

Darwin Plus: **Overseas Territories Environment and Climate Fund** **Annual Report**

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

Submission Deadline: 30th April 2017

Darwin Plus Project Information

Project reference	DPLUS041
Project title	Creating a Terrestrial Action Plan for the Chagos Archipelago
Territory(ies)	British Indian Ocean Territory
Contract holder institution	Chagos Conservation Trust
Partner institutions	British Indian Ocean Territory Administration, ZSL, RBG Kew, IUCN, RSPB
Grant value	£243,074
Start/end date of project	1 st April 2016/30 th Sept 2019
Reporting period (e.g., Apr 2016-Mar 2017) and number (e.g., AR 1,2)	April 2016-March 2017 AR1
Project leader name	Peter Carr
Project website/blog/Twitter	www.chagos-trust.org
Report author(s) and date	Peter Carr, Helen Pitman, Martin Hamilton (and team RGB Kew), Paul Pearce-Kelly (ZSL), Rachel Jones (ZSL), 30 th April 2017

1. Project overview

The Chagos Archipelago of the British Indian Ocean Territory is located in the Indian Ocean and lies about 1,770km east of Mahe (the main island of the Seychelles).

Whilst the marine environment of the Chagos Archipelago is comparatively healthy, there are concerns about the ecological health of the islands, which have been negatively impacted by human activities.

Over half of the 55 islands are affected by invasive species, with rats being the greatest problem. In addition, 'coconut chaos' affects many islands, whereby unmanaged coconut plantations from a historical copra production industry have become rampant and created a monoculture environment. The result has been a marked difference in biodiversity between invasive and non-invasive islands.

This project will, for the first time, produce a prioritised and costed *Terrestrial Action Plan for the Chagos Archipelago*



with emphasis upon invasive species management. It will provide the British Indian Ocean Territory Administration with island specific information from which informed decisions for terrestrial management can be made based on priorities and costs.

It will address the following priorities for action identified in the BIOT Interim Conservation Management Framework (September 2014):

- Section 1 – “Understanding and Interpreting the Environments”. Specifically, “Establish detailed baselines for terrestrial environments”.
- Section 2 - “Conserving wildlife and habitats”. Specifically, 1). Develop terrestrial management plans for outer islands, including identification and recommendations for ongoing or future restoration or ecological improvement. 2). Undertake a field-based review of habitat restoration projects underway on DG. 3). Produce an official list of ‘pest’ species.

2. Project stakeholders/partners

The key stakeholder is the British government through the British Indian Ocean Territory Administration (BIOTA). CCT meets every six weeks with the administrator and the environment officer where the latter are briefed on the progress of the project. The main challenges have been agreement over use of the BIOT Patrol Vessel, which has resulted in numerous postponements to the dates of the fieldwork, and securing face to face project team meetings with BIOTA due to time limitations of their small team.

The other stakeholders are representatives from ZSL, RSPB, RBG Kew, an invasive species eradication specialist and an IUCN Red List specialist. All stakeholders are part of the Chagos Atoll Restoration Expedition (CAREX) team and participated in regular meetings during the first Q1-3 of Year 1 of the project.

CAREX meetings

Team meetings were held at ZSL and RGB Kew across Q1-3 of Year 1 (Evidence Annex 3, Doc 1). Each meeting included discussions on expedition planning, project deliverables and project timelines during the first year. These regular meetings were crucial as the planned expedition was postponed, however, this meant that significantly more time was spent on preparation and administrative activities as a result.

Kew hosted two dedicated project meetings in July and September 2016 to develop the methodology and elicit feedback and specialist input from CCT and the project partners on the development of bespoke vegetation maps. (Evidence Annex 3, Doc 2)

ZSL hosted a dedicated project meeting in September 2016 to discuss the development of species profiles and standard survey methods for the taxa groups and an extensive invertebrate database that will form the core reference tool for the survey work and specimen material.

The team also visited the RSPB in November to meet with island eradication specialists to discuss modification of the RSPB methodology of island prioritisation to incorporate plants and invertebrates.

Stakeholder participation

Stakeholders have been asked to provide articles on project work that have been used for the CCT website, social media and e-newsletter.

The RGB Kew team was invited to present at the Chagos Conservation Trust event in January 2017 and maps developed for the CAREX were displayed and participants could discuss BIOT vegetation with the experts on the day. (Evidence Annex 3, Doc 3)

CAREX planning workshop

A planning workshop was scheduled for January 2017 where all team members were to present their work for the development of a detailed expedition plan. Unfortunately because the

expedition has been delayed due to complications with the BIOT Patrol Vessel this workshop was postponed.

3. Project Progress

3.1 Progress in carrying out project Activities

Significant progress has been made on activities during Year 1 regardless of the significant delay of the Chagos Atoll Restoration Expedition.

Activity 1. Produce biosecurity recommendations for visitors to the northern atolls

Dr Grant Harper was contracted as the biosecurity and invasive species eradication specialist (Evidence – contract available on request). Although the expedition component of the project has been delayed Dr Harper developed a draft BioSecurity Plan and Recommendations for the northern atolls (Output 1 of Darwin application). This was constructed using his prior experience in BIOT and his extensive knowledge and experience globally of biosecurity. This plan will be enhanced by the expedition phase but could be submitted to BIOTA as a standalone document.

Activity 2. Produce an IUCN sponsored Regional Red List for BIOTA

Dr Justin Gerlach was contracted as IUCN Regional Red List (RRL) specialist. To assist planning for the delivery of the Regional/National Red List assessments of the different taxonomic groups being studied by the project, Dr Gerlach developed a data recording form (Evidence Annex 3, Doc 5). He has been working with the RBG Kew team who will undertake an assessment of the ~45 native vascular plant species using the published regional red list criteria to produce a “BIOT National Red List of Vascular Plants”. He will continue working with the broader team to ensure data collection is standardised and formatted correctly for the production of the Red List. Plainly, the finished version of the RRL cannot be achieved for all taxon without the expedition phase of the project, this is especially true of plants.

Activity 3. Produce an overview of the sequence of events required for the terrestrial rehabilitation of the Chagos Archipelago for conservation

Terrestrial management specialists have been contracted for each discipline. Each sub-team has been working on reviewing existing knowledge and identifying gaps.

- ZSL – the invertebrate team has compiled an invertebrate inventory for every island based upon the available literature. This will be ground-truthed and added to during the fieldwork phase. (Evidence Annex 3, Doc 4)
- RBG Kew – the vegetation and GIS teams have conducted computer and manual assessments of island vegetation communities, developed vegetation community layers, determined areas to assess in the field and have developed methods for improving their vegetation assessments using historical maps and satellite data available.
- RSPB - analysis of all the islands using satellite maps focusing on features including existing bare ground (suitable for ground nesting birds), native trees (suitable for aerial nesting birds) and coconut dominance (to assess restoration opportunities).
- Invasive plant specialist – has produced a database of the potentially invasive/invasive species by island from the published and grey literature.
- Invasive mammal specialist – has liaised with the expedition leader to mine unpublished information regarding the potential for undiscovered invasive mammals (cats) and to areas of uncertainties for the distribution of rats in the territory.

The expedition component of the project has been delayed but existing data analysis is continuing.

Activity 4. Produce a prioritised list of the terrestrial management requirements by island with costs

A terrestrial habitat management specialist was recruited from the RSPB. A habitat management prioritisation scientist from the RSPB has agreed to advise and undertake the analysis for island rehabilitation prioritisation, free of charge. The expedition component of the project has been delayed but the literature review in to the prioritisation of islands for

rehabilitation has been completed and resulted in the recruitment of the prioritisation scientist above.

Activity 5. Produce an island by island TAP

The template for the TAP is under development and will be reviewed internally prior to submission for peer review.

3.2 Progress towards project Outputs

Output 1: Produce biosecurity recommendations for visitors to the northern atolls

CCT contracted Dr Grant Harper, a biosecurity planning expert, to develop a biosecurity plan to guide the establishment of biosecurity protocols and infrastructure as part of the management of the Chagos Islands except Diego Garcia. This plan provides a background to the current situation on the northern Chagos atolls with regard to Invasive Alien Species (IAS) and suggests practical and sustainable tasks required to initiate biosecurity and should be implemented as soon as possible. During the first year of this project a draft plan was submitted (Evidence Attachment 2).

Output 2: Produce an IUCN sponsored National Red List for BIOTA

Kew's Dr Martin Hamilton and Sara Barrios have updated the UKOTs Species and Specimens Database held at Kew. There are currently 3262 botanical records comprising 719 herbarium vouchers and 2543 observation records.

2548 new records were processed during year one comprising 11 new herbarium vouchers and 2537 observation records mostly derived from data collected by Dr Colin Clubbe during the 2010 Chagos Expedition.

CCT contracted Dr Justin Gerlach as the IUCN Red List specialist. To assist planning for the delivery of the Regional Red List assessments of the different taxonomic groups being studied by the project, Dr Gerlach developed a data recording form.

Kew agreed to undertake an assessment of the ~45 native vascular plant species during the project (following the expedition) using the published regional red list criteria to produce a "BIOT National Red List of Vascular Plants".

An updated draft of the BIOT plant species checklist (Evidence Attachment 3) was prepared based on the new records in the UKOTs Species and Specimens Database along with the checklist of the plants of BIOT first produced in 2009, which was based on the holdings of Kew and the collections and field notes of Commander Topp.

A final version of the BIOT plant species checklist will be prepared following the expedition and processing of all field data and collections. These data will be the basis for undertaking assessments of the ~45 native vascular plant species during the project.

Output 3: Produce an overview of the sequence of events required for the terrestrial rehabilitation of the Chagos Archipelago for conservation

Draft vegetation maps for Great Chagos Bank

Kew acquired multi-spectral high-resolution satellite imagery under agreement from the Living Ocean Foundation. These images were processed and added to a GIS that included all botanical records available in the UKOTs Species and Specimens Database using ArcMap software. (Evidence Attachment 4: Kew report for the Darwin Plus funded project "Creating a Terrestrial Action Plan for the Chagos Archipelago". Year one (2017-18))

Remote sensing and spatial analysis were undertaken to produce draft vegetation maps and metrics for the islands of the Great Chagos Bank proposed for visitation during the expedition.

GIS (for field data collection)

Kew's field data collection GIS that was first developed for use during the 2010 Chagos Expedition was updated. The updating included new recording forms and the inclusion of all botanical records available in the UKOTs Species and Specimens Database. The ArcPad

based GIS will be used by Kew staff during the expedition to collect voucher and observation data. Kew's spatial analysis team have prepared electronic field forms, using ODK Collect, for use on Android phones for ground truthing the vegetation maps. (Evidence Attachment 4: Kew report for the Darwin Plus funded project "Creating a Terrestrial Action Plan for the Chagos Archipelago". Year one (2017-18))

Developing species profiles and an extensive invertebrate database

As part of the preliminary fieldwork actions, an extensive literature search from available information on BIOT's terrestrial and littoral invertebrates and the results were compiled on a BIOT invertebrate database.

The review covered 503 native and non-native species (spanning 30 different Orders) which involved some considerable detective work to reconcile taxonomic conflicts in the 1905 Percy Sladen Trust Expedition, Natural History Museum, Barnett & Emms, Stoddart and Lunde data.

The review also included IUCN Red List status and the most recent field observations of scientists working in the archipelago to develop, where possible, island and habitat level associations for taxa. Species profiles and standard survey methods for the taxa groups are also included and this cumulative information is helping to prioritise survey islands and will form the core reference tool for the survey work and specimen material.

Analysis of bird habitat and restoration potential

An analysis of all the islands using satellite maps focusing on features including existing bare ground (suitable for ground nesting birds), native trees (suitable for aerial nesting birds) and coconut dominance (to assess restoration opportunities) was conducted. This has resulted in the RSPB (project ornithologist comes from this organisation) drawing up a list of priority islands for visiting during the fieldwork session. These islands will be considered against other discipline's requests.

Output 4: Produce a prioritised list of the terrestrial management requirements by island with costs

A terrestrial habitat management specialist has been recruited from the RSPB. A habitat management prioritisation scientist from the RSPB, Dr. Steffan Opiel, has agreed to advise and undertake the analysis for island rehabilitation prioritisation, free of charge. The literature review into the prioritisation of islands for rehabilitation has been completed and resulted in the recruitment of the prioritisation scientist above. The prioritisation of islands has to be scientifically robust and repeatable. In order to achieve this, following the visit to the RSPB Headquarters in Sandy, it was agreed with Dr. Opiel that the R Script (methodology) used by the UK Overseas Territories Unit of the RSPB to prioritise islands in the UK Overseas Territories, (including BIOT) for the eradication of invasive alien vertebrates. This script will be adapted by Dr. Opiel to include other taxa and for use in BIOT and the production of the Terrestrial Action Plan.

Output 5: Produce an island by island TAP, including a scientific base-line of the biodiversity of each island, an idealised future state and, the specific details required to rehabilitate and/or manage an island

This output can only progress after post expedition phase of project.

3.3 Progress towards the project Outcome

The outcome of this project is to produce a scientifically credible, peer reviewed, prioritised and costed Terrestrial Action Plan for the Chagos Marine Reserve and success will be measured on the acceptance by BIOTA of the plan within the allotted timeframe.

The original allotted timeframe has been changed with the approval of the Darwin Initiative due to the unavailability of the BIOT Patrol Vessel, which resulted in the need to delay the Chagos Atoll Restoration Expedition.

The current indicators are still adequate for measuring the outcome as this has not altered:

- The project has delivered a number of key activities that will ensure the outcome will be met.
 - Year 1 has delivered a number of key activities such as a draft biosecurity plan (See 3.1) that all contribute to the overall outcome regardless of the delays in the expedition component of the project
- The minimisation or cessation of further deliberate or accidental introductions of terrestrial species to the northern atolls.
 - The acceptance of the Terrestrial Action Plan and implementation by BIOTA will use this indicator as a measure of success once the project has delivered the outcome.
- The prioritised protection and conservation of species identified in the Regional Red List.
 - Year 1 has seen the data collection method standardised and formatted correctly for the production of the Red List (See 3.1). This indicator is a measure of success once the project has delivered the outcome.
- The sequential rehabilitation of the terrestrial environment of the Chagos Archipelago.
 - This indicator is a measure of success once the project has delivered the outcome.
- The prioritised intervention and management of the Chagos Archipelago undertaken to known costs.
 - This indicator is a measure of success once the project has delivered the outcome.
- Future prioritised and costed terrestrial management of the islands of the Chagos Archipelago.
 - This indicator is a measure of success once the project has delivered the outcome.

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

At present, BIOTA has an Interim Conservation Management Framework (ICMF - September 2014) that is to be upgraded to a (recognised and implemented) Management Plan at some point in the future. As stated in the original application, this project will address two priorities for action in the ICMF, these are:

- Section 1 – “Understanding and Interpreting the Environments”. Specifically, “Establish detailed baselines for terrestrial environments”.
- Section 2 - “Conserving wildlife and habitats”. Specifically, 1). Develop terrestrial management plans for outer islands, including identification and recommendations for ongoing or future restoration or ecological improvement. 2). Undertake a field-based review of habitat restoration projects underway on DG. 3). Produce an official list of ‘pest’ species.

The work achieved this year detailed in Outputs 1-4 directly contributes to BIOTA achieving these priorities.

Strategically, the contribution this project is making towards Darwin Plus assisting UKOTs to improve their management of their environmental assets is unquestionable. The whole *raison d'être* of the project is to produce a costed and prioritised Terrestrial Action Plan for BIOTA to plan future environmental action upon.

3.5 Monitoring of assumptions

The monitoring of critical conditions has taken up an inordinate amount of project time this year, principally through Assumption 0.4 (That the BIOT Patrol Vessel remains on station, available and capable of assisting a 12 person terrestrial expedition) not being fulfilled by BIOTA to date.

This setback has meant that Assumption 4.2 (That the terrestrial expedition to gather the data gaps is undertaken early enough within the project lifetime in order for the Terrestrial Action Plan to be written within the allocated timeframe) has resulted and a change request has been submitted and approved to extend the project timeline..

The project team is managing these two changed assumptions by regular dialogue with BIOTA in order to ascertain when the BIOT Patrol Vessel will be back on station (this happened in January 2017) and critically, when the CAREX expedition phase of the project can happen. The last meeting held with BIOTA indicated this was to be November 2017.

These changed assumptions have been fully and honestly explained to the Darwin Plus team and change requests, principally over dates have been accepted.

4. Monitoring and evaluation

Monitoring and evaluation has been covered in 3.2.

5. Lessons learnt

The principal lesson learnt this year has been the difficulties in partnering with a government department (BIOTA) in which the workforce is transitional. This has resulted in agreements made prior to the project being changed or challenged by successors to the detriment of the project, e.g. the amount of time the BIOT Patrol Vessel will be allocated to the project, the interpretation of the words written in the application, *etcetera*. This has been the dominant lesson learnt of a magnitude that it is impacting upon the success of the project.

If the clock could be turned back two years CCT would have entered in to a signed contract with BIOTA, detailing exactly what the government was to provide and to have this legally binding. It is suspected that BIOTA would not accept this responsibility and the project would not have been launched.

Recommendations for any other NGO relying on a government agency for support is to have the details of the arrangement spelled out and signed by them in order that there can be no question of what has been agreed.

CCT has learnt a great deal through this experience and will be more rigid and bureaucratic in its approach to partnering with BIOTA in the future. Alternatively, CCT could source funds for its own vessel and therefore be independent in regards to BIOT Patrol Vessel requirements.

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

N/A this is the first annual report submitted for this project.

7. Other comments on progress not covered elsewhere

The project aims to survey the islands of the BIOT and will result in a Chagos Archipelago Terrestrial Action Plan for the BIOT Administration. The islands of the BIOT are only accessible by vessel and as such CCT partnered with the BIOT Administration for this project with their main contribution being the BIOT Patrol Vessel.

Unexpectedly the BIOT Administration decommissioned the patrol vessel in April 2016 and was involved in a long procurement process until a new vessel was secured and delivered to BIOT in February 2017. This resulted in the original Chagos Atoll Restoration Expedition being delayed from August to November 2016 and then further delayed until 2017.

This delay impacts the project in two ways:

1. Completing the expedition by September 2016 as initially planned would have resulted in the *Terrestrial Action Plan* being completed by December 2017. The delays now mean the plan will be completed by September 2019.

2. Initially when the expedition was planned for August the bulk of the funds would have been spent in Year 1. Unfortunately now part of the Year 1 funds need to move into Year 2 due to the delays that have occurred.

CCT submitted a change request to Defra in September 2016 requesting a budget adjustment and a six-month “no-cost” extension. Notification that this was approved was received. CCT then had to submit a further change request in January 2017 for a further 12-month extension given the lack of a secure date for the expedition. This again was approved.

The main risk to the successful completion of the project is the lack of access to the BIOT Patrol Vessel and/or a change to the number of days allocated for its use. Either would result in the non-delivery of a significant number of outputs and the over all objective.

8. Sustainability and legacy

The project remains a high priority in the Territory, as witnessed by the regular meeting between BIOTA and CCT to discuss the way forward.

The CCT exit strategy is still valid. The Terrestrial Action Plan is a working document to be gifted to BIOTA and for them to use and review as required in to the future.

9. Darwin identity

CCT and the project partners have been very active publicising the Darwin Initiative and the funded project online. (Evidence links below and Annex 3, Document 6)

Funding announcement

The initial announcement was covered on the CCT and CCT-US’ websites and through a direct mail to supports and members:

[Direct mail to 150 supporters and members](#)

[CCT news announcement](#)

[CCT-US news announcement](#)

News stories

A number of news stories and blogs were published throughout the year:

[Preparing for the Chagos Archipelago expedition](#)

[Pinning Down the Terrestrial Invertebrates of BIOT](#)

[The land crabs of the Chagos Archipelago](#)

E-news

Three edition of CCT’s e-newsletter featured the project:

[April 2016](#)

[August 2016](#)

[November 2016](#)

Social media:

Five posts on Facebook featuring the Darwin Initiative

Seven Tweets featuring the Darwin Initiative

CCT annual event

Darwin Initiative logo was displayed prominently at the event held at ZSL in January 2017. RBG Kew had a stand where participants could discuss the maps developed for the project.

10. Project Expenditure

Table 1: Project expenditure during the reporting period (1 April 2016 – 31 March 2017)

Project spend (indicative) in this financial year	2016/17 D+ Grant (£)	2016/17 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs			10%	Due to the delays in the expedition some salary costs were moved into Year 2 as per the change request submitted and approved..
Consultancy costs			0	
Overhead Costs			0	
Travel and subsistence			99%	Due to the delay in the expedition the travel and subsistence costs were moved into Year 2 as per the change request submitted and approved.
Operating Costs	0	0	0	
Capital items	0	0	0	
Others (Please specify)			99%	Due to the delay in the expedition the other costs, all associated with the expedition such as equipment, were moved into Year 2 as per the change request submitted and approved.
TOTAL				

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2016-2017 – if appropriate

Project summary	Measurable Indicators	Progress and Achievements April 2016 - March 2017	Actions required/planned for next period
<p>Impact</p> <p>That the future terrestrial management of the Chagos Marine Reserve is undertaken in a prioritised manner and based upon scientifically credible information against known costs.</p>		<p>Significant progress made in regards to scientifically credible information being researched and compiled in preparation for the field component of the project.</p>	
<p>Outcome</p> <p>To produce for the BIOTA a scientifically credible, peer reviewed, prioritised and costed Terrestrial Action Plan for the Chagos Marine Reserve.</p>	<p>The acceptance by BIOTA of the Terrestrial Action Plan within the allotted timeframe</p>	<p>Regardless of the delays surrounding the use of the BIOT Patrol Vessel the progress has been significant especially with activities such as recruitment, literature reviews and data analysis.</p> <p>This has placed the project in good position for a successful Chagos Atoll Restoration Expedition.</p>	<p>Securing BIOT Patrol Vessel use with BIOTA.</p> <p>Conducting Chagos Atoll Restoration Expedition planning workshop with all stakeholders and partners.</p> <p>Completing the Chagos Atoll Restoration Expedition.</p>
<p>Output 1.</p> <p>Produce biosecurity recommendations for visitors to the northern atolls (including a list of pest species)</p>	<p>The minimisation or cessation of further deliberate or accidental introductions of terrestrial species to the northern atolls</p>	<p>During the first year of this project a draft plan was developed using prior experience in BIOT and extensive knowledge and experience globally of biosecurity and submitted to CCT (See 3.2).</p> <p>The indicator for this output is still highly relevant.</p>	
<p>Activity 1.1 Recruit biosecurity specialist</p>		<p>Complete (Evidence provided in section 3.1 of report)</p>	
<p>Activity 1.2 Undertake fieldwork</p>		<p>Due to significant delays with the BIOT Patrol Vessel access this is still to be completed. Fieldwork will be undertaken as soon as possible but is dependant on BIOTA cooperation. (Evidence provided in section 3.1 of report)</p>	
<p>Activity 1.3 Undertake analysis and consult local experts</p>		<p>Draft BioSecurity Plan developed and peer reviewed. Completion post expedition phase of project. (Evidence provided in section 3.1 of report)</p>	
<p>Activity 1.4 Write biosecurity instructions for peer review</p>		<p>Draft is complete with completion post expedition phase of project. (Evidence provided in section 3.1 of report)</p>	

<p>Output 2. Produce an IUCN sponsored Regional Red List for BIOTA</p>	<p>The prioritised protection and conservation of species identified in the Regional Red List</p>	<p>An updated draft of the BIOT plant species checklist (Evidence Attachment 3) was prepared and to assist planning for the delivery of the Regional Red List assessments of the different taxonomic groups being studied by the project a data recording form has been developed (See 3.2). The indicator for this output is still highly relevant.</p>
<p>Activity 2.1 Recruit IUCN Regional Red List specialist</p>		<p>Complete</p>
<p>Activity 2.2 Train expedition members in the information gathering requirement to produce an IUCN-sponsored RRL</p>		<p>Complete</p>
<p>Activity 2.3 Undertake fieldwork</p>		<p>Due to significant delays with the BIOT Patrol Vessel access this is still to be completed. Fieldwork will be undertaken as soon as possible but is dependant on BIOTA cooperation.</p>
<p>Activity 2.4 Undertake data analysis including of relevant scientific publications</p>		<p>Complete</p>
<p>Activity 2.5 Construct RRL</p>		<p>Completion post expedition phase of project.</p>
<p>Activity 2.6 Submit RRL to UICN for endorsement</p>		<p>Completion post expedition phase of project.</p>
<p>Activity 2.7 Incorporate IUCN endorsed RRL in to TAP</p>		<p>Completion post expedition phase of project.</p>
<p>Output 3. Produce an overview of the sequence of events required for the terrestrial rehabilitation of the Chagos Archipelago for conservation.</p>	<p>The sequential rehabilitation of the terrestrial environment of the Chagos Archipelago</p>	<p>Significant progress on literature reviews and data analysis (See 3.2) including:</p> <ul style="list-style-type: none"> • Satellite imagery processed and added to a GIS and Kew's field data collection GIS updated. • Remote sensing and spatial analysis were undertaken to produce draft vegetation maps and metrics for the islands. • Extensive literature search on BIOT's terrestrial and littoral invertebrates with results compiled in database. • Analysis of all the islands using satellite maps focusing birds and restoration priorities. <p>The indicator for this output is still highly relevant.</p>
<p>Activity 3.1 Recruit terrestrial management specialists</p>		<p>Complete</p>
<p>Activity 3.2 Undertake literature reviews to identify knowledge gaps</p>		<p>Complete</p>
<p>Activity 3.3 Undertake fieldwork</p>		<p>Due to significant delays with the BIOT Patrol Vessel access this is still to be completed. Fieldwork will be undertaken as soon as possible but is dependant on BIOTA cooperation.</p>

Activity 3.4 Undertake data analysis		Existing data analysis is continuing.
Activity 3.5 Produce output for inclusion in the TAP for peer review		Completion post expedition phase of project.
Output 4. Produce a prioritised list of the terrestrial management requirements by island with costs	The prioritised intervention and management of the Chagos Archipelago undertaken to known costs	The literature review in to the prioritisation of islands for rehabilitation has been completed and resulted in the recruitment of the prioritisation scientist (See 3.2). The indicator for this output is still highly relevant.
Activity 4.1 Recruit terrestrial management specialists		Complete
Activity 4.2 Undertake literature reviews to identify knowledge gaps		Complete
Activity 4.3 Undertake fieldwork		Due to significant delays with the BIOT Patrol Vessel access this is still to be completed. Fieldwork will be undertaken as soon as possible but is dependant on BIOTA cooperation.
Activity 4.4 Undertake data analysis		Existing data analysis is continuing.
Activity 4.5 Produce output for inclusion in the TAP for peer review		Completion post expedition phase of project.
Output 5. Produce an island by island TAP, including a scientific base-line of the biodiversity of each island, an idealised future state and, the specific details required to rehabilitate and/or manage an island	Future prioritised and costed terrestrial management of the islands of the Chagos Archipelago	This output can only progress after post expedition phase of project. The indicator for this output is still highly relevant.
Activity 5.1 Agree TAP template		Under development and will be reviewed internally.
Activity 5.2 Co-ordinate data from outputs 1 – 4		Completion post expedition phase of project.
Activity 5.3 Draft TAP and submit to BIOTA and independent scientists for peer review		Completion post expedition phase of project.

Activity 5.4 Produce final output for submission to BIOTA	Completion post expedition phase of project.
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Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed) - – if appropriate

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

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: That the future terrestrial management of the Chagos Marine Reserve is undertaken in a prioritised manner and based upon scientifically credible information against known costs.			
<p>Outcome:</p> <p>To produce for the BIOTA a scientifically credible, peer reviewed, prioritised and costed Terrestrial Action Plan for the Chagos Marine Reserve.</p>	<p>The acceptance by BIOTA of the Terrestrial Action Plan within the allotted timeframe</p>	<p>Verification will be achieved through the implementation of the TAP in to future BIOTA environmental management plans</p>	<p>0.1 That BIOTA continues to function as is</p> <p>0.2 That no major ecological / environmental changes occur in BIOT in the near-term future to render the TAP outdated</p> <p>0.3 That the level of military activity on Diego Garcia does not prevent the expedition to the northern atolls mounting through there</p> <p>0.4 That the BIOT Patrol Vessel remains on station, available and capable of assisting a 12 person terrestrial expedition</p> <p>0.5 That key personnel or substitutes if required remain available for the project</p> <p>These assumptions are valid for all outputs</p>
<p>Output 1 Produce biosecurity recommendations for visitors to the northern atolls (including a list of pest species)</p>	<p>1.1 The minimisation or cessation of further deliberate or accidental introductions of terrestrial species to the northern atolls</p>	<p>1.1 Peer review of the TAP by BIOTA and independent scientists to verify the inclusion of biosecurity recommendations and their viability and credibility</p> <p>1.2 Future monitoring and evaluation of the northern atolls to assess if further introductions have occurred after the implementation of the recommendations</p>	<p>1.1 That BIOTA will accept and enforce the biosecurity recommendations</p> <p>1.2 That BIOTA will continue to conduct visits by the Chief Scientific Advisor and Environmental Officer to assess, where possible and practical, whether further invasions have occurred</p> <p>1.3 That BIOTA will continue to allow interested parties (e.g. CCT, RBG Kew, RSPB) to monitor the northern atolls</p>

<p>Output 2 Produce an IUCN sponsored Regional Red List for BIOTA</p>	<p>2.1 The prioritised protection and conservation of species identified in the Regional Red List</p>	<p>2.1 Peer review by IUCN, independent scientists and BIOTA to ensure the RRL has been produced and is credible 2.2 Future monitoring of the northern atolls to assess the ongoing status of the flora and fauna versus RRL status</p>	<p>2.1 That BIOTA will continue to conduct visits by the Chief Scientific Advisor and Environmental Officer to monitor, where practical and possible, the status of the flora and fauna present 2.2 That BIOTA will continue to allow interested parties (e.g. CCT, RBG Kew, RSPB) to monitor the flora and fauna of the northern atolls 2.3 That IUCN continue to support the concept of an RRL for the Chagos and ensure the availability of the nominated IUCN representative or substitute if required 2.4 That the identification and RRL status of the majority of the specimens collected can be ascertained</p>
<p>Output 3 Produce an overview of the sequence of events required for the terrestrial rehabilitation of the Chagos Archipelago for conservation</p>	<p>3.1 The sequential rehabilitation of the terrestrial environment of the Chagos Archipelago</p>	<p>3.1 Peer review of the TAP by BIOTA and independent scientists to verify the inclusion of the sequence of events for the terrestrial rehabilitation of the Chagos Archipelago, their viability and credibility 3.2 Monitoring of the northern atolls to assess the impacts of future sequential ecological interventions</p>	<p>3.1 That the terrestrial expedition to gather the data gaps required for the production of the sequence of events table is undertaken early enough within the project lifetime in order for the TAP to be written within the allocated timeframe 3.2 That monitoring of the flora and fauna of the Chagos Archipelago continues</p>
<p>Output 4 Produce a prioritised list of the terrestrial management requirements by island with costs</p>	<p>4.1 The prioritised intervention and management of the Chagos Archipelago undertaken to known costs</p>	<p>4.1 Peer review of the TAP by BIOTA and independent scientists to verify the inclusion of the prioritised list and cost of terrestrial management requirements and their viability and credibility 4.2 Monitoring of the northern atolls to assess the impacts of future ecological interventions and management</p>	<p>4.1 That BIOTA will continue to monitor the flora and fauna of the Chagos Archipelago 4.2 That the terrestrial expedition to gather the data gaps is undertaken early enough within the project lifetime in order for the TAP to be written within the allocated timeframe 4.3 That key personnel or substitutes remain available for the duration of the programme</p>

<p>Output 5 Produce an island by island TAP, including a scientific base-line of the biodiversity of each island, an idealised future state and, the specific details required to rehabilitate and/or manage an island</p>	<p>5.1 Future prioritised and costed terrestrial management of the islands of the Chagos Archipelago</p>	<p>5.1 The production of a peer reviewed Terrestrial Action Plan</p>	<p>5.1 That BIOTA implement the TAP in to future environmental management plans 5.2 That outputs 1 – 4 are successful</p>
<p>Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <ul style="list-style-type: none"> 1.1 Recruit biosecurity specialist (Dr. Grant Harper) 1.2 Undertake fieldwork 1.3 Undertake analysis and consult local experts (British Representative, BIOT Environmental Officer, Master BPV etc.) 1.4 Write biosecurity instructions for peer review 1.5 Incorporate peer reviewed instructions in to the TAP 2.1 Recruit IUCN Regional Red List specialist (Dr. Justin Gerlach) 2.2 Train expedition members in the information gathering requirement to produce an IUCN-sponsored RRL 2.3 Undertake fieldwork 2.4 Undertake data analysis including of relevant scientific publications 2.5 Construct RRL 2.6 Submit RRL to UICN for endorsement 2.7 Incorporate IUCN endorsed RRL in to TAP 3.1 Recruit terrestrial management specialists 3.2 Undertake literature reviews to identify knowledge gaps 3.3 Undertake fieldwork 3.4 Undertake data analysis 3.5 Produce output for inclusion in the TAP for peer review 4.1 Recruit terrestrial management specialists 4.2 Undertake literature reviews to identify knowledge gaps 4.3 Undertake fieldwork 4.4 Undertake data analysis 4.5 Produce output for inclusion in the TAP for peer review 5.1 Agree TAP template 5.2 Co-ordinate data from outputs 1 – 4 5.3 Draft TAP and submit to BIOTA and independent scientists for peer review 5.4 Produce final output for submission to BIOTA 			

