

Darwin Plus: Overseas Territories Environment and Climate Fund Annual Report

Darwin Plus Project Information

Project reference	DPLUS 138
Project title	Filling Knowledge Gaps to Enable Rewilding of the Chagos Archipelago
Territory	British Indian Ocean Territory
Lead partner	Chagos Conservation Trust
Project partner(s)	British Indian Ocean Territory Administration Biodiversity Restoration Specialists Limited
Darwin Plus grant value	£73,672.00
Start/end dates of project	01 July 2021 – 30 June 2023
Reporting period (e.g. Apr 2021-Mar 2022) and number (e.g. Annual Report 1, 2)	July 2021 – March 2022 CCT-FtKG-AR1
Project Leader name	Dr Peter Carr
Project website/blog/social media	https://chagos-trust.org/news/healthy-islands-healthy-reefs-programme-manager-announced https://www.instagram.com/p/CUZxHdTqr0o/?utm_source=ig_web_copy_link https://twitter.com/ChagosTrust/status/1402962242677755908 https://twitter.com/ChagosTrust/status/1438430050920148992 https://www.facebook.com/protectchagos
Report author and date	Dr Peter Carr 29 April 2022

1. Project summary

Seabirds globally are the fastest declining family of birds, facing threats at sea when feeding and migrating and, on land where they breed and roost. Recent scientific research, much conducted in the Chagos Archipelago, has confirmed the beneficial link between seabird islands (islands with a high density of breeding seabirds) and surrounding ecosystems – caused primarily through the runoff of guano that enriches surrounding areas. In the tropical central Indian Ocean where the Chagos Archipelago is situated, the surrounding ecosystems are primarily coral reefs, one of the most threatened habitats globally.

Man's arrival on remote, isolated islands historically often brought non-native, invasive species. The invasive species that has had the most catastrophic impact on the delicate island ecosystems worldwide has been rats. Rats have and are still causing declines in breeding seabirds. This has been the case in the Chagos Archipelago where seabirds are now restricted to breeding on a very small number of rat-free islands (Black Rat *Rattus rattus* is species

present), where approximately 96% of the 282,000 breeding pairs of seabirds' nest on less than 6% of the available landmass.

Invasive predator control and eradication is now a standard method of conservation management employed globally on islands. Rodent eradication is prime among these management tools. The Chagos Conservation Trust (CCT) has been at the forefront of conservation management in the Chagos Archipelago for over two decades and has already led a successful Darwin funded rat eradication project in 2014 in the archipelago. At the request of the Territory's governing body BIOTA, CCT has since 2019 been leading the quest to eradicate rats from the northern atolls and has as such, produced an Environmental Impact Assessment (EIA), Feasibility Study (FS) and draft Operational Plan (OP) to eradicate rats from four of the five atolls. The OP has been peer reviewed and it was recommended that some (unavoidable) knowledge gaps were filled prior to its' execution. The aim of this project, via a small scale, yacht-based expedition in June 2022 is to collect data to fill knowledge gaps identified by peer review to inform and strengthen the OP. Eradicating rats is the first and most important step in a multi-stakeholder CCT led aspiration to rewild the Chagos Archipelago, excluding the inhabited atoll of Diego Garcia.

The restoration of seabird islands in this remote and undisturbed sanctuary in the central Indian Ocean has multiple cross-ecosystem benefits. On land, in the absence of invasive rats, biodiversity will increase, especially the globally declining family of seabirds. This increase will restore the cross-ecosystem benefits bestowed by seabird islands and will in-time benefit threatened habitats such as the surrounding coral reefs. Reaching further, the healthy terrestrial and marine ecosystems supported by seabird islands within the Chagos Marine Protected Area can provide a source of recruits to the anthropically pauperised ecosystems that surround the archipelago to the east, north and west.



Figure 1: The red square denotes where the Chagos Archipelago is situated within the Indian Ocean.

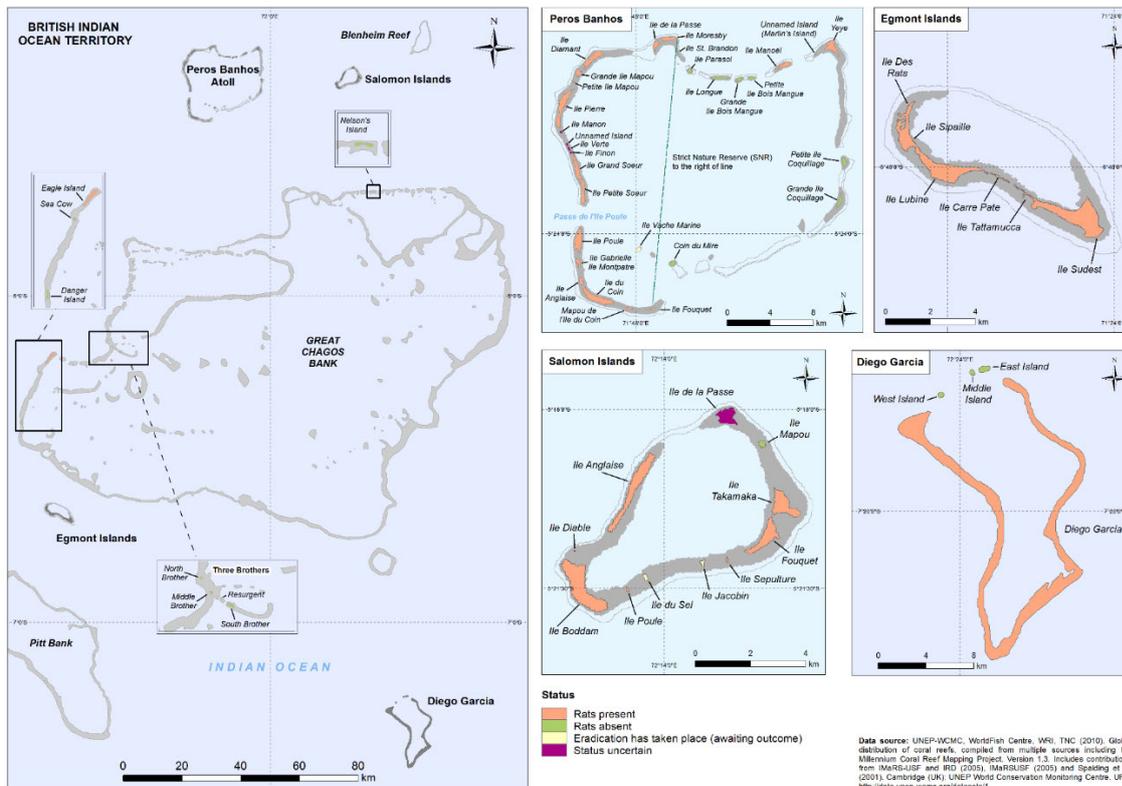


Figure 2: The distribution of invasive rats (*Rattus rattus*) in the Chagos Archipelago as at 2019.

2. Project stakeholders/partners

There are two key stakeholders in this project, 1). the British Indian Ocean Territory Administration (BIOTA) – the Territory’s governing organisation and; 2). Biodiversity Restoration Specialists Limited (BRSL) – the agency responsible for delivering the Chagos Archipelago Rat Eradication Operational Plan.

1. No visitors of any nature are allowed in to the British Indian Ocean Territory without written permission from BIOTA. For visiting yachts, scientists and conservation workers, there is a formal application process. Permits have to be submitted to BIOTA a minimum of three months prior to the expedition occurring. In the case of this Darwin Plus grant, the two-person expedition aboard chartered yacht Jocara (two crew) will depart from the Maldives on 01 June 2022. Therefore, the permit application had to be submitted by 01 March 2022. The permit application was submitted by CCT on 28 February 2022 and acknowledged by BIOTA on 14 April 2022. The time between submission and acknowledgement of this application is not a cause for concern and within the usual timeframe of expedition planning based on fifteen years’ experience of expeditions in the Chagos Archipelago. The formal application paperwork could be available, if required, with permission and approval from BIOTA.
2. Biodiversity Restoration Specialists Limited (BRSL), a New Zealand based company that specialises in rodent eradications have a history with the Chagos Archipelago. Partnering with the Chagos Conservation Trust, in 2014 they were responsible for the only successful rat eradication operation in the archipelago, successfully removing all rats from Vache Marine in Peros Banhos. This was confirmed in 2017 where again this partnership confirmed the presence/absence of invasive rats throughout the archipelago (see Figure 2). BRSL have been contracted by CCT to produce the rat eradication Ecological Impact Assessment (EIA), Feasibility Study (FS) and Operational Plan (OP) for the four northern atolls of the Chagos Archipelago. The EIA and FS have been peer reviewed and formally passed to BIOTA for consideration. The OP, at peer review was found to have unavoidable knowledge gaps, e.g., how to deliver rodenticide in the mangrove (*Lumnitzera racemosa*) stands on Eagle and Moresby Island, this being

unique to this operation. This knowledge gap is being filled by the 2022 expedition. A formal contract between CCT and BRSL to conduct research to fill the knowledge gap and complete the OP, for submission for approval to BIOTA in 2023 was signed on 26 December 2021 and is available from CCT (with redactions) if required.

There is now a third, essential stakeholder in this Darwin Plus project, a vessel to conduct the research from in the northern atolls. In December 2021/January 2022 the yacht Jocara conducted a successful Rhode Island University led research expedition to the Chagos Archipelago (see <https://earthzine.org/there-is-nothing-absolutely-nothing-half-so-much-worth-doing-as-simply-messing-about-in-boats/>) that Dr Carr of CCT was due to be part of but withdrew due to Covid infection. Dr John Potter the skipper of Jocara and his yacht have been formally contracted by CCT as of January 2022 to be the support vessel for the June 2022 expedition. A copy of the contract is available from CCT (with redactions) if required.

3. Project progress

3.1 Progress in carrying out project Activities

Each activity is numbered below according to the Output it relates towards in the Darwin Plus application:

- 1.1. BIOTA Environmental Officer (EO) co-ordinate all permits and permissions to access BIOT by March 2022. The formal expedition application was submitted to BOTA EO on 28 February as per government expedition application guidelines, the permit and permissions process is ongoing and as normal.
- 2.1 BIOTA EO and CCT Programme manager (PM) co-ordinate all permits and permissions by March 2022. See 3.1 (1.1).
- 2.2 Contract BRSL by December 2021 See 2.2, contract signed 26 December 2021.
- 2.3 Recruit Programme Manager (PM) by October 2021. A PM was recruited by CCT in October 2021 and a formal contract signed on 15 November 2021. A copy of the contract is available from CCT (with redactions) if required.
- 2.4 Recruit Chagossian research assistant by April 2022. Ongoing within this report period.
- 2.16 Monthly meetings. Meeting between all stakeholders, including those involved in the overarching Rewilding the Chagos Archipelago programme have been held. There has not been a Project Leader (CCT Director) since December 2021, this has not impacted the progress of DPLUS 138. It has not been possible to include the BIOTA Environmental Officer in monthly meetings; their workload does not allow such regular meetings with any expeditions in the planning phase – this was not a realistic aspiration in the original application. BIOTA EO is kept abreast of expedition planning progress by e-mail and through meetings with the ZSL/BPMS expedition coordinator (who is a CCT Trustee).

3.2 Progress towards project Outputs

Both Outputs (1 and 2 of application) were successfully contributed towards throughout the reporting period. Progress is numbered below according to the Output it relates towards in the Darwin Plus application:

- 1.1 Expedition team confirm presence of rats on Ile Manoel. This Output is dependent upon the results of the June 2022 expedition.
- 1.2 Confirm presence/absence of mice on Coin. This Output is dependent upon the results of the June 2022 expedition.
- 1.3 Baseline data collected by Bertarelli Programme in Marine Science (BPMS). Two expeditions have been mounted throughout the reporting period and, where relevant, the data has been forwarded to the CCT PM for inclusion in the rat eradication OP. This is an ongoing process and will continue throughout the life of this project and, the overarching Rewilding the Chagos Archipelago programme.
- 2.1 Increase capacity and capability of CCT....by December 2021 through recruiting BRSL and PM. See 3.1 (2.2) and (2.3).

- 2.2 Increase knowledge of conservation in Chagos Archipelago to Chagossian community. Ongoing, a Chagossian descendant and active member of Chagossian Voices is a Trustee of CCT and the vehicle for achieving this Output. (see <https://chagos-trust.org/about/who-we-are>). The recruitment of a Chagossian research assistant for the expedition is ongoing at the time of this report.
- 2.3 Data to confirm bait off-take by rats and crabs. This Output is dependent upon the results of the June 2022 expedition.
- 2.4 Data to confirm bait application methods. This Output is dependent upon the results of the June 2022 expedition.
- 2.5 Review current Chagos Archipelago Biosecurity Plan. Ongoing, led by BIOTA.
- 2.6 Increase BIOTA capability in invasive predator management. This Output is primarily dependent upon the results of the June 2022 expedition. The continued CCT-led dialogue with BIOTA concerning the rewilding of the Chagos Archipelago ensures that the specific objective of eradicating rats, that this Darwin Plus application relates to by strengthening the rat eradication OP, is maintained on their list of priorities.

3.3 Progress towards the project Outcome

The single project Outcome “Effective predator management via improved knowledge....to enable rewilding....of the Chagos Archipelago” is an ongoing process. The Means of Verification for Outcomes 0.1.1 - 0.1.6 are dependent upon the successful completion of the research expedition in June 2022 – of which the preparation for has been covered in sections 3.1 and 3.2. Outcome 0.2.1 has been covered at 3.2 (1.3). Outcome 0.3.1 and 0.3.2 are ongoing, see 3.2 (2.2).

In summary, the goal of submitting a peer reviewed Operational Plan to BIOTA in 2023 to eradicate rats from the four northern atolls of the Chagos Archipelago is on track. This Darwin Plus grant will fill the knowledge gaps in the OP identified through peer review. Research to fill the knowledge gaps will be conducted in June 2022 and all the Activities and Outputs towards the complicated process of mounting an expedition in the Chagos Archipelago have been met throughout the reporting period.

3.4 Monitoring of assumptions

One Assumption in the original application was that the CCT Director would lead on this Darwin Plus grant and a Programme Manager would be recruited to manage the specifics of expedition planning, permissions and logistics and the finalisation and submission of the BIOT permit application. This assumption was not at the time of the grant application considered a risk. It has come to pass that the Director has left CCT (December 2021) and a new incumbent has been identified and will commence duties in May 2022, out with of the reporting period. As an interim measure the PM assumed the lead for the overall delivery of DPLUS 138. This arrangement has now been formalised and a Change Request submitted. This was approved by Darwin Projects (EIYO) in an email of 03 December 2021. The transferral of project lead has not impacted the delivery of the Outcome, that is dependent upon the successful planning and execution of the June 2022 expedition. This transition has however resulted in a period of ‘catch-up’ in the Darwin Plus reporting and claims procedures, though all submission deadlines to date have been met. There has been a hiatus in the publicising of the project, this will be rectified when the new Director assumes post in May 2022.

The greatest threat to the delivery of the Outcome is not completing the research expedition in June 2022. A Risk Assessment (RA) and Emergency Response Plan (ERP) has been produced with all stakeholders (CCT/BIOTA/BRSL/Jocara) contributing. These are living documents and are reviewed monthly up until the point of expedition departure by stakeholders. Copies of the RA and ERP are available from the PM on request.

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

Below is the support offered to the environmental and/or climatic Outcomes identified in the original application.

BIOTA environmental priorities

The BIOT Administration has identified eleven conservation and environmental priorities to ensure the protection of the Chagos Archipelago for the future. CCT is working in partnership with the Administration [through DPLUS 138 and other projects] to address three of these priorities:

- (1) restoring the islands through eradicating invasive rats and controlling invasive plants, which threaten native seabird populations and impact the delicate balance of BIOT's ecosystem
- (2) understanding more about BIOT's unique terrestrial environment and
- (3) Protecting BIOT from invasive flora and fauna

UK government's Overseas Territory Biodiversity Strategy

This project will contribute to the Strategy's priorities of:

- (1) preventing the establishment of invasive alien species, and eradicating or controlling species that have already become established
- (2) developing ecosystem-based initiatives for the conservation and sustainable use of the marine environment relevant in the rats, birds and coral linkages

UK government's 25-year plan

This project will contribute to the target "Coral reefs are under direct and sustained pressure. The UK's ambition is to champion and support their conservation and biodiversity in UK and Overseas Territories' (OTs') waters and around the world."

The overarching themes of each of the above is the eradication of invasive species and the recovery of native biodiversity. This project will fill knowledge gaps identified during the feasibility study and increase the understanding of the terrestrial environment specifically to protect the archipelago from invasive rats. Once gaps are filled the Rat Eradication Operational Plan can be finalised and used to specifically remove the threat of invasive rats to the ecosystem, which in turn will allow native biodiversity, specifically seabirds and coral reefs, to recover.

This project also contributes to Darwin Plus' top three priorities of:

- increasing the effectiveness of marine protected areas by collecting data to develop an effective *Invasive Predator Eradication Technical Strategy* that will result in tripling the area available to native species once invasive rats are eradicated
- conserving and managing coral reefs through the increase of nutrients available to reefs and mangrove forest ecosystems by confirming the size of mangrove forest on one of the two islands where these are found in the archipelago
- tackling invasive non-native species by confirming the distribution of invasive species and collecting vital data to develop an effective *Invasive Predator Eradication Technical Strategy*.

The above support in the original application has not changed throughout the reporting period. Eradicating rats as the first phase of the Rewilding the Chagos Archipelago programme remains a top priority for CCT and the total focus of the PM employed by CCT to deliver DPLUS 138. The support offered above will be cemented on completion of the June 2022 research expedition, this reporting period has been devoted to ensuring that expedition takes place.

5. OPTIONAL: Consideration of gender equality issues

The following statement is lifted direct from the original application has not changed:

The Chagos Archipelago is an uninhabited Overseas Territory and therefore working to reduce inequality between persons of different gender is not applicable but CCT will make sure

opportunities for community involvement and applications for the research assistant role are inclusive of different genders. CCT will also look to develop a gender inclusivity policy.

Monitoring and evaluation

CCT monitor and evaluate (M&E) this project by evaluating the performance of the Programme Manager (PM) contracted to deliver the project. Evaluation of performance is available from chair@chagos-trust.org. Specifically, the PM has to report to CCT Chair and Trustees on the delivery of the project, this was last conducted on 18 January 2022 – a transcript of the report is available from the PM.

The approach to project delivery by CCT has been effective to date, all Darwin Plus deadlines and reports have been submitted on time. The role of direct management of the PM by the CCT Director was assumed by the CCT Chair in December 2021. This management process will remain when the new Director is employed in May 2022. Publicity of the project will be part of the new Director's workload.

The central pillar, the Outcome of the overarching 'Rewilding the Chagos Archipelago' programme is the eradication of rats from the four northern atolls. The approval of a peer reviewed rat eradication Operational Plan (OP) by the Territory's governing body (BIOTA) prior to implementation is absolute and non-negotiable. DPLUS 138 contributes to the overarching rewilding programme by completing the rat eradication Operational Plan, addressing knowledge gaps identified through peer review.

The Outputs and Activities designed to deliver the Outcome of the DPLUS 138 project are centred upon the results of a research expedition in the Chagos Archipelago, to be conducted in June 2022. The demonstration of the effectiveness of the Outputs and Activities will be evident from the results of the expedition and how they inform and fill the knowledge gaps in the OP. The indicators of achievement are measured by the Chair and Trustees of CCT against a framework of targets the PM has been contracted to achieve (see reference above concerning report to Trustees on 18 January 2022).

Throughout the reporting period the CCT Director who originally had overall responsibility for delivering the project has left CCT. This position will be filled in May 2022. Effectively there have been no changes to the M&E offered in the original application, except the conduit of reporting to the Trustees of CCT on project progress has shortened in that reporting is now to Trustees via the Chair. This is a more effective *modus operandi*.

The role of M&E to deliver the project Outcome is the sole responsibility of CCT. However, DPULS 138 cannot be achieved without the Territory's governing body's (BIOTA) approval. Regular, scheduled communication with BIOTA concerning a very small-scale expedition to achieve the Outcome would not be encouraged. Throughout the reporting period communication with BIOTA has been timely and effective.

6. Lessons learnt

DPLUS 138 is in the embryonic stage. The activities to date have been prescribed and committed to a project deadline (e.g., contracts for PM, BRSL, vessel and BIOTA permit applications). It was fortuitous that CCT contracted a PM with much Chagos Archipelago experience. Without doubt, the project deadlines of vessel charter and BIOTA permit applications would have been at best, challenged without prior experience. However, CCT had been in discussions with various PM candidates prior to employment and contract and, therefore, had negated the risk of non-delivery by a PM not well-versed in the administrative challenges of operating in the Chagos Archipelago. The lesson learnt is that the identification of suitable candidate for PM in a very, very niche arena is both crucial to delivery and difficult. The background work CCT conducted prior to releasing the job advert for PM is commendable and should be repeated by other similar projects.

To date throughout the reporting period, the response by the Chagossian community to the advert for a research assistant to BRSL has not produced a suitable candidate. It may have

required more time to achieve the marrying of identifying a suitable candidate and the BIOTA permit application process. This process has not concluded in this reporting period and will be commented on in future reports.

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

As this is the first Annual Report, there are no previous reviews to consider.

8. Other comments on progress not covered elsewhere

At this early juncture in the project, there are no considerations that have not been commented upon elsewhere.

9. Sustainability and legacy

Increased interest has been tangibly evident by the meeting with representatives of two philanthropic foundations that have expressed an interest in the Rewilding the Chagos Archipelago project – details of these meeting have been withheld at the request of the foundations. Continued support for the rewilding project that DPLUS 138 forms part of from the Zoological Society of London (ZSL) has been exemplary.

The exit strategy proposed in the original application remains unchanged. The sustained legacy of DPLUS 138 will be the submitting of the rat eradication Operational Plan to BIOTA. With BIOTA approval, this plan will be accessible online for all conservation practitioners to refer to.

10. Darwin identity

The project has been publicised online throughout the reporting period at the links provided in the Project Information box at the start of the document.

The handling of the publicising of DPLUS 138 was the responsibility of the CCT Director. This post has been vacant from December 2021 – due to be filled in May 2022. Therefore, there has been a lull in publicity that is expected to change when the Director post is assumed in May.

A presentation at the CCT AGM in London on 18 January 2021 by Dr Peter Carr about rewilding the Chagos Archipelago acknowledged and used the Darwin Initiative logo. This presentation detailed where DPLUS 138 sits within the overarching Rewilding the Chagos Archipelago programme. The final slide of this presentation is at Annex 3.

11. Impact of COVID-19 on project delivery

COVID-19 has had an effect on the project - the CCT Programme Manager contracted COVID-19 in the third week of March 2021 and was ill (PCR testing positive) for a month. This stalled the production of this Annual Report.

A greater problem has been booking travel, travel insurance and quarantine regulations. This issue has been a potential deal-breaker for the June 2022 expedition but, looking in to the future and critical timeframes, there is still time for regulations to be relaxed as the pandemic is normalised. It is believed that travel to the Maldives for the expedition in June 2022 will not be a problem and that New Zealand (BRS home country) will relax insurance criteria and quarantine laws (At the time of writing this report – April 2022, these issues have been resolved).

12. Safeguarding

There are no safeguarding incidents to report.

13. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2021 – 31 March 2022)

Project spend (indicative) in this financial year	2021/22 D+ Grant (£)	2021/22 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	■	■	■	Not applicable

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 Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	Yes
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/A
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
Do you have hard copies of material you need 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.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	