 seabird species that collectively inhabit over 40 key sites in the TCIs. This has massively expanded knowledge on the distribution, behaviour and status of seabird populations in the TCIs against a baseline of little to no knowledge since surveys over 20 years ago. Count data have been amalgamated into a population database that will be used for management and built upon to in future years. These data are now enabling national updates on Key Bird and Biodiversity Areas to be performed, and areas of high conservation priority to be highlighted. The framework built during this project will allow these management and planning process to continue in an adaptive manner over the long term, and has helped to initiate a TCI Government 'Bird Monitoring Programme' that will be led by the DECR.

Despite ongoing staff capacity limitations in Y2 that have slowed progress, the project has also made notable strides in the last year towards undertaking activities that will support and advance longer-term management of seabirds and their habitats. Over 40 people were involved in surveys and gained some form of training in Y2, including project and partner staff, interns, volunteers and interested members of the public. This is a key indicator is increased support and capacity for seabird monitoring and conservation. Assessments of key threats to colonies and the appropriateness of the current IBA system are being undertaken, as is a drive to increase public awareness of seabirds amongst local communities. These actions will continue into Y3 and will be presented and disseminated in a technical document towards the end of the project with recommendations for management. As set out earlier in this report, almost all the current proposed indicators remain adequate for measuring achievement of the Outcome following rescaling in Y2. Where not, alternatives have been identified, implemented and outlined. We believe the project will achieve its Outcome by then end of the funding period.

3.4 Monitoring of assumptions

The major assumptions of this project are associated with the availability of wild animals for sufficient data collection to improve management, suitability of weather condition for accessing field sites, and amenability of contributing organisations to the project and its outputs. These assumptions all still held true during Y2 of the project.

Assumption 1: Availability of birds at colonies and environmental conditions during survey periods will allow ample collection of data to assess threats to seabirds, assess site importance, and develop appropriate management plans.

The project assumes that seabird species will be present during survey periods, and available in peak numbers, to allow collection of sufficient data that will enable robust population estimates of breeding populations, and provide an evidence base for conservation planning.

Fieldwork ran throughout Y2 of the project. However, both the number of sites and their extent was greater than originally anticipated at the start of the project. In most cases it was possible to conduct surveys within appropriate time windows that closely matched the bird's breeding cycles, despite some issues with weather. However, there were some sites that were impossible to access at the height of the breeding season due to rough seas (i.e. the Seal Cays on the outer bank). Limited staff availability also meant that it was not possible to survey some lower priority sites in Y2. Using knowledge gained in Y1, we focused on the key breeding areas of seabirds. and where full area coverage was impossible due to limited manpower (i.e. East Caicos), we subsampled to gain abundance estimates. It remains impossible to survey every site fully in TCI, with over 40 cays and large islands making up this territory. However, we have been able to generate an impressive database to date and have now created capacity to undertake some minor fieldwork in Y3 at a small number of key sites, and those that remain unsampled, to ensure areas at higher risk of human-induced disturbance are better understood.

Assumption 2: Amenability of contributing organisations to the project:

The project was developed following preliminary collaborative surveys run in 2021 by the UoL and DECR (under DPLUS097). Following development of the project concept, and identification of management priorities, all other project partners engaged in the project's development. Project partners have continued to participate in meetings throughout Y2, and field partners (predominantly RSPB, with some involvement from TCRF and TCNT) have engaged in fieldwork and training activities where possible. The core project team worked hard to mitigate against ongoing capacity limitations of some TCI partners by engaging and training a team of volunteers from outside the partner group, to ensure that adequate persons were available for essential survey work in Y2. Nevertheless, with such an extensive number of sites to survey, we had to prioritise the cays and islands to target based on limited staff availability. Consequently, some field surveys will take place in Y3. Another large challenge has been, and continues to be, the ongoing handling, processing, and analysis of the sizable dataset that is being generated, which is a task that almost solely falls on the project leader due to heavy workloads and skill competency of other project staff.

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

Our project's focus aligns closely with the overarching objective of Darwin Plus of 'supporting the UKOTs to achieve strategic long-term outcomes for the natural environment'. It aims to aid conservation actions by providing tools that will allow appropriate monitoring and management of seabirds, including identification of priority habitats for protection. Over the last year this project has supported this outcome by making massive strides in generating data and improving knowledge on the size, distribution, and health of seabird populations in TCI, which are allowing assessments of priority areas for conservation action (Evidence in Annex 4.2 – 4.6). In addition, it has improved knowledge of the breeding behaviour and annual cycles of colonies, and potential threats to them, thus providing information that will help the TCIG to implement strategic long-term plans for seabirds and their core habitats. Training of local staff and development of population monitoring activities represent notable progress towards improving management capacity in this UKOT.

Seabirds are key components of healthy marine ecosystems and are under severe threat from multiple stressors. The 1992 UN Rio Convention requires the development of holistic ecosystem-based management approaches, and partner UKOTs are committed to incorporate these approaches into their marine and coastal management practices. Our project aids this process in TCI by bringing together a strong multi-disciplinary project team to work collaboratively at a national level, to generate essential information that is required to develop National Biodiversity Action Plans and Conservation strategies. For example, through increased knowledge of threats

to seabirds and priority sites for protection, the project is encouraging targeted action through new National legislation. It is providing information for the Protected Area network process in TCI, thus supporting progress under multi-lateral environmental agreements such as the SPAW Protocol to the Cartagena Convention, and local Biodiversity Bills.

5. Gender Equality and Social Inclusion (GESI)

Our project team is well-balanced in terms of gender, race and social background. The two main in-country organisations are led by women and have a strong proportion of woman seated in management positions, and the PI is also a woman.

Please quantify the proportion of women on the Project Board[1].	50%
Please quantify the proportion of project partners that are led by women, or which have a senior leadership team consisting of at least 50% women[2].	All five project partners are either led by women (3) or have senior leadership teams consisting of a high proportion of women (2).

GESI Scale	Description	Put X where you think your project is on the scale
Not yet sensitive	The GESI context may have been considered but the project isn't quite meeting the requirements of a 'sensitive' approach	
Sensitive	The GESI context has been considered and project activities take this into account in their design and implementation. The project addresses basic needs and vulnerabilities of women and marginalised groups, and the project will not contribute to or create further inequalities.	x
Empowering	The project has all the characteristics of a 'sensitive' approach whilst also increasing equal access to assets, resources and capabilities for women and marginalised groups	
Transformative	The project has all the characteristics of an 'empowering' approach whilst also addressing unequal power relationships and seeking institutional and societal change	

We have sought to provide opportunities equally to women, men and agender persons through all aspects of our project outreach and training activities. This is demonstrable in the proportion of female (39%), male (59%) and agender (2%) volunteers on the project.

6. Monitoring and evaluation

Organisation and coordination of formal M&E is the responsibility of UoL, with an independent M&E Lead (Dr Green) facilitating regular meetings of a Project Steering Group (PSG), which

[1] A Project Board has overall authority for the project, is accountable for its success or failure, and supports the senior project manager to successfully deliver the project.

[2] Partners that have formal governance role in the project, and a formal relationship with the project that may involve staff costs and/or budget management responsibilities.

consists of representatives from each partner and independent members. Information is shared via meeting agendas and minutes that are circulated to the PSG.

The project's third steering meeting was held in Q4 of Y2 (January 2024), allowing representatives from all partner organisations to discuss issues and lessons learned during Y2, measure progress against Measurable Indicators and the Implementation Timetable, discuss required changes and agree a plan for the remainder of the project (see Evidence in Annex 4.1). These M&E processes continue to work well and will help to ensure delivery of the project Outcome and lasting change in the TCIs for seabirds and their habitats.

In addition to the PSG meetings, the core project team (Project Leader, in-country RSPB manager and TCNT management) regularly met face-to-face in Y2 to discuss project progress and logistics. The Project Leader and M&E Lead (both UoL) also meet via Teams regularly (usually biweekly) to informally discuss progress and mitigation of issues. Communication between the project lead and remote partners has also been regular in Y2 via email and teams. For example, UoL and Birdlife International staff have been in periodic correspondence about the IBA/KBA update process. The DECR and core project staff also met twice in Y2 to discuss ongoing relevance of project data and a strategy for application of new knowledge into national management actions (see Evidence in Annex 4.5). Our monitoring and evaluation plans remain unchanged, are working well, and we intend to continue convening steering group meetings in Y3 to ensure the ongoing achievement of project objectives.

7. Lessons learnt

One of the main challenges to this project since Y1 has been staff retention and appropriate skills of local partner organisations. This has placed core staff under undue strain when attempting to deliver on the ambitious tasks of the project. The project has still stayed on track owing to a strong commitment of core staff (UoL and RSPB) beyond contracted roles. However, this has not been sustainable. Various steps were taken in Y1 an Y2 to attempt to address this shortfall (see change requests over this period e.g. CR23-048). However, most activities are still being undertaken by the project leader, and a backlog of tasks still remains, particularly associated with UAV data processing (see above). Following lessons learned in Y2 associated with this challenge, we refined Outputs and activities at the end of 2023 to rescale the project. The main changes were to:

- Replace the planned non-technical report, and many of the superfluous documents and reports, with a central technical report (Seabird Management Recommendation Report)
- Shift the production of this report and other deliverables to later in Y3, allowing time for data processing, analysing and presentation, which are major tasks
- Refine public engagement activities to focus efforts on appropriate targeted community events and media
- Refine and downscale management outputs to those that better align with current activities and priorities of the local TCI Government

We now plan to make further refinements to data analysis tasks and deliverables in Y3 to address shortfalls in processing capacity for the extensive UAV dataset that the project has generated.

Should the project funds have extended far enough to employ a project manager or administrator, as some other DPLUS projects have been able to utilise, this would have allowed the project to run more smoothly, and freed up the project leader to execute their role and duties of delivering more fully on data analysis activities in Y2. At the time of writing DPLUS164, the project budget would not extend to cover a project administrator/manager, nor a fulltime role for the project leader, due to the exceptional costs of operations in TCI and other project requirements. Such an adjustment would be not only essential but also realistic for future projects given the budget ranges now offered within the DPLUS scheme.

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

In HR2, we briefly responded to the reviewer comments present in AR1. However, we have attempted to further elaborate below:

Comment	Response
More technical information on the drone activities and analysis would be useful in the next annual report. The reviewer also wonders what height the drone was flying, and whether the team had any incidents where birds interacted with the drone.	Processing of drone data is still in its early stages due to the magnitude of this task and limited staff capacity on this project. However, we are working with collaborators at Liverpool John Moores University to count and tag birds in images to trial the development of automated approaches to gaining abundance estimates. This is a large time-consuming task, but we have recruited two volunteers through UoL who have been trained and vetted and are now working parttime on this task, and we have been actively advertising for a dedicated MPhil student to work on the UAV data (see Annex 4.2 for more information on drone activities and analyses).
The 'photo guide' to seabirds created for training purposes shows birds (e.g. terns and Franklin's Gull) on the ground, but this would not help people to identify these species in the field in flight, and even for birds on the ground, the guide does not point out distinguishing features amongst the terns for example. The example pages from the monitoring guide provide more information, but illustrations in flight pointing out the key identification features would be helpful (the text does not mention the size and structural differences between bridled tern and sooty tern for example).	The few example pages that were provided as evidence in AR1 did not show the entire field guide, which does summarise the differences between terns present in TCI. However, we have now gone to further lengths to address the reviewer's comment and commissioned an artist to produce illustrations of ALL 15 resident species of seabirds for the guide (see Evidence in Annex 4.3). This has delayed printing on the guides, but the illustrations were completed at the end of March 2024, and we are now working on the updated guide in preparation for printing.

9. Risk Management

In Y2, we ran a survey to gain population estimates for Audubon shearwaters that required night work. This came with a suite of safety considerations required for working in remote conditions at night and we put in place several risk mitigation measures including a safety check protocol, use of VHF radios, and an extended first aid kit and PPE.

Following a staff infection likely caused by exposure to cactus spines in Y1, we implemented increased mitigation measures in Y2 including a requirement for all staff and volunteers to wear better PPE such as robust walking boots and long-sleeved clothing. This worked well in Y2 with no repeat issues.

10. Sustainability and legacy

The project was designed and is running in a manner that actively encourages cross-organisational collaboration and engagement. Local capacity building continued throughout Y2 with staff and volunteers of all the main conservation and management organisations in the TCIs (i.e. DECR, TCNT, TCRF, SFS, MEITI), some of which are not formal partners, having received notable training in seabird ID and monitoring. This knowledge can then be passed on within these organisations through peer-to-peer training to ensure skill retention. These combined efforts should ensure that locally run sustainable population monitoring programmes are in place by the project's close. We have also engaged and enhanced knowledge of local boat crew and several other interested community members to build capacity for future seabird monitoring should ongoing funding be secured, particularly around nearshore areas such as inshore cays off

Providenciales that are at higher risk from human pressure. In Y2, over 40 people were involved in surveys demonstrating increasing interest in seabirds through this project, and the potential for sustained benefits post-project. Note that funding remains an issue in the TCIs, due to the remote breeding locations of many of the larger seabird populations and notable costs of accessing sites, but efforts will be made in Y3 by the project lead and local partners to identify future funding sources to retain capacity. The project has also helped to push for a national bird monitoring scheme that the DECR are developing in 2024 and 2025, again demonstrating increasing awareness and capacity.

TCIG is currently engaged with the task of enhancing environmental conservation and site protection in TCI, specifically through the TCI Biodiversity Bill (which will replace legislation such as the Wild Birds Protection Ordinance 2009), as well as expansion of the Protected Area System. They continue to seek and acquire funding and resources to ensure the continuation of this objective, which includes ongoing skills expansion of their personnel in marine spatial planning. DECR staff have benefitted thorough bespoke training and involvement in project surveys in both Y1 and Y2, providing them with a thorough understanding of seabird ecology, survey design, population data, and challenges associated with protecting seabirds and their habitats. DECR staff will also participate in the drone workshop and other training events in Y3. Consequently, the TCIG are being provided with the knowledge and data needed to develop and implement appropriate strategies for seabird and their breeding sites, and the tools to ensure a sustained legacy planned through the project Outcome.

In Y2, the project gained coverage and interest in the TCIs through social media and community engagement events including festivals, science fairs and school visits (see Annex 4.6). The project has also been promoted through articles and partner project websites, and more widely through activities run by BirdsCaribbean's Seabird Working Group. Dr Austin (Project Leader) has been instrumental in arranging these through her role as SWG committee co-chair (see Annex 4.6). Two mini documentaries on seabirds and the project were showcased at community event in Y2 and will continue to be used to further promote seabirds. These combined efforts should promote longer term awareness and support of seabird conservation in TCI.

11. Darwin Plus identity

Considerable effort was made in Y2 to publicise the project within TCI and more widely in the region. The project was regularly publicised in Y2 through partner Instagram and twitter feeds (i.e. @tciseabirds, @tcnationaltrust_, @decrtci, @tcreef_fund, @RhiAustin, @ddutz_doodles), project webpages (www.caribbeanseabirds.weebly.com), media releases and community events (see Evidence in Annex 4.6). In addition, two mini films, that clearly acknowledged the DPLUS scheme funding, were produced to report on project activities. These were showcased at a local film festival, as well as through local and regional webpages (see Evidence in Annex 4.6). The Darwin Initiative and UK Government were acknowledged through all media and public engagement activities, and the Darwin logo was used in public presentations and educational materials (Annex 4.6).

The Turks and Caicos Islands have been the focus of several other high-profile Darwin Plus projects (i.e. DPLUS175, DPLUS153, DPLUS129, DPLUS121), including those that are still ongoing (DPLUS129, DPLUS181). The general public are thus familiar with this grant scheme. Moving into Y3, this project and its future outputs will continue to be clearly identified as stemming from Darwin Initiative funding, and the Darwin logo will be displayed on all project material.

12. Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?	No
Have any concerns been reported in the past 12 months	No
Does your project have a Safeguarding focal point?	No

Has the focal point attended any formal training in the last 12 months?	NA
What proportion (and number) of project staff have received formal training on Safeguarding?	Past: 66% [2] Planned: 66% [2]
Has there been any lessons learnt or challenges on Safeguarding in the past 12 months? Please ensure no sensitive data is included within responses. No	
Does the project have any developments or activities planned around Safeguarding in the coming 12 months? If so please specify. No	
Please describe any community sensitisation that has taken place over the past 12 months; include topics covered and number of participants. NA	
Have there been any concerns around Health, Safety and Security of your project over the past year? No	

13. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2023 – 31 March 2024)

Project spend (indicative) in this financial year	2023/24 D+ Grant (£)	2024/25 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				Y2 project expenditure to be provided by UoL financial in financial report.
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others (Please specify)				
TOTAL				

Table 2: Project mobilised or matched funding during the reporting period (1 April 2023 – 31 March 2024)

	Secured to date	Expected by end of project	Sources
Matched funding leveraged by the partners to deliver the project (£)	[redacted]		TCNT and TCRF staff time for field support; Subsidised TCRF boat expenses; UoL staff contributions (M&E lead) and overhead contributions; TCNT overhead contributions.
Total additional finance mobilised for new activities occurring outside of the project, building on evidence, best practices and the project (£)			In-kind field support from DECR staff; Subsidised TCRF live aboard trip in July 2023; In-kind contributions from SFS of accommodation, food and field support; Deakin University monitoring and biologging equipment contributions.

14. Other comments on progress not covered elsewhere

The project was refined through M&E activities and approved change requests in Y2, to address notable shortfalls in staff and partner capacity and the associated strain placed on core project staff (see section 7). However, with these refinements, we believe the project is now more realistic and will deliver on the overall project Outcome, through generation of an extensive dataset, and with it a substantial improvement in knowledge and capacity for monitoring and safeguarding seabirds and their habitats.

One task which remains problematic is processing and analysis of the massive drone imagery dataset that the project has generated beyond originally planned. This is a task requiring significant manpower, and despite our efforts at recruiting dedicated students for this task, the project does not currently have this capacity. We are processing a subset of these data with help from volunteers to demonstrate the value of this approach, but we believe that this task is appropriate for a follow-on project which the project team plan to seek funding for.

15. OPTIONAL: Outstanding achievements or progress of your project so far (300-400 words maximum). This section may be used for publicity purposes.

We generated additional outputs to the project in Y2 including two mini feature films for publicity purposes to promote support for seabird conservation (links below). I agree for the Biodiversity Challenge Funds to edit and use the following for various promotional purposes.

Image, Video or Graphic Information:

File Type (Image / Video / Graphic)	File Name or File Location	Caption including description, country and credit	Social media accounts and websites to be tagged (leave blank if none)	Consent of subjects received (delete as necessary)
Video	https://www.youtube.com/watch?v=yOBb7QU1Vmg	This film presents the work being undertaken in the Turks and Caicos Islands during a collaborative conservation project. The project aims to gain up-to-date seabird assessments in this Caribbean nation, and build capacity for monitoring and management of species and habitats.	Instragram: @TCISeabirds @tcnationaltrust_ @tcreef_fund @rspb @birdlife_americas @saeri_fi @decrtci @the_sfs_tci	Yes
Video	https://www.youtube.com/watch?v=bzNS-Ip9eK	This film describes the seabird monitoring and research work being undertaken in the Caribbean by a collaborative team of scientists and practitioners. It focuses on one of the more elusive Caribbean seabirds that is being monitored, the Audubon shearwater, and takes us on a journey into their secret underground world!	@TCISeabirds @seathroughmyeyescm @tcnationaltrust_ @tcreef_fund @rspb @birdlife_americas @saeri_fi @decrtci @the_sfs_tci	Yes.

Annex 1: Report of progress and achievements against logframe for Financial Year 2023-2024

Project summary	Progress and Achievements April 2023 - March 2024	Actions required/planned for next period
Impact Internationally and regionally important seabird populations on the Turks and Caicos Islands will flourish following improved and sustainable capacity of local stakeholders to identify, assess and address conservation threats.	Notable progress has been made towards improving the state of knowledge on seabird populations in TCI, and building local capacity that will enable an improved ability of local stakeholders to manage and protect seabirds and their habitats. This should contribute to conserving biodiversity and maintaining healthy ecosystems in this UKOT.	
Outcome **Protection and health of TCI's seabird populations will improve through locally-driven monitoring programmes that determine the current status of populations, tackle threats through increased stakeholder capacity, and allow targeted management.**		
Outcome indicator 0.1 Priority seabird populations secured through identification and greater awareness of key breeding and roosting areas of 15 species, and generation of population estimates for at least 24 sites by Y3	Data collected in Y2 to identify key breeding sites and roosting areas for 15 species, and are being collated and analysed from >40 sites to obtain official population estimates for all resident species (Evidence provided in section 3.1 of report and Annex 4.2).	Data collection activities will be completed by the beginning of Q2 in Y3, and data will be analysed to obtain official population estimates for all resident seabird species in the TCIs.
Outcome indicator 0.2 Sustainable locally driven population monitoring programmes developed and implemented by end of project, accounting for different breeding behaviour and habitats of 15 resident seabird species, and supported by increased capacity generated thorough training of local staff (at least 6) and volunteers (at least 10) in Y1 and 2.	Population monitoring programmes refined in Y2 using information collected in Y1 and implemented by collaborative project staff. Both staff and volunteers further trained in monitoring methods, and extensive experience gained in executing surveys to ensure sustained local capacity for seabird monitoring and management.	Additional seabird ID training events to be run for wider partner staff, the TCIG, and ecotour vendors. Speciality training in designing and conducting UAV surveys, and handling imagery data, to be provided to representatives of local organisations.
Output indicator 0.3 Threats to key seabird populations and their breeding habitats identified and addressed (for 15 species and at least 24 sites), along with management recommendations, by Q1 of Y3	Threat assessments to take place in Y3, but threats recorded at sites visited during Y2 surveys.	Threat assessments will be undertaken in Y3 using standardized criteria.

Output indicator 0.4 IBAs for breeding seabird populations identified and updated (according to the current baseline of 10 existing IBAs) by Y3, using BirdLife International approaches	IBA assessments in progress using population data collected in Y2. New recommended KBAs identified based on seabird features and recommendation document submitted to TCIG for approval.	IBA assessments will be completed and passed to BirdLife International to integrate in September 2024 update. New KBA sites will be recommended to KBA secretariat.
Output indicator 0.5 Local community education, engagement and support for seabird and site conservation is promoted through participation in project activities spanning Y1-Y3, including a focused seabird community event, at least 6 school/youth group talks, and project publicity through news channels and social media	Local communities have been reached through school talks, film festivals, community events and social media in Y2.	The project will engage in further school and community events in Y3.
Output 1 The size, distribution and health of breeding seabird populations identified on the cays and main islands of the TCI archipelago.		
Output indicator 1.1 Population estimates gained from visual (boat and land-based), aerial (UAV) and/or acoustic surveys for 15 resident species on/over a minimum of 24 seabird breeding sites on the TCI cays and main islands by the midpoint of Y2 (end Q2)	Over a 12-month period in Y3, more than 500 hours of survey effort were undertaken across 50 sites, during 84 visual and 13 drone surveys. This generated a wealth of count, acoustic, and aerial data that is allowing population estimates to be gained in varying levels of resolution for 15 species (Evidence in Annex 4.2 and 4.3). Much progress has been made to analyse the data collected collectively during Y1 and Y2. Biologging data were also collected from one species of seabird to extend knowledge from land to sea and add additional value to the project.	Population data analyses will continue into the first half of Y3 to obtain population estimates that will be used in formal IBA updates and management planning. A final technical report on this Output is still relevant and will be delivered at the end of Y3.
Output indicator 1.2 Technical report (Seabird Management Recommendation Report) produced summarising population estimates and data generated in 1.1	Population data collected from Y2 are still being analysed.	The technical report will be produced following analysis and interpretation of Y2 data from the ~50 sites.
Output indicator 1.3 Predation rates and biosecurity risks assessed on priority offshore cays during land-based surveys and remote time-lapse monitoring in Y1 and Y2 (up to 7 sites), and summarised in Seabird Management Recommendation Report.	All trail cameras were collected in Y2 and data await analysis. The biosecurity risk assessment is scheduled to be completed in Y3 following processing and interpretation of Y2 survey data.	Biosecurity risk assessment will be undertaken and presented in the technical report.

Output 2. Local NGOs, Government and community partners develop skills, knowledge and capacity to operate self-sustaining seabird monitoring programmes		
Output indicator 2.1. Visual, aerial and acoustic survey methods compared in Y1 Q3-Q4, and best-practice methods identified for specific sites and species prior to full surveys in Y2	Progress was made to process and analyse population data in the second half of Y2, with updates to the population database undertaken, and analyses to extrapolate from subsampled data to full population estimates performed (see section 3.1 and Evidence in Annex 4.2). Field documents and recording sheets were refined and used for training and data collection in Y2 surveys.	Details of suitable monitoring protocols and threats at each site will be summarised into the Seabird Management Recommendation Report in Y3.
Output indicator 2.2. Population database created by end Y1 and maintained by local partners (managed by TCNT and shared with TCIG).	The population database was added to as surveys took place in Y2 (Evidence in Annex 4.3).	The database will continue to be updated ongoingly as analyses are completed for the ~40 sites monitored in the project.
Output indicator 2.3. A minimum of 6 staff from local partner and collaborating organisations (i.e. TCNT, TCRF, TCIG) trained in seabird identification, monitoring methods and data management during survey work in Y1 and Y2, and through tailored training events run by end of project.	16 staff/voluntary members from partner organisations with training in seabird identification and monitoring methods, including 4 from TCNT, 4 from DECR, 2 from TCRF, 5 from RSPB and 1 linked to SFL (Evidence in Annex 4.3)	Partner staff will receive training in UAV ecological survey planning and post-survey data handling during a training event in Y3.
Output indicator 2.4. 10 islander volunteers trained in seabird identification and monitoring methods by end of project, and capacity built for longer-term involvement in seabird monitoring work.	11 captains/crew from ecotour operators, and 11 enthusiastic dedicated members of the public were provided with bespoke on-the-ground training in seabird identification and monitoring (Evidence in Annex 4.3).	Additional seabird ID training events will be held in Y3 for ecotour operators and other community groups.
Output indicator 2.5. Seabird monitoring guide for the TCIs produced in Y1 Q4, and distributed to partner staff, the volunteer network, DECR, and other local organisations (i.e. Big Blue Collective) for wider community dissemination in Y2.	Seabird monitoring guide was refined to include illustrations of birds in flight and printing was therefore delayed (Annex 4.3).	Guides will be printed and disseminated at seabird training events in Y3.
Output indicator 2.6. Drone workshop run in Y3 to build local capacity amongst partner organisations for generating and handling drone imagery for monitoring seabird populations.	NA	The activity associated with this indicator is scheduled for Y3.

Output 3. Knowledge of the main threats to key seabird populations is greatly improved, allowing identification of appropriate conservation strategies		
Output indicator 3.1. Knowledge of the main threats to key seabird populations is greatly improved, allowing identification of appropriate conservation strategies	NA	This output and its activities are not scheduled until Y3.
Output 4. IBAs identified and delineated for seabird breeding sites on the cays and islands of TCI		
Output indicator 4.1. Distribution maps and GIS layers produced from survey data, identifying breeding and roosting sites of seabird species on TCI (Q3 and Q4 of Y2).	Improved surveys generated a wealth of new population data on the distribution of nesting sites for 13 species, many of which have been processed and input into the population database and mapping software (evidence in Annex 4.2 and 4.3).	Distribution maps will be presented alongside population estimates and threat assessments in the technical report in Y3.
Output indicator 4.2. Review of TCI IBA network undertaken with new data (Q3 and Q4 of Y2), and IBA list updated by BirdLife International using standardized methods in first quarter of Y3.	IBA assessments were started using collective population data collected in Y1 and Y2. New recommended KBAs were identified based on seabird features and a recommendation document was submitted to TCIG for approval (Evidence in Annex 4.5).	IBA assessments will be completed and passed to BirdLife International to integrate in September 2024 update. New KBA sites will be recommended to KBA secretariat.
Output 5. IBAs identified and delineated for seabird breeding sites on the cays and islands of TCI		
Output indicator 5.1. Development of monitoring and management recommendations that will be fed to the TCIG.	Activities associated with Output 5 scheduled to take place in Y3 following interpretation of Y2 data. However management meetings with TCIG took place in Y2 and recommendations including seabird awareness leaflets and signs have been produced (Evidence in Annex 4.5 and 4.6).	Recommendations for seabird management will be presented in Seabird Management Recommendation Report in Y3.
Output 6. Local communities and stakeholders, and more widely regional and global audiences, understand, support and engage with avian conservation actions on the TCIs		
Output indicator 6.1. The project engages local communities with publicity and education activities, via 4-6 community meetings / school or youth group engagement events throughout the project.	The project was involved in 5 school/student presentations, 1 community engagement event and two community meetings in Y3. Additionally, two films on the project work were produced and shared with local communities (see Evidence in Annex 4.6).	Further school talks and community events will be run in Y3.

Output indicator 6.2. Participation of local communities in public outreach event in Y3 entitled the 'TCI Seabird Fest', with support from regional conservation bodies (BirdsCaribbean).	The Seabird Fest event was replaced in Y2 by a stand with engagement activities for school children at the TCI FORTIS Science Fair in March 2024 (see Evidence in Annex 4.6).	The project will continue to promote seabirds and outputs during community events and school visits in Y3.
Output indicator 6.3. Local communities engage with the project via regular project updates (minimum of once quarterly), provided through dedicated project webpages (created and hosted on www/caribbeanseabirds.weeby.com) and other partner social media feeds.	During Y2, updates were posted periodically on the project webpage (www.caribbeanseabirds.weeblly.com) and social medial feeds (twitter: @TCISeabirds). Project also promoted through regional avenues via BirdsCaribbean's Seabird Working Group.	Project updates will continue through social media channels in Y3.
Output indicator 6.4. A voluntary 'seabird colony code-of-conduct' produced and distributed amongst local ecotour operators and other stakeholders by end of the project.	The seabird code-of-conduct was drafted in Q3-Q4 of Y2 and has been send to TCIG's DECR for comments (see Evidence in Annex 4.3).	Code-of-conduct to be finalised in Y3 and fed into training events with ecotour operators.

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

Project summary	SMART Indicators	Means of verification	Important Assumptions
Impact: Internationally and regionally important seabird populations on the Turks and Caicos Islands will flourish following improved and sustainable capacity of local stakeholders to identify, assess and address conservation threats.			
Outcome: **Protection and health of TCI's seabird populations will improve through locally-driven monitoring programmes that determine the current status of populations, tackle threats through increased stakeholder capacity, and allow targeted management.**	0.1 Priority seabird populations secured through identification and greater awareness of key breeding and roosting areas of 15 species, and generation of population estimates for at least 24 sites by Y3 0.2 Sustainable locally driven population monitoring programmes developed and implemented by end of project, accounting for different breeding behaviour and habitats of 15 resident seabird species, and supported by increased capacity generated thorough training of local staff (at least 6) and volunteers (at least 10) in Y1 and 2. 0.3 Threats to key seabird populations and their breeding habitats identified and addressed (for 15 species and at least 24 sites), along with management recommendations, by Q1 of Y3 0.4 IBAs for breeding seabird populations identified and updated (according to the current baseline of 10 existing IBAs) by Y3, using BirdLife International approaches 0.5 Local community education, engagement and support for seabird	0.1 Population estimates available in databases hosted on project, partner and regional organisation websites, and within technical Seabird Management Recommendation Report 0.2 Best-practice population survey methods, and population database and other training documents, available on project and partner websites 0.3 Threat assessment and management recommendations reported within technical Seabird Management Recommendation Report available on partner and TCIG websites 0.4 Maps and associated information on updated IBAs listed on BirdLife International online database (http://datazone.birdlife.org) and partner websites 0.5 Updates and photos of community events available through partner websites and media feeds.	Sufficient data collected to implement BirdLife International procedures, identify IBAs and threats, and develop appropriate management plans (mitigation: there is high confidence that sufficient data will be generated as the project team has budgeted for an extensive period of UK-supported seabird surveys in TCI. Furthermore, the TCNT and RSPB on-island resource will be year-round, boosted by RSPB sabbatical staff support, allowing for flexible survey work should weather-related challenges affect activities during UK scientist visits). Local organisations and volunteers retain sustained capacity and enthusiasm to operate continuing monitoring programmes and management activities (we believe this holds true based on enthusiasm for the work expressed via pre-project planning dialogue with on island partners).

Project summary	SMART Indicators	Means of verification	Important Assumptions
	and site conservation is promoted through participation in project activities spanning Y1-Y3, including a focused seabird community event, at least 6 school/youth group talks, and project publicity through news channels and social media		
Outputs: **1**. The size, distribution and health of breeding seabird populations identified on the cays and main islands of the TCI archipelago.	1.1 Population estimates gained from visual (boat and land-based), aerial (UAV) and/or acoustic surveys for 15 resident species on/over a minimum of 24 seabird breeding sites on the TCI cays and main islands by the midpoint of Y2 (end Q2) 1.2 Technical report (Seabird Management Recommendation Report) produced summarising population estimates and data generated in 1.1 1.3 Predation rates and biosecurity risks assessed on priority offshore cays during land-based surveys and remote time-lapse monitoring in Y1 and Y2 (up to 7 sites), and summarised in Seabird Management Recommendation Report.	1.1 Population estimates listed and available at the ebird online database (http://ebird.org), and project and partner websites. Population data also available through the Turks and Caicos Data Portal managed by SFL (https://dataportal.gov.tc), and a regional BirdsCaribbean Seabird Working Group (SWG) database. 1.2 Seabird Management Recommendation Report.uploaded and available from project and partner websites 1.3 Seabird Management Recommendation Report available on project and partner websites.	Breeding seabirds will be present at colonies during scheduled survey work, and sub-sections of colonies will be amenable to regular monitoring (mitigation: flexible, contingency survey periods incorporated into project workplan). Environmental conditions will be favourable for access to offshore cays, and survey methods not affected by variability in environmental conditions (mitigation: flexible, contingency survey periods incorporated into project workplan; local project officer stationed in- territory). Field staff and equipment will be safe from threats associated with poaching and illegal immigration activity on the offshore cays (mitigation: survey team will be cautious during trips to offshore cays, and will always work in teams following recommended TCIG safety protocols. Contingency survey periods incorporated into project workplan).
2. Local NGOs, Government and community partners develop skills,	2.1 Visual, aerial and acoustic survey methods compared in Y1 Q3-Q4, and	2.1 Details of suitable monitoring protocols available within population	Local partners and islander volunteers will engage in project and training

Project summary	SMART Indicators	Means of verification	Important Assumptions
knowledge and capacity to operate self-sustaining seabird monitoring programmes	best-practice methods identified for specific sites and species prior to full surveys in Y2 2.2 Population database created by end Y1 and maintained by local partners (managed by TCNT and shared with TCIG). 2.3 A minimum of 6 staff from local partner and collaborating organisations (i.e. TCNT, TCRF, TCIG) trained in seabird identification, monitoring methods and data management during survey work in Y1 and Y2, and through tailored training events run by end of project. 2.4 10 islander volunteers trained in seabird identification and monitoring methods by end of project, and capacity built for longer-term involvement in seabird monitoring work. 2.5 Seabird monitoring guide for the TCIs produced in Y1 Q4, and distributed to partner staff, the volunteer network, DECR, and other local organisations (i.e. Big Blue Collective) for wider community dissemination in Y2. 2.6 Drone workshop run in Y3 to build local capacity amongst partner organisations for generating and	database and Seabird Management Recommendation Report available on project and partner websites 2.2 Population data available on TCI Data Portal 2.3 Presentations and notes from staff training sessions, field trips and workshops available on project and partner websites 2.4 Presentations and notes from volunteer training sessions, field trips and workshops available on project and partner websites. 2.5 Copy of seabird monitoring guide available on project and partner websites 2.6 Copies of PowerPoint presentations and training materials available on project and partner websites.	activities (mitigation: hold talks, and use news channels and social media, to encourage interest and gain support for conservation activities. Partners are in support of, and were actively involved in development of, project). Longer-term staffing and funds are available for sustained monitoring efforts.

Project summary	SMART Indicators	Means of verification	Important Assumptions
	handling drone imagery for monitoring seabird populations.		
3. Knowledge of the main threats to key seabird populations is greatly improved, allowing identification of appropriate conservation strategies	3.1 Threats (including development conflicts, predation, harvesting pressure) to seabird populations on the cays and islands of Turks and Caicos assessed, ranked and outlined in Y2 Q4, using data gained through surveys and remote monitoring (output 1) in Y1 and Y2	3.1 Technical report (Seabird Management Recommendation Report) containing threat assessment held by and available from local and international partners, and disseminated on project and partner websites	Availability of birds at colonies and environmental conditions during survey periods will enable sufficient data collection (output 1) to sufficiently assess threats to seabirds on the cays and main islands of TCI (Mitigation: flexible and contingency survey periods incorporated into project workplan. In the unlikely worst-case event that data collection is disturbed beyond realistic project flexibility, partners will undertake a desk-based exercise to 1) collect existing information on development proposals and other current activities at key seabird sites (through collaboration with TCIG), and 2) combine this information with the best available seabird data (new and past) to assess potential threats. Regardless of data generation, local staff and volunteers will receive training, to build capacity for ongoing surveys).
4. IBAs identified and delineated for seabird breeding sites on the cays and islands of TCI	4.1 Distribution maps and GIS layers produced from survey data, identifying breeding and roosting sites of seabird species on TCI (Q3 and Q4 of Y2). 4.2 Review of TCI IBA network undertaken with new data (Q3 and Q4	4.1 Map layers of seabird breeding and roosting sites available from local partners and relevant government agencies, and uploaded to partner and project websites	Sufficient data collected to implement BirdLife International procedures and identify IBAs.

Project summary	SMART Indicators	Means of verification	Important Assumptions
	of Y2), and IBA list updated by BirdLife International using standardized methods in first quarter of Y3.	4.2 Updated IBA map layers and associated information available on BirdLife International online database (http://datazone.birdlife.org), and links on project and partner websites	
5. Development of monitoring and management recommendations that will be fed to the TCIG.	5.1 Recommendations created for key actions to mitigate identified threats to TCI's seabird populations	5.1 Recommendations listed in Seabird Management Recommendation Report. Copies available from the TCIG and partner websites.	Sufficient data collected to inform development of Seabird Cays Policy and subsequent site management plans. The TCIG will uptake actions within the Seabird Cays Policy, and it will be adapted into legislation in the long-term. Site Management Plans will be met favourably by local stakeholders, and approved and adopted by the TCIG Cabinet after positive public consultation.
6. Local communities and stakeholders, and more widely regional and global audiences, understand, support and engage with avian conservation actions on the TCIs	6,1 The project engages local communities with publicity and education activities, via 4-6 community meetings / school or youth group engagement events throughout the project. 6.2 Participation of local communities in public outreach event in Y3 entitled the 'TCI Seabird Fest', with support from regional conservation bodies (BirdsCaribbean).	6.1 Photos, meeting minutes, PowerPoint presentations and feedback forms from community meetings, school / youth engagement events available on project and partner websites and social media feeds 6.2 Photos, feedback forms and media coverage from the 'TCI Seabird Fest' event available on project and partner websites and social media feed.	Local communities show interest in the project and seabird conservation and engage in citizen science activities (mitigation: hold locally led (TCNT and TCRF) talks to actively engage local communities in project and gain support for conservation activities).

Project summary	SMART Indicators	Means of verification	Important Assumptions
	6.3 Local communities engage with the project via regular project updates (minimum of once quarterly), provided through dedicated project webpages (created and hosted on www/caribbeanseabirds.weeby.com) and other partner social media feeds. 6.4 A voluntary 'seabird colony code-of-conduct' produced and distributed amongst local ecotour operators and other stakeholders by end of the project.	6.3 Regular updates on project activities available on dedicated project webpages and partner social media feeds. 6.4 Electronic copy of voluntary seabird code-of-conduct leaflets available on project and partner websites	

Activities

Output 1. Population surveys and estimates

1.1 Boat-based, land-based, aerial and acoustic surveys undertaken on the seabird cays and main TCI islands, and population estimates obtained for 15 resident species

1.2 Technical report (Seabird Management Recommendation Report) produced summarising population estimates and data

1.3 Array of time-lapse cameras deployed on priority seabird cays (up to 7 sites) to collect image data for publicity purposes and biosecurity monitoring, and biosecurity risks assessed from combined data and presented in the Seabird Management Recommendation Report

Output 2. Capacity building for population monitoring

2.1 Population monitoring methods and data outputs assessed and compared, and best-practice methods for ongoing monitoring of specific sites and species outlined in the technical report (Seabird Management Recommendation Report)

2.2 Population database created and maintained

2.3 Local partner staff trained in seabird identification, monitoring methods and data handling during survey work and tailored training sessions

2.4 Small number of islander volunteers trained in seabird identification and monotiling during field periods

2.5 Seabird monitoring guide produced and distributed amongst local partners and stakeholders

2.6 Drone workshop run during Y3

Project summary	SMART Indicators	Means of verification	Important Assumptions
Output 3. Seabird threat assessment 3.1 Using data generated during population surveys, threat assessment undertaking to identify threats to seabird populations and added to Seabird Management Recommendation Report. **Output 4. IBA network identification** 4.1 Key breeding and roosting sites of seabird species identified, and maps and map layers produced 4.2 Review and update of TCI's IBAs undertaken, and the BirdLife International IBA list updated **Output 5. Species and site management recommendations** 5.1 Recommendations for seabird management presented in Seabird Management Recommendation Report **Output 6. Community engagement and education** 6.1 Community meetings and school / youth group events run to engage local communities and young people (Y1 – Y3) 6.2 A 'TCI Seabird Fest' event run during Y3 6.3 Dedicated project webpages created and maintained on the www.caribbeanseabirds.weeblly.com website, and regular quarterly project updates given on this and other partner social media feeds 6.4 Seabird code-of-conduct produced and disseminated amongst local ecotour operators and other stakeholders			

Annex 4: Onwards – supplementary material (optional but encouraged as evidence of project achievement)

Please see separate attachment which contains:

Annex 4.1 M&E Steering Group Meeting Minutes
Annex 4.2 Population surveys and drone data
Annex 4.3 Capacity Building for Population Monitoring
Annex 4.4 Management activities – IBA/KBA recommendations
Annex 4.5 Management activities - Other
Annex 4.6 Publicity and Public Engagement

Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the **correct template** (checking fund, type of report (i.e. Annual or Final), and year) and **deleted the blue guidance text** before submission?	Yes
Is the report less than 10MB? If so, please email to BCF-Reports@niras.com putting the project number in the Subject line.	No
Is your report more than 10MB? If so, please discuss with BCF-Reports@niras.com about the best way to deliver the report, putting the project number in the Subject line.	Yes
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Yes
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 15)?	Yes
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	See note.
Do not include claim forms or other communications with this report.	