



Department
for Environment
Food & Rural Affairs



Darwin Initiative Final Report

To be completed with reference to the Reporting Guidance Notes for Project Leaders (<http://darwin.defra.gov.uk/resources/>) it is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

Darwin project information

Project Reference	19-002
Project Title	A cutting- <i>EDGE</i> approach to saving Seychelles' evolutionarily distinct biodiversity
Host country(ies)	Seychelles
Contract Holder Institution	Durrell Institute of Ecology and Conservation (DICE) - University of Kent (UKC)
Partner Institution(s)	Seychelles National Parks Authority (SNPA) Seychelles Government Ministry of Environment (MOE) Seychelles Islands Foundation (SIF) Wildlife Clubs of Seychelles (WCS) Seychelles Natural History Museum (SNHM) Island Conservation Society (ICS) Nature Protection Trust of Seychelles (NPTS) British Natural History Museum –London (BNHM) Zoological Society of London- Edge of Existence programme (ZSL) Independent Bat Specialist(Professor Paul Racey)
Darwin Grant Value	£256,085
Funder (DFID/Defra)	Defra
Start/End dates of Project	01 October 2012 – 30 September 2015
Project Leader Name	Dr Jim Groombridge
Project Website	http://www.kent.ac.uk/sac/research/projects/jg_biodiversity.html
Report Author(s) and date	Dr Rachel Bristol (Project Officer); Dr Jim Groombridge (Project Leader); Ms Sylvanna Antat (SNPA) Mr James Mougat (SNPA) Ms Diana Renaud (Seychelles government); Mr Terance Payet (SIF); Mr Charles Morel (SNHM); Ms Berthilde Belle (SNHM) Dr David Gower (BNHM); Ms Olivia Couchman (ZSL); December 2015.

1 Project Rationale

PRIORITISING SPECIES FOR CONSERVATION.

Our understanding of the Earth's biodiversity has begun to recognise the global and taxonomic significance of evolutionarily distinct species and their high conservation value. With ancient evolutionary origins, these 'biological treasures'

not only represent the 'last of their kind' but are often extremely rare, raising the stakes for their successful recovery. Saving these species is a major challenge because:

- (i) their biology, taxonomy and habitat requirements are often poorly-known and under-studied, limiting options for their recovery until appropriate in-country capacity is developed and basic knowledge gaps are filled
- (ii) they often go unnoticed by the global conservation community, struggling to compete for resources against more charismatic 'flagship species'
- (iii) they seldom cluster together geographically to form a convenient focus, but instead are scattered worldwide as 'high-priority' species in dire conservation need.

Together, extreme rarity, evolutionary uniqueness and data-deficiency make it difficult for global policy-makers to allocate resources to conserve these species.

EDGE SPECIES: ZSL developed the *EDGE* Programme in 2007, using a scientifically robust method to identify and prioritise *Evolutionarily Distinct Globally Endangered (EDGE)* species. Using the latest DNA-based phylogenies to estimate evolutionary distinctiveness and evaluate it alongside IUCN threat status, ZSL identified top priority '*EDGE*' species for many taxa, including mammals, amphibians, birds and reef-building corals. *EDGE* has been presented to the IUCN World Conservation Congress and CBD COP 10, and is a globally accepted prioritisation tool for biodiversity conservation, paving the way for nations to recognise and target their *EDGE* species as a priority.

SEYCHELLES – an *EDGE*-zone: Most *EDGE* species are scattered globally. Remarkably, the Seychelles islands in the Indian Ocean are home to no less than 12 currently recognised *EDGE* species, such as the *Sooglossus* frogs (amongst the World's smallest, most ancient frogs), the black parrot, Cooper's black caecilian (an ancient limbless amphibian lineage) and the sheath-tailed bat (one of the world's rarest species with <100 survivors) (see Fig.1/Table1). Consequently, the Seychelles islands form a natural '*EDGE*-zone'. Whilst posing a heavy burden on the Government of Seychelles to fulfil its CBD obligations, this also presents a remarkable opportunity to deliver resources and training to conserve 12 *EDGE* species in a single location.

IN-COUNTRY CHALLENGES: To fulfil their commitment to the CBD, the Government of Seychelles' Ministry of Environment, Energy and Climate Change (MEECC) is tasked with saving these species, some predicted to be only a decade from extinction. However, the Ministry has identified two major obstacles to recovering their *EDGE* species and has sought our help.

- (i) The Seychelles' population of c.90,000 people, and the absence of university-level training opportunities in conservation biology, until the opening of a university in 2011, makes it difficult for Government to recruit, train and capacity-build for conservation amongst the local workforce.
- (ii) This deficiency in local professional expertise makes conserving *EDGE* species doubly difficult, because each *EDGE* species requires specialist approaches.

SOLUTION & OBJECTIVES: A DICE-led Darwin project (with UK partners ZSL, NHM, Independent UK bat consultant, and seven Seychelles organisations) is uniquely-placed to overcome these obstacles, by providing specialist support to develop earmarked local biologists as *EDGE* Species Fellows. Six Seychelles personnel have been identified, some of whom are already embedded within the Ministry or local NGOs. Each has demonstrated potential to become such a 'species champion', but lacks specialist training and resources. With Darwin support, each *EDGE* Fellow will receive in-country training by UK partners, tailored specifically to their individual and respective *EDGE* species' requirements. Training and

Sheath-tailed bat (<i>Coleura seychellensis</i>):	1 <i>EDGE</i> sp
Seychelles black parrot (<i>Coracopsis barklyi</i>):	1 <i>EDGE</i> sp
Sooglossid frogs (<i>Sooglossus/Sechellophryne</i> spp.):	4 <i>EDGE</i> sp
Cooper's black caecilian (<i>Praslinia cooperi</i>):	1 <i>EDGE</i> sp
Corals (<i>Anomastrea irregularis; Horastrea indica; Parasimplastrea sheppardi; Catalaphyllia jardinei; Physogyra lichensteini</i>):	5 <i>EDGE</i> sp
TOTAL <i>EDGE</i> species:	12



Fig. 1: 4 of the 12 Seychelles *EDGE* species

development of these Seychelles *EDGE* Fellows will be overseen by a full-time salaried Project Officer (PO) who will supervise the in-country conservation work and coordinate training by UK partners through field visits, exchanges and training workshops during the 3 years.

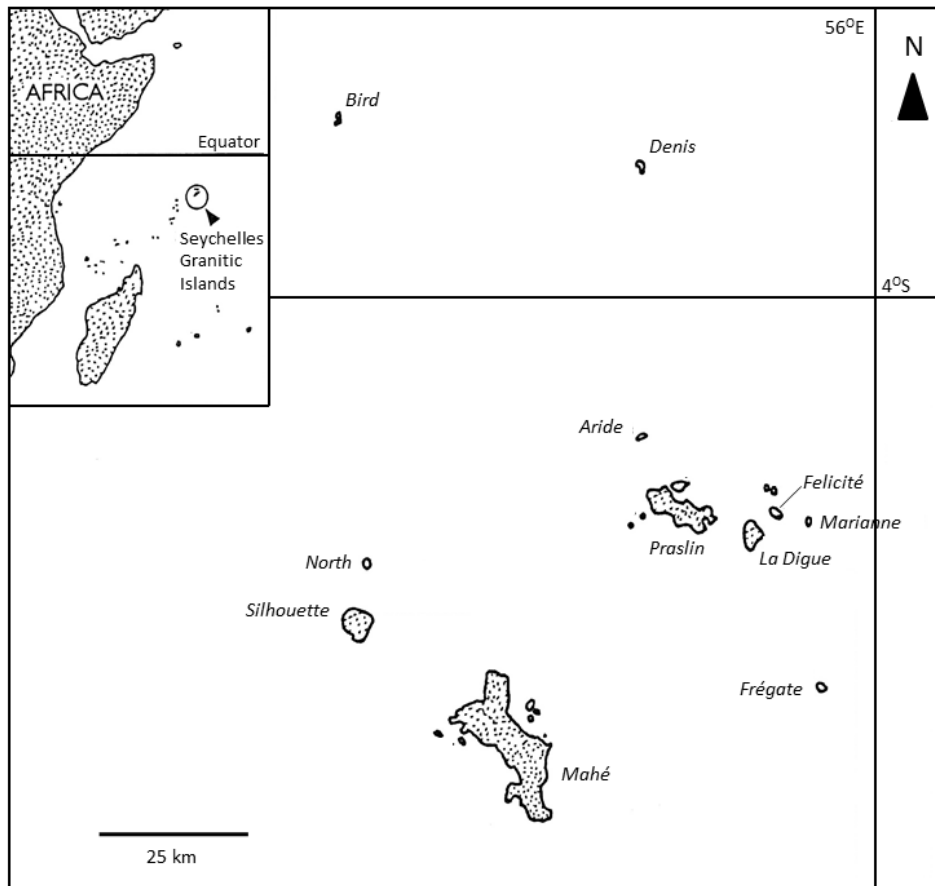


Fig 2. Map of the Seychelles granitic islands where all Seychelles *EDGE* species are located.

2 Project Achievements

2.1 Outcome

To provide investment, technical expertise and targeted training in conservation, ecology and taxonomy to improve knowledge, management and conservation status of the 12 *EDGE* species endemic to Seychelles.

Indicators: a) Comprehensive training programmes tailored to each *EDGE* Fellow, each led by appropriate UK partners.

b) Increased local *EDGE* Fellows' skills, knowledge and competence in all aspects of their *EDGE* species' conservation management and field activities.

c) Increased understanding of priority management actions, threats and mitigations for each *EDGE* species.

d) Conservation status of each *EDGE* species known and maximised through field research and targeted management activities.

Means of verification:

- *EDGE Fellow training reports from UK project partners leading capacity building training of local EDGE Fellows.*
- *On-the-job assessment of skills and knowledge acquired through training.*
- *Project Annual reports.*
- *Individual EDGE species status reports.*
- *Species Action Plan implementation progress reports.*

We have provided investment, technical expertise and targeted training in conservation, ecology and taxonomy through (i) our series of 16 targeted training workshops to our six project fellows and to the wider Seychelles conservation community and through (ii) one-on-one mentoring and training of our project fellows through 27 visits by 18 different experts from our UK partner organisations on 13 separate occasions throughout the project.

Our six project fellows, as testified by themselves personally, their employers, their UK project partner expert trainers, the PO and the PL have all, as a direct result of this project, significantly increased their knowledge, skills and competence in all aspects of their respective EDGE species conservation needs (see annexes 7, 8 & 9 for assessments from expert UK mentors confirming project fellows' skill gains). They are all well versed, confident and competent in appropriate research, monitoring and management methods, and are implementing conservation initiatives for their respective EDGE species. We are confident this will translate into a long-term and sustainable improvement of the conservation status of Seychelles EDGE species.

Five of our six project fellows are still employed by their project partner organisations and still working with their respective EDGE species post project close. Our 6th fellow Ms Diana Renaud is still implementing education and awareness activities for Sheath-tailed bats post project close and she is still working for government, but she has changed Ministries (from the Ministry of Environment to the Ministry of Social Affairs) during the project. The Darwin Initiative was made aware of this change and also a revised work-programme was devised with Diana, her ZSL EDGE of existence programme mentors, the project bat expert Prof. Paul Racey, Diana's old line-manager at the Ministry of Environment (Mr Flavien Joubert) and her new employers, whereby Diana, the PO Dr Rachel Bristol and a University of Seychelles BSc (Environmental Science) student Ms Ashley Dias (on study leave from her post at the Ministry of Environment) shared the responsibility of ensuring the STB programme of work was completed.

Our EDGE corals fellow (Ms Sylvanna Antat -SNPA), black parrot fellow (Mr Terance Payet-SIF) and 2x caecilian fellows (Mr Charles Morel and Ms Berthilde Belle-SNHM)) have completed their training under this project. Our sooglossid frog fellow (James Mougat –SNPA) and sheath-tailed bat fellow (Diana Renaud - Government) are scheduled to complete their ZSL EDGE fellowships in February 2016 in line with the ZSL timeline for their fellowships which could not 100% line up with this project's timeframe.

ZSL EDGE fellows (following ZSL Edge fellowships) or project fellows only?

The decision of whether each of our 6 project fellows also followed a ZSL fellowship programme (in addition to being a project fellow) or not was decided based individually on what was best for the training and capacity building of each fellow by the fellow themselves and their employer. Three out of our six fellows followed the formal ZSL EDGE fellowship training programme (Diana Renaud –Sheath-tailed bat fellow; James Mougat – sooglossid frog fellow and Sylvanna Antat EDGE corals fellow). Our other 3 project fellows (Terance Payet- Black parrots, Charles Morel and Berthilde Belle – caecilians) skill sets and professional development was better enhanced through close support and mentoring from the project expert team. All fellows, regardless of whether they followed the ZSL fellowship route or not, followed very similar training programmes. They all developed their individual projects and accompanying work programmes with input and guidance from the PO, the PL, their organisation and their UK partner expert mentors.

We now have, as a direct result of the research and monitoring undertaken under this project, a much more accurate idea of the conservation status, threats and appropriate mitigation actions for each of our EDGE species as evidenced by project species reports, survival blueprints (Species Action Plans) and conservation status updates produced under this project (see annexes 7, 10, 11, 12, 13 & 14.)

In fact we have exceeded our expected project outcomes in the following ways:

Our EDGE corals fellow Sylvanna Antat has started an MPhil in Conservation Leadership at the University of Cambridge on a full scholarship from Cambridge. Her training and work under this project was pivotal in helping her gain the Cambridge MPhil scholarship.

Our Sooglossid frog fellow James Mougat has been recommended for higher academic training by his employer (CEO of project partner SNPA) as a direct result of his professional growth and development under this Darwin Initiative project. He is currently applying for scholarships to undertake a MPhil in biodiversity management to further increase his capacity to manage and conserve Seychelles biodiversity with the full support of his employer (SNPA). He plans to conduct his research project on sooglossid frog habitat requirements and conservation.

Terance Payet our project black parrot fellow was promoted to team leader of the Black Parrot research and monitoring team at SIF during the project in recognition of his increased skills-set and he has applied to Durrell to undertake a DESMAN (Durrell Endangered Species Management Graduate Certificate in

2016 with the full support of his employer project partner SIF, something he would never have been confident enough to do prior to this project.

This project in addition to providing technical expertise and training to local biologists to enable them to better manage Seychelles EDGE species, has also acted as a springboard to propel them forward to greater things!

2.2 Impact: achievement of positive impact on biodiversity and poverty alleviation

Project Impact statement: Seychelles EDGE species are well managed and conserved, enabling Seychelles to meet its obligations to the CBD and to contribute positively to the CBD Thematic Programme on Island Biodiversity.

Indicators: Ground surveys and monitoring reports contain information detailing (i) status of populations of Seychelles EDGE species, and/or (ii) conservation management actions that are in place to mitigate against identified threats.

Means of verification: Species Action Plan implementation progress reports / Field monitoring reports / Seychelles National Reports to the CBD.

Our project has contributed to this higher-level impact by providing up-to-date information on status, threats and best practice mitigation for all of our EDGE species (for evidence see the annotated logframe in annex 2 and project fellow EDGE species reports in annexes 7, 10, 11, 12, 13 & 14.)

All project reports and publications have been made available to the Seychelles Ministry of Environment and National Parks Authority as well as to all project partners so the information is freely available for inclusion in future national reporting to the CBD.

Please note this project is 100% funded through DEFRA and we never proposed to alleviate poverty in any way. However the main pillar of the Seychelles economy is eco-tourism, with over 40% of the national workforce estimated to be directly or indirectly working in tourism-generated employment, while currently the local in-country capacity to protect the environment and the biodiversity that the country relies on for income generation and poverty alleviation is limited. This project is contributing to human development and welfare in Seychelles by arming six local conservation practitioners with the skill sets necessary for the conservation and sustainable management of 12 Seychelles EDGE species and other threatened endemic biodiversity. This ensures the Seychelles has the skills in-house to conserve and sustainably manage the biodiversity upon which the Seychelles economy and sustainable development is so reliant. This project has up-skilled 6 conservation practitioners of which definitely 3 have benefited through increased status, position in organisation, and salary as a direct result of the training and skill acquisition received under this project.

2.3 Outputs

The projects four Outputs are:

1. Improved local capacity to research, monitor and manage Seychelles EDGE species.
2. Best practice research, best practice monitoring and best practice adaptive management researched, agreed by all stakeholders and implemented for each EDGE species.
3. Research information about EDGE species produced and disseminated.
4. Education, Awareness and Outreach programme increases local knowledge of EDGE species status and their needs.

We believe we have achieved the project outputs. Please refer to the annotated logframe in annex 2 for a brief summary of all project activities undertaken which -if the logframe holds true ,and we believe it does, should have achieved the project outputs.

The Project was continually overseen by the PO and the PL using the logical framework and the output indicators to measure our success at achieving project outputs. A project steering committee comprising heads of each local partner organisation and chaired by the PO also met annually as a group and more regularly individually with the PO to monitor project progress against the logframe and to plan upcoming tasks.

Output 1. Improved local capacity to research, monitor and manage Seychelles EDGE species.

Indicators: 1a. Five EDGE Fellows trained in surveying, monitoring, and management best practices for their allocated EDGE species by end of Year 3.

1b. Five EDGE Fellows embedded in local NGO's and/or government leading conservation programmes for their EDGE species.

1c. Five EDGE Fellows trained in conservation leadership skills through DICE-based training course.

Means of Verification:

- *Training programme reports from UK partners confirming acquisition of new skills.*
- *Letters from respective employers confirming continued employment of EDGE Fellows post project.*
- *Certificates of attendance by EDGE Fellows on ZSL/DICE training course in conservation leadership.*

Five of our six fellows are still embedded in NGO's and government and continue to lead conservation programmes for their particular EDGE species (throughout the project and post project close).

Comprehensive tailored training programmes were delivered to six project fellows through 27 visits by 18 UK partner expert staff on 13 different occasions (providing one-on-one personal training + targeted training workshops) and ongoing support and guidance via email and Skype.

Training was provided to a much larger group of Seychelles conservation community through participation in our workshop series.

Both the numbers of participants (10-30 participants at each workshop) and the number of workshops (16) exceeded the 6-8 planned for the project. This was possible largely due to a collaboration initiated between this project and the newly established University of Seychelles. The university provided a venue and facilities for our workshops free of charge and their BSc Environmental Science students attended all our workshops as part of their university studies.

Feedback from training workshops testified to the excellent quality and relevance of both the workshops' contents' and of the facilitators (see annex 15 examples of project workshop feedback).

All 6 project fellows were trained in Conservation Leadership through participation in a 2-day DICE-led workshop on Conservation Leadership Development run in Seychelles by conservation leadership and management expert Dr Simon Black from DICE, University of Kent. Additionally our three fellows who pursued ZSL-EDGE of existence fellowships (Diana, James, Sylvanna) participated in a 2-week long ZSL conservation leadership course at ZSL-London Zoo.

Output 2. Best practice research, best practice monitoring and best practice adaptive management researched, agreed by all stakeholders and implemented for each EDGE species.

Indicators: 2a. Species Action Plans and accompanying work programmes detailing priority actions and best practice for each EDGE species, agreed by all stakeholders.

2b. Species Action Plans (SAP) and accompanying work programmes and priority actions for each EDGE species implemented by appropriate government and NGO bodies, and led by respective EDGE Fellows under the guidance of UK project partners (ongoing).

Means of Verification:

- *Endorsed management plan.*
- *Species Action Plan implementation progress reports.*

Output 2 indicators remained largely appropriate, although it was decided and reported to LTS near the beginning of the project that Survival Blueprints/SAPs would be produced at the end of the project in order to be able to use our project work to inform the action plans and in-fact some of these action plans/survival blueprints are behind schedule and will be produced after the end of the project in order to be informed by project work and in order to ensure government and other stakeholders are properly included (ie - participatory which takes time).

Each fellow with input and guidance from their employer, UK expert partner and the PO wrote and agreed their own project work-plans early in the project based on the activities listed as priorities for their particular EDGE species under this project. They have implemented their work programmes throughout

the project and reported on progress in annual progress reports which have been submitted as annexes with our 3 project annual reports.

Survival Blueprint (alternative to Species Action Plan recommended by ZSL) for EDGE coral *Physogyra lichtenstieni* has been compiled (see annex 11); the existing sheath-tailed bat SAP has been updated during the project (see annex 12) and a survival blueprint is being compiled by bat fellow Dana Renaud to be completed and submitted at the end of her ZSL EDGE fellowship in c. March 2016. A sooglossid frog survival blueprint is being compiled and will be submitted at the end of James Mougals' ZSL EDGE fellowship in c. March 2016. Caecilian conservation recommendations are provided in annex 7. There is an existing black parrot Species Action Plan which is scheduled to be updated, led by project partner SIF - through stakeholder participation and incorporating knowledge gained during this project (black parrots are a priority species for SIF and a part of their organisation's ongoing work programme). Refer to annex 2 for a summary of activities undertaken during the project contributing to this output.

Output 3. Research information about EDGE species produced and disseminated.

Indicators: 3. Knowledge increased regarding the conservation importance, knowledge base, gaps and needs of Seychelles EDGE species by Year 3.

Means of verification:

- 2-3 peer-reviewed publications resulting directly from this project's work.

We have successfully disseminated research information to local and international conservation and scientific communities through three channels: (i) we organised an end of project ½ day open public lecture where all project fellows, the PO and BHMN caecilian expert each presented a short presentation on the work we had done under the project and our key findings to an audience of over 60 local conservation practitioners, interested public and government officials -see annex 16 for workshop images and invitation; ii) four peer reviewed papers resulting directly from this projects work have been published to date, and several more are in the pipeline (see annex 5 for publication details); (iii) our project's high profile and well attended workshop series (16 workshops – see annex 17), on the current state of knowledge of our EDGE species, what we know, the knowledge gaps and some of the work we undertook under the project to fill these gaps to the Seychelles conservation community.

Output 4. Education, Awareness and Outreach programme increases local knowledge of EDGE species status and their needs.

Indicators: 4a. Awareness of Seychelles citizens about the uniqueness, vulnerability and management actions necessary for recovery of EDGE species has increased, including an awareness of what the local public can do to help.

4b. Evidence of project-based activities that have promoted development of a CEPA (Communication, Education and Public Awareness) strategy for Seychelles' EDGE species.

Means of verification:

- 3x Seychelles national TV coverage.
- 6x Seychelles national radio interviews.
- 6x Seychelles national news-paper articles.
- Production of leaflets, T-shirts, posters and postcards for each EDGE species disseminated to local communities and tourism industry stakeholders.

Each project Fellow had a CEPA component to their project and accompanying work- programme specifically designed to increase awareness of Seychelles citizens about Seychelles EDGE species.

Four social questionnaire surveys were conducted to understand the general public's knowledge and feelings towards caecilians, black parrots, sooglossid frogs and Sheath-tailed bats (STB) in order to inform our CEPA activities for those species. Diana Renaud our bat fellow is currently undertaking a second social questionnaire survey to measure change in knowledge post CEPA campaign. Her results will be presented in her ZSL EDGE of existence final report.

As a direct result of the CEPA activities undertaken as an integral part of this project including (i) this project's well attended workshop series; (ii) participation with displays at 7 international and national environment theme days during the project lifetime; (iii) project exposure through numerous TV appearances (x12), radio interviews (x5) and newspaper articles (x6) (iv) our widely distributed information leaflets and posters on each EDGE species; (v) our fellows' and partner organisations' educational school visits; (vi) our well attended end of project open public lecture; (vii) our project T-shirts featuring the Darwin Initiative logo, our project logo and a strapline "saving species on the EDGE" that all project fellows and the PO wore at every opportunity; our project Facebook page; the ZSL EDGE

of existence blog where our EDGE fellows regularly blog about their work; project partner symposiums and newsletters where this project's work has been presented; there can be little doubt that Seychellois knowledge of EDGE species, their uniqueness, vulnerability, needs and what we can do to help has increased considerably. See annex 18 for some images of project CEPA activities.

Knowledge and awareness raising is ongoing post project close for example: as a result of in depth discussions with the Central Bank of Seychelles they intend to feature Seychelles EDGE species on new currency. Please keep this information CONFIDENTIAL as the Central Bank requests confidentiality regarding currency; caecilians and frogs feature on the new Air Seychelles in-flight video; school visits by project fellows raising awareness about their particular EDGE species amongst school children are ongoing.

3 Project Partnerships

Project partnerships:

Partnerships were all based on demand stemming from the host country. This project was planned in collaboration with the host country partners/organisations in response to a call (initially from the Seychelles Government - Ministry of Environment) for help with conservation of Seychelles EDGE species. A scoping grant to ZSL/DICE from the Darwin Initiative enabled a workshop in Seychelles (held in November 2010) which discussed conservation of the EDGE species in Seychelles and identified the actions considered priorities for each species by the host country. These priority actions formed the basis of this Darwin Initiative project. The host country project partners were organisations (government and NGO's) who work in the conservation sector and were best placed to lead on the conservation of the particular EDGE species. The UK project partners were then hand-picked for their expertise in the Seychelles EDGE taxa.

A project agreement was signed between UK lead institution (University of Kent) and all other project partners detailing project financial and project running procedures at the beginning of the project.

Throughout the project the PO (who is based in Seychelles), on behalf of the PL (who is based in UK) met regularly with all host country partners to discuss project direction, progress and any issues – i.e. to self-monitor and evaluate progress. After initially trying to organise quarterly steering group meetings with host country partners and often failing to get all partners in one place at the same time (and realising also that such regular group meetings were unnecessary for effective project management and self-monitoring), the PO organised annual 'steering group' meetings where all project partners are present in order to discuss project progress, direction and collaborations and plan main activities for the year ahead, and the PO met more regularly with project partner organisations individually to discuss in more detail partner specific activities, progress and needs. We used both our annual 'steering group' meeting and the individual partner meetings to self-monitor project progress, detect any potential issues and to plan ahead. Additionally host partner group emails are regularly sent around to all local partners to keep everyone in the loop about upcoming activities and project progress and we have a project Dropbox folder where project documents, workshop presentations, relevant literature etc were uploaded for all partners to access. The Dropbox folder is shared with all project partners and fellows. The PO and PL held regular Skype calls. This management structure worked well and project partners indicated that the arrangement of one full group meeting and more regular individual meetings worked best for them.

At the start of the project the PO visited all UK project partners to plan and timetable their input into the project activities. Then throughout the project the PO and PL regularly emailed UK project partners to keep everyone in the loop and to enable forward planning of project workshops and partner inputs.

Other collaborations:

The project formed a mutually beneficial link with the University of Seychelles. In order to maximise the capacity building opportunity provided by our project workshops series the BSc environmental science students attended our training workshops on Seychelles EDGE species led by UK partner experts as part of their course work. In return the University provided us with a well-equipped lecture theatre free of charge for a workshop venue

With approval from the Darwin Initiative we formally included local environmental NGO Island Conservation Society (ICS) as a new local partner on our project. Between project planning and start date NPTS (another project partner) was evicted from Silhouette Island and ICS made responsible for all environmental work on Silhouette, a key island for this project for Sheath-tailed bats, sooglossid frogs and caecilians. ICS took over the project work planned for Silhouette (that was to be undertaken by NPTS) and also the accompanying budget allocation to enable them to undertake the work. This transition was done in full consultation with the Darwin Initiative. NPTS was not very happy about relinquishing their budget, however as they were prohibited from setting foot on Silhouette, it was necessary.

Challenges:

Several challenges were encountered and overcome during the course of the project:

The initial challenge of coordinating such a large number of partners (12), whilst ensuring a rich mixture of expertise, was time consuming, particularly at the beginning of the project in order to get everyone up to speed on project implementation and Darwin Initiative financial and reporting requirements. We overcome this challenge by having annual project steering group meetings where all Seychelles project partners were in the same at the same time and more regular one-on-one meetings between the PO and individual partner organisations. Having so many partner organisations is also very rewarding as 12 organisations can achieve a lot when they work together toward a common aim!

Another initial challenge was aligning our project time-frame and associated annual budgets with the ZSL EDGE fellowship programme time-frame (which changed between project planning and implementation stages) and number of international training visits (which increased to 2 but we had only budgeted for 1) in order for three of our project fellows to also follow the ZSL EDGE fellowship programme. However with some understanding, juggling and additional fundraising from both sides- this project and the ZSL team managed to ensure that three of our fellows benefited from the ZSL EDGE fellowship programme and were able to attend both overseas training courses.

Host country partners did not all have the cash flow to implement project activities without receiving the funds up-front (in advance). This was a challenge initially, with funds taking a long time to reach host country partners from the University of Kent, however the university research office came through and improved the system, ensuring partners received funds more efficiently in order to implement project activities.

Partnership longevity:

Many of the partnerships forged during this project will be maintained for the long-term. For example: (i) SNPA, the PO and the PL (DICE-University of Kent) are already planning further mutually beneficial projects together; (ii) SNPA, SIF and ICS are committed to working together to undertake long-term monitoring of sooglossid frog populations; (iii) Natural History Museum Seychelles and BNHM –London are planning further collaborative caecilian research and monitoring; (iv) Prof Paul Racey (project bat expert), the PO and Bat Conservation International are discussing collaborative sheath-tailed bat conservation initiatives and (iv) ZSL and the EDGE fellows are working together to upscale their EDGE fellowship projects into the future (v) Sylvanna our corals fellow is planning to do her MPhil research project based at ZSL.

4 Contribution to Darwin Initiative Programme Outputs

4.1 Project support to the Conventions (CBD, CMS and/or CITES)

This project has supported Seychelles to meet its objectives to the CBD. The Seychelles National Biodiversity Strategy Action Plan (NBSAP), produced to fulfil Seychelles responsibility to the CBD, has instigated several national policies. Our Darwin project supported two key NBSAP strategies, (a) the *Seychelles Strategy for Sustainable Development*, and (b) the *Public Sector Investment Programme*, by providing support for employment in conservation in order to carry out species-based conservation activities and associated field management work. This project supported five major Goals of the Seychelles National Biodiversity Strategy Action Plan NBSAP:

(i) support general measures for conservation and sustainable use [Goal 1] (supports Article 6 of the CBD): the project supported Policy Objective (PO) 1.2 'establish or strengthen capacity in the Ministry of Environment, other government organisations, NGO and private sector for the conservation of biodiversity' by providing extensive capacity building, support and funding to local staff in the form of project EDGE Fellows;

(ii) strengthen identification and monitoring of biodiversity [Goal2] (supports Article 7 of the CBD): the project supported PO 2.2 to 'monitor key components of biological diversity, gather priority data and establish a reporting mechanism' by researching, monitoring and reporting best practices for our EDGE species with world-class project partner experts and implementing via local project EDGE fellows;

(iii) increase in-situ conservation of biodiversity [Goal 3] (supports Article 8 of the CBD): the project supported PO 3.1 to 'improve knowledge of appropriate classification and develop where necessary management plans', PO 3.6 to 'promote the recovery of threatened species through the development and implementation of plans, special projects or other management strategies' by direct conservation action via implementation of project research and monitoring programmes by project EDGE Fellows and partner organisations, and through the production of species survival blueprints, and PO 3.12 to 'consolidate, harmonise and/or revise legislation for the protection of threatened species and sensitive ecosystems' through achieving legal protection for sheath-tailed bats, their roosts and

surrounds and by continuing to work to identify key feeding and activity areas so they can be incorporated into new protected areas legislation currently being drafted for Seychelles;

(iv) improve biodiversity related research and training [Goal 7] (supports Article 12, 17 and 18 of the CBD): the project supported PO 7.1 to 'strengthen scientific and technical education and training', PO 7.2 to 'encourage and promote research' and PO 7.3 to 'seek international cooperation in the use of advances in research and technology in developing methods' by training and supporting six EDGE Fellows in conservation via partnerships with world-class institutions;

(v) augment public education and awareness of biodiversity [Goal 8] (supports article 13 of the CBD): the project supported PO 8.1 to 'promote public understanding of the importance of, and measures required to conserve biological diversity', by engaging the public in the work by the local EDGE Fellows through targeted education and awareness activities throughout this project; PO 8.2 to 'seek local and international co-operation to strengthen capacity for public awareness programs', by instilling active partnerships between three UK organisations (DICE, ZSL, NHM,) and an independent UK bat expert, and eight Seychelles partners; and PO 8.3 to 'facilitate access to and exchange of information', through worldwide promotion of information and awareness of Seychelles' 12 EDGE species (via ZSLs popular EDGE website, the DICE website and other institutional visitor outlets.)

4.2 Project support to poverty alleviation

This project is 100% funded through DEFRA and we never proposed to alleviate poverty in any way. However the main pillar of the Seychelles economy is eco- tourism, with over 40% of the national workforce estimated to be directly or indirectly working in tourism-generated employment, while currently the local in-country capacity to protect the environment and the biodiversity that the country relies on for income generation and poverty alleviation is limited. This project has contributed to human development and welfare in Seychelles by arming six local conservation practitioners (3 male and 3 female) with the skill-sets necessary for the conservation and sustainable management of 11 Seychelles EDGE species and other threatened endemic biodiversity. This contributes to ensuring the Seychelles has the skills in-house to conserve and sustainably manage the biodiversity upon which the Seychelles economy and sustainable development is so reliant.

This project did not set out to address gender issues or inequality and therefore we are not expecting to have direct gender equality impacts. Seychelles has relatively few gender equality issues: Seychelles was ranked second out of 52 African countries for gender equality in the 2013 Ibrahim Index of African Governance Report. A nation's performance on gender issues was judged by seven indicators: gender equality; gender balance in primary and secondary education; women's participation in the labour force; equal representation in rural areas; the number of women in parliament; women's economic and political rights; and laws on violence against women. Seychelles is considered a matriarchal society with women wielding great power in both the home and in the public sphere. Seychelles has many women in positions of power and leadership with numerous women ministers, CEO's, doctors, lawyers and judges and gender equality in wages. Seychelles ranks 5th highest in the world for the proportion of women in parliament (43%). Three of our six project fellows are male and three are female.

4.2.1 Programme indicators

- Did the project lead to greater representation of local poor in management structures of biodiversity?
- Were any management plans for biodiversity developed?
- Were these formally accepted?
- Were they participatory in nature or were they 'top-down'? How well represented are the local poor and women, in any proposed management structures?
- Were there any positive gains in HH income as a result of this project?
- How many HH saw an increase in their HH income?
- How much did their HH income increase (e.g. x% above baseline, x% above national average)? How was this measured?

4.3 Transfer of knowledge

- i. Did the project result in any formal qualifications? Yes

Two PhD's, however please note that although these 2 PhD's were made possible by this project, they were not financed by this project.

Jim Labisko is due to submit his PhD in January 2016. Jim's PhD on "Amphibians on the EDGE: Evolutionary relationships and conservation ecology of sooglossid frogs" is at DICE, University of Kent, co-supervised by our Project leader (PL) Dr Jim Groombridge and our project sooglossid frog expert Prof Richard Griffiths (DICE) and in collaboration with local project partner Seychelles Islands Foundation (SIF). Initially Jim was undertaking an MPhil but through this Darwin Initiative project we have been able to assist Jim and enable him to upgrade to complete a PhD.

Simon Maddock's submitted his PhD thesis in July 2015 and passed his VIVA in November 2015. Simons PhD was on "Evolutionary history and conservation of Seychelles caecilians, tree frogs and snakes" was supervised by our project caecilian experts Dr David Gower and Dr Mark Wilkinson from NHM London and Dr Julia Day from UCL and undertaken in collaboration with local project partners Seychelles National Parks Authority and Seychelles Natural History Museum.

Importantly, both of these PhDs extend the value and scope of this project by enabling detailed research into topics, particularly those involving genetic research, which would otherwise be beyond the ability of this project.

- ii. How many people achieved formal qualifications? Two
- iii. Were they from developing countries or developed countries? Developed
- iv. What gender were they? Male

This project has consistently sought to transfer knowledge to both practitioners and policy makers in Seychelles. The vast majority of Conservation NGO's in Seychelles are project partners as are the government Ministry of Environment and the Seychelles National Parks Authority (government arm mandated with management of all National Parks). The CEO's of these organisations as well as government officials (the Director General of Wildlife, Enforcement and Permits and the Director of Conservation) were all on the project steering committee. Copies of all project reports and documents are provided to all project partners.

In addition to this we have so far published 4 scientific papers (see annex 5 for details) and copies of these are provided to government and NGO's. We also used project-gained knowledge as well as project pressure to (i) get Sheath-tailed bats (STB) and their roosts protected under legislation, and to help stop a proposed large hotel development (Emirates) that if it had gone ahead would have threatened the largest STB roost on Mahé and an important feeding area.

We submitted a brief to government on the potential threats of Amphibian infectious diseases to sooglossid frogs and organised and facilitated a high-level discussion panel on same topic in order bring this very real threat to Seychelles EDGE amphibians onto the radar of the decision makers (including Minister for environment, energy and climate change; the special advisor to the minister; the CEO of SNPA, the Principle secretary for Environment; the Director general for Environment; the Director of the conservation section; biosecurity officials amongst others).

4.4 Capacity building

- i. Did any staff from developing country partners see an increase in their status nationally, regionally or internationally? For example, have they been invited to participate in any national expert committees, expert panels, have they had a promotion at work? Yes.

Our EDGE corals fellow Sylvanna Antat was awarded a full scholarship to complete a MPhil at Cambridge University and she started her MPhil in September 2015. Her research and monitoring undertaken on EDGE corals under this project and her successful completion of a ZSL EDGE of existence fellowship also under this project contributed significantly to her winning the scholarship. SNPA – her employer in Seychelles has given her 1 year paid study leave to complete the MPhil as they see her potential and also how investing in her education will help SNPA.

Our Frog fellow James Mougall has also applied for a scholarship to complete a 1 year MPhil in biodiversity management at the University of Kent in UK. His employer (the CEO of SNPA) reported to the PO that he has seen enormous growth in James' professional development over the past 3 years

which he attributes fully to the training and mentorship James received under this project. He has recommended James for higher academic training.

Project partner SIF have also commented on the increase in confidence and ability of our black parrot fellow Terance Payet across the course of this project. They attribute this to his project training trip to Mauritius Wildlife Foundation and to being part of this project which has boosted his confidence enormously. Prior to this project the black parrot team was led by an expat, however during this project Terance was promoted to black parrot team leader and now the black parrot team is all local staff.

The PO Rachel Bristol and the project as an entity - are both regularly invited to participate in national strategy development workshops and project formulation and prioritisation exercises for biodiversity and biosecurity.

- ii. What gender were they? 2x male & 2x female.

Seychelles capacity to implement the CBD particularly has been augmented by the large investment in individual training and capacity development of 6 local conservation practitioners (our project fellows) under this project. Five of the 6 fellows are still employed with their host country partner and are now armed with better skills, knowledge and confidence to conserve Seychelles unique biodiversity.

4.5 Sustainability and Legacy

What will happen to project staff and resources now the project funding has ceased?

This project has a strong exit strategy/legacy in place which we believe is still entirely valid. Five of our 6 our project fellows are still employed within conservation NGO's or government departments in permanent posts after project completion. As a result of this project they have increased capacity to implement their work (current and future) to a higher standard. Additionally all 12 Seychelles EDGE species are priority species for the respective host country partner organisations who (i) employ these fellows and (ii) who have expressed a long-term desire and commitment to continue working to conserve these EDGE species post project completion. It was the host country Ministry of Environment and other local partner organisations who asked for assistance to conserve Seychelles EDGE species- which resulted in this project's development. Partnerships formed between host country and UK partners are likely to be maintained post project completion due to common interest and have the ability to evolve as host partners needs change, providing lasting benefits to the Seychelles conservation community.

Amongst the University of Seychelles BSc in environmental science students, who participated in our project workshop (15 students), there is evidence for a growing realisation that Seychelles biodiversity is impressive and unique and that there are real opportunities for them to work in biodiversity conservation in Seychelles when they finish their studies.

Amongst our 6 project fellows the PO, the PL, the UK partner exerts and their employers have all noted real increases in the knowledge, confidence and capability of the fellows over the course of the project to conserve their EDGE species (detailed elsewhere in this report).

Seychelles government is incorporating information gained during this project on EDGE species distributions into Seychelles new protected area policy and legislation that is currently being drafted- particularly for EDGE corals and sheath-tailed bats.

As a result of the brief and high-level panel discussions led by this project on infectious amphibian diseases global amphibian declines, infectious amphibian diseases Seychelles government has requested further information in order to help them make informed decisions to mitigate against amphibian infectious diseases. Government in 2015 banned the import of aquarium fish as mitigation against introduction of infectious amphibian diseases.

Due to the strong exit strategy of this project we are certain that the project outputs, outcomes and impacts will be sustained for the long term.

The PO had an informal discussion with the Minister of Environment, Energy and Climate Change at the world earth day festival in April 2015 where we had a 'bat-shack' stall to raise awareness about Sheath-tailed bats and their plight. The PO informed the minister that the STB was Seychelles endemic species most likely to go extinct in our lifetime if we do more to save them and that this would be an embarrassing black mark against Seychelles if we stood back and let that happen. The PO also told the Minister that Seychelles is not doing enough to conserve the STB and we need to do more. He agreed and the PO plans to take this up again with the Minister post-project close.

We also applied for and received a donation of 2 x automatic bat recorders from the British High Commission to Seychelles (worth £1000). The detectors were received post project close and will be used to upscale searches for roosts and areas of bat activity by the PO and project partner ICS into the

future. We purchased one of these detectors under this (Darwin) project and it was instrumental in discovering areas of bat activity. The automatic detectors can be set up anywhere and left unmanned for up to 40 days to automatically record any bat passes, increasing fieldwork efficiency.

5 Lessons learned

We discuss challenges we faced and solved relating to project management, finance disbursement to host country partners, and timetabling under Section 3 Project Partnerships under the heading 'challenges'.

We can say with confidence that we had the right expertise on board for this project: UK partners were chosen specifically for their world-class expertise in Seychelles EDGE taxa; the PO Rachel Bristol was selected for her knowledge and experience in conserving critically endangered species and her detailed understanding of biodiversity management challenges in the Seychelles having lived and worked there for over 18 years; the project fellows were put forward by their respective employers as the right person to benefit from the project fellowships and to champion their respective EDGE species.

The project was pretty well planned as it was based on priorities decided by the host country – as discussed more fully in section 3 Project Partnerships.

5.1 Monitoring and evaluation

We have made no changes to our project logframe during the project.

Looking back –we think our internal M&E of the project was practical and helpful. Our logframe was constructed in such a way that by undertaking our project activities, our outputs were achieved and through achieving our outputs we achieved our outcome or purpose. The PL and the PO oversaw the project using the logical framework and agreed outputs and milestones for guidance. The PL and PO had regular Skype calls to discuss project implementation and the PO held annual meetings with all host country partners together, and more regular meetings between the PO and each host country partner individually in order to, plan, manage and self-monitor progress. The PO also had regular discussions with the project fellows to monitor their progress, plan activities, and provide advice and guidance. In these ways the project is continually monitored and evaluated internally. The PO also kept regular email and Skype contact with the UK expert partners in order to plan ahead and to keep all partners in the loop.

We found the annual report reviews provided by LTS very useful as an external evaluation of project progress for us (all project partners). These reviews were shared with all project partners.

5.2 Actions taken in response to annual report reviews

We have no outstanding issues raised in annual report reviews to respond to. Our project annual report reviews (x3) were shared and discussed with all project partners as we received them.

6 Darwin identity

At every opportunity the PO and project fellows wear our project Ti-shirts which feature the Darwin Initiative logo. The Darwin Logo features clearly on all our project publicity materials including all displays, posters, info sheets and leaflets. We prominently display the Darwin Initiative logo at all our stalls and exhibitions, and all our workshops are opened with clear reference to the Darwin Initiative, what it is, and the support it is providing.

Additionally Project partners contribute to increasing Darwin Identity by acknowledging the contribution of the Darwin Initiative to their work. For example this project and the funding from the DI was recognised in SIF annual reports, 2013, 2014 (including the DI logo in the annual reports) and in several partner organisations newsletters. Our project Facebook page also prominently features the DI logo.

For all activities undertaken/led by this project and for all materials produced by this project the Darwin Initiative support is fully recognised as a distinct project with a clear identity. However sometimes for project partner activities for which this Darwin Initiative project is just a component, the Darwin Identity is not as strong or clear as the partner identity sometimes comes across very strongly.

Amongst the conservation community in Seychelles there is a good familiarity with and understanding of the Darwin Initiative. In addition to this project, Seychelles has benefited from several Darwin Initiative funded projects over the years, and as most Darwin projects have multiple partners, many of the conservation organisations in Seychelles have personal experience of being partners on Darwin Initiative

financed projects. The Darwin Initiative is well recognised in Seychelles as one of the mechanisms available for financing biodiversity goals.

7 Finance and administration

7.1 Project expenditure

Current Year's Costs	2015/16 Grant (£)	2015/16 Total actual Darwin Costs (£)	Variance %	Comments (please explain any significant variance)
Staff costs (see below)			0.588	
Consultancy Costs			0.000	
Overhead Costs			-0.099	
Travel and subsistence			3.377	
Operating Costs			-6.800	
Capital Items				
Others (see below)			7.288	
TOTAL				

Staff employed (Provide name and position)	Date work commenced and finished in 2015/16	Proportion of this time spent on this work	Cost to Darwin (£)
Dr Jim Groombridge	01/04/2015 to 30/09/2015	2.5%	
Host Country various fieldwork salaries	01/04/2015 to 30/09/2015	various	
TOTAL			

Other items – description	Other items – cost (£)
Educational printing	
TOTAL	

7.2 Additional funds or in-kind contributions secured

Source of funding for project lifetime	Total (£)
University of Kent	
NHM/UCL	
ZSL	
Independent bat expert	
MEECC	
SIF	
SNPA	
NMS	
British High Commission to Seychelles	
The Rufford Foundation	
TOTAL	

Source of funding for additional work after project lifetime	Total (£)
SNPA	
ICS	
SIF	
TOTAL	

7.3 Value for Money

This project provided good value for money. The Darwin Initiative, by funding this project to a value of £256,085, enabled us to lever a further £349,642 in matched and in-kind funding.

Annex 1 Project's logframe, including indicators, means of verification and assumptions.

Note: Insert your full logframe. If your logframe was changed since your Stage 2 application and was approved by a Change Request the newest approved version should be inserted here, otherwise insert the Stage 2 logframe.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Goal:</p> <p>Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.</p>			
<p>Sub-Goal:</p> <p>Seychelles EDGE species are well managed and conserved, enabling Seychelles to meet its obligations to the CBD and to contribute positively to the CBD Thematic Programme on Island Biodiversity.</p>	<p>Ground surveys and monitoring reports contain information detailing (i) status of populations of Seychelles EDGE species, and/or</p> <p>(ii) conservation management actions that are in place to mitigate against identified threats.</p>	<p>Species Action Plan implementation progress reports.</p> <p>Field monitoring reports.</p> <p>Seychelles National Reports to the CBD.</p>	
<p>Purpose:</p> <p>To provide investment, technical expertise and targeted training in conservation, ecology and taxonomy to improve knowledge, management and conservation status of the 12 EDGE (<i>Evolutionarily Distinct Globally Endangered</i>) species endemic to the Seychelles.</p>	<p>Comprehensive training programmes tailored to each EDGE Fellow, each led by appropriate UK partners.</p> <p>Increased local EDGE Fellows' skills, knowledge and competence in all aspects of their EDGE species' conservation management and field activities.</p> <p>Increased understanding of priority management actions, threats and mitigations for each EDGE species.</p> <p>Conservation status of each EDGE species known and maximised through field research and targeted management activities.</p>	<p>EDGE Fellow training reports from UK project partners leading capacity building training of local EDGE Fellows.</p> <p>On-the-job assessment of skills and knowledge acquired through training.</p> <p>Project Annual reports.</p> <p>Individual EDGE species status reports.</p> <p>Species Action Plan implementation progress reports.</p>	<p>No adverse climatic/stochastic events (cyclones, coral bleaching events) preventing timely completion of this project.</p> <p>Continued stability and support of the Seychelles government.</p>
<p>Outputs:</p> <p>1. Improved local capacity to research, monitor and manage Seychelles EDGE species.</p>	<p>1a. Five EDGE Fellows trained in surveying, monitoring, and management best practices for their allocated EDGE species by end of Year 3.</p> <p>1b. Five EDGE Fellows embedded in local NGO's and/or government leading conservation programmes for their EDGE species.</p> <p>1c. Five EDGE Fellows trained in conservation leadership skills through DICE-based training course.</p>	<p>1a. Training programme reports from UK partners confirming acquisition of new skills.</p> <p>1b. Letters from respective employers confirming continued employment of EDGE Fellows post project.</p> <p>1c. Certificates of attendance by EDGE Fellows on ZSL/DICE training course in</p>	<p>Trained staff (EDGE Fellows) remain with local partners throughout and after the project, to continue using the skills gained and to train others in those skills.</p>

		conservation leadership.	
2. Best practice research, best practice monitoring and best practice adaptive management researched, agreed by all stakeholders and implemented for each EDGE species.	2a. Species Action Plans and accompanying work programmes detailing priority actions and best practice for each EDGE species, agreed by all stakeholders. 2b. Species Action Plans and accompanying work programmes and priority actions for each EDGE species implemented by appropriate government and NGO bodies, and led by respective EDGE Fellows under the guidance of UK project partners (ongoing).	2a. Endorsed management plan. 2b. Species Action Plan implementation progress reports.	All government and NGO organisations tasked with protecting EDGE species continue to collaborate and coordinate efforts.
3. Research information about EDGE species produced and disseminated.	3. Knowledge increased regarding the conservation importance, knowledge base, gaps and needs of Seychelles EDGE species by Year 3.	3. 2-3 peer-reviewed publications resulting directly from this project's work.	The international scientific community continue to regard EDGE species as an important global conservation priority. Editors accept papers for publication.
4. Education, Awareness and Outreach programme increases local knowledge of EDGE species status and their needs.	4a. Awareness of Seychelles citizens about the uniqueness, vulnerability and management actions necessary for recovery of EDGE species has increased, including an awareness of what the local public can do to help. 4b. Evidence of project-based activities that have promoted development of a CEPA (Communication, Education and Public Awareness) strategy for Seychelles' EDGE species.	4. 3x Seychelles national TV coverage. 6x Seychelles national radio interviews. 6x Seychelles national news-paper articles. Production of leaflets, T-shirts, posters and postcards for each EDGE species disseminated to local communities and tourism industry stakeholders.	Local communities are receptive to awareness campaigns.

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)

Project management, monitoring and reporting activities

0.1 Establishment of MOU(s) /agreements between project partners as appropriate; **0.2** Project steering group set-up and provide ongoing guidance; **0.3** Integrate and coordinate conservation initiatives of different organisations in Seychelles working with EDGE species; **0.4** Project Annual Reports submitted to DI; **0.5** Project Final Report submitted to DI

1.1 EDGE Fellows Identified; **1.2** Personally tailored training programmes designed and implemented for each EDGE Fellow, designed by PL, PO and UK partner experts (with input from EDGE Fellow) to maximise training uptake and benefit for EDGE fellow and target EDGE species needs; **1.3** Bi-annual training workshops for EDGE Fellows and potentially the wider Seychelles conservation community as appropriate led by UK partner experts; **1.4** 1x 3 week trip for each EDGE Fellow to appropriate UK partner institution for UK based training

Amphibians (Sooglossid frogs and caecilians)

2.1 Sooglossid frog distribution surveys undertaken on the main islands; **2.2** Sooglossid frog ecology researched and potential effects of climate change explored; **2.3**

Sooglossid frog Species Conservation Action Plans drafted, finalised and agreed; **2.4** Investigate potential of captive-breeding for conservation of sooglossids in partnership with Amphibian Ark; **2.5** Precautionary disease monitoring for sooglossid frogs and caecilians undertaken, especially for 'chytrid'; **2.6** Research yellow crazy ant ecology, dynamics and methods of control, to understand their threat to sooglossid frog and caecilian populations; **2.7** Develop caecilian survey methodology with NHML experts; **2.8** Caecilian distribution surveys conducted on all relevant islands; **2.9** Genetics studies on the caecilians to clarify species present; **2.10** Investigation into potential and real threats to caecilians and recommended mitigation actions; **2.11** Caecilian Species Conservation Action Plans developed, finalised and agreed by relevant stakeholders

Black parrot

2.12 Black parrot repeat survey in 2014 to determine population size; **2.13** Continued research into black parrot breeding ecology including limiting factors; **2.14** Provide support to SIF (existing project) ring-necked parakeet eradication on Mahé; **2.15** Confirm status of Seychelles black parrot species through molecular genetics work; **2.16** Undertake screening for Psittacine beak and feather disease (PBFD) in the black parrot population; **2.17** Utilise existing Seychelles black parrot Species Conservation Action Plan as guiding document, produce annual workprogrammes, implement and report and assist with development of next Action Plan in 2013

Sheath-tailed bat

2.18 Utilise the existing Seychelles sheath-tailed bat Conservation Action Plan as guiding document, agree annual work programmes, implement and report; **2.19** Work with Seychelles government to produce guiding document to mitigate impact of hotels and any other developments near sheath-tailed bat roosts; **2.20** Surveys to locate any further sheath-tailed bat roosts on Mahe and Silhouette, and re-check historical roosts on Praslin ; **2.21** Evaluate role of barn owls in the decline of the sheath-tailed bat (ongoing –to coincide with roost counts and all bat surveys); **2.22** Bat surveys to locate new bat feeding/activity areas; **2.23** Regular roost counts to monitor numbers

Coral species

2.24 Build a network of local and international experts to advise on conservation actions for priority EDGE corals in the Seychelles; **2.25** Develop a single Conservation Action Plan for EDGE coral species in Seychelles; **2.26** Begin implementing priority actions determined by coral network and resulting Species Conservation Action Plan.

All EDGE species

2.27 Annual progress reports for each EDGE species based on work programmes developed from Species Conservation Action Plans

3.1 2-3 peer reviewed publications resulting directly from this DI projects work

4.1 Displays produced and installed in SNHM and Vallee de Mai Visitors Centres on each of the EDGE species; **4.2** Education and Awareness Leaflets designed, produced and disseminated amongst local Seychelles communities for all Seychelles EDGE species, tailored to each EDGE species and target audiences ; **4.3** 6x Seychelles National Radio programmes/interviews about EDGE species and this DI project; **4.4** 3x Seychelles National TV coverage of this project and EDGE species; **4.5** 6x Seychelles National Newspaper articles about the DI project and Seychelles EDGE species; **4.6** Information boards designed, produced and installed at trail entrances with information about EDGE species likely to occur in the area; **4.7** T-shirts and postcards produced for each EDGE species for project staff uniform and for sale and distribution at partner visitor centres; **4.8** Each EDGE Fellow will have a webpage on the ZSL EDGE of Existence website, they will contribute to the EDGE blog, and the project will have a dedicated webpage on the DICE website; **4.9** Project blog set up where all 5 EDGE Fellows regularly blog about their work and findings.

Annex 2 Report of progress and achievements against final project logframe for the life of the project

Note: For projects that commenced after 2012 the terminology used for the logframe was changed to reflect DFID's terminology.

Project summary	Measurable Indicators	Progress and Achievements	Actions required/planed for next period
<p>Goal/Impact:</p> <p>Seychelles EDGE species are well managed and conserved, enabling Seychelles to meet its obligations to the CBD and to contribute positively to the CBD Thematic Programme on Island Biodiversity.</p>		<p>Scientific knowledge of status, distributions, threats and appropriate mitigation actions are increased as a direct result of this project</p> <p>General public's knowledge, awareness and pride in Seychelles EDGE species has increased as a direct result of this project</p> <p>Seychelles government has in-hand updated knowledge on Seychelles EDGE species to contribute to meeting Seychelles obligations to CBD.</p>	<p>Do not fill not applicable</p>
<p>Purpose/Outcome</p> <p>To provide investment, technical expertise and targeted training in conservation, ecology and taxonomy to improve knowledge, management and conservation status of the 12 EDGE (<i>Evolutionarily Distinct Globally Endangered</i>) species endemic to the Seychelles.</p>	<p>Comprehensive training programmes tailored to each EDGE Fellow, each led by appropriate UK partners.</p> <p>Increased local EDGE Fellows' skills, knowledge and competence in all aspects of their EDGE species' conservation management and field activities.</p> <p>Increased understanding of priority management actions, threats and mitigations for each EDGE species.</p> <p>Conservation status of each EDGE species known and maximised through field research and targeted management activities.</p>	<p>95% completed by project end. Our EDGE corals fellow (Sylvanna Antat -SNPA), black parrot fellow (Terance Payet-SIF) and 2x caecilian fellows (Charles Morel and Berthilde Belle-SNHM)) have all completed their training under this project. Our sooglossid frog (James Mougat -SNPA) and sheath-tailed bat fellow (Diana Renaud - Government) are scheduled to complete their ZSL EDGE of existence fellowships in February 2016 in line with the ZSL timeline for their fellowships which could not be 100% lined up with this projects' timeframe. Their training involved one-on-one input from their respective UK partner experts through 27 training visits to Seychelles by 18 different UK partner staff, participation in 16 project training workshops and through month-long training visits to UK partner institutions.</p> <p>All 6 project fellows as testified by themselves personally, their employers, and their UK project partner expert trainers have, as a direct result of this project, significantly increased their knowledge, skills and competence in all aspects of their respective EDGE species conservation needs, and are all well versed and competent in appropriate research, monitoring and management methods and are all implementing conservation initiatives for their respective EDGE species.</p> <p>We now have, as a direct result of the research and monitoring undertaken under this project, a much more accurate idea of the conservation status, threats and appropriate mitigation actions for each of our EDGE species as evidenced by project species reports (annexes 7,10,12,13,14) Survival Blueprints /Species Action Plans (annexes 11,12) and conservation status updates produced under this project.</p>	<p>Do not fill not applicable</p>

		<p>In fact we have exceeded our expected project outcomes in the following ways:</p> <p>Our EDGE corals fellow Sylvanna Antat has just started MPhil in Conservation Leadership at the University of Cambridge on a full scholarship from Cambridge. Her training and work under this project was pivotal in helping her gain the Cambridge MPhil scholarship.</p> <p>Our Sooglossid frog fellow James Mougall has been recommended for higher academic training by his employer (CEO of project partner SNPA) as a direct result of his professional growth and development under this Darwin Initiative project. He is currently applying for scholarships to undertake a MPhil in biodiversity management and to increase his capacity to manage and conserve Seychelles biodiversity with the full support of his employer (SNPA). He plans to conduct his research project on sooglossid frog habitat requirements and conservation.</p> <p>Terance Payet our project black parrot fellow was promoted to team leader of the Black Parrot research and monitoring team at SIF during the project in recognition of his increased skills-set and he has applied to Durrell to undertake a DESMAN (Durrell Endangered Species Management Graduate Certificate in 2016 with the full support of his employer project partner SIF, something he would never have been confident enough to do prior to this project.</p> <p>This project in addition to providing technical expertise and training to local biologists to enable them to better manage Seychelles EDGE species, has also acted as a springboard the propel them forward to greater things!</p>	
Output 0. Project management, monitoring and reporting activities	N/A	N/A	
Activity 0.1. Establishment of MOU(s)/agreements between project partners as appropriate		100% completed in year 1.	
Activity 0.2. Project steering group set-up and provide ongoing guidance		Successfully set up in year 1 and ongoing guidance provided throughout project	
Activity 0.3. Integrate and coordinate conservation initiatives of different organisations in Seychelles working with EDGE species		Successfully completed as evidenced by for example-successful integration of SIF, ICS and SNPA initiatives for Sooglossid frogs including coordinated staff training and monitoring initiatives; integration by SNPA of private dive centres and SIF into EDGE coral research and monitoring initiatives including providing training and to private dive centre staff; good integration and coordination of this project, MOE and ICS sheath-tailed bat monitoring and education and awareness initiatives.	
Activity 0.4. Project Annual Reports submitted to DI		100% completed. All annual reports (x3) and ½ year reports (x2) submitted to DI on time and to standard.	

Activity 0.5. Project Final Report submitted to DI	You are reading it now!
<p>Output 1. Improved local capacity to research, monitor and manage Seychelles EDGE species.</p>	<p>1a. Five EDGE Fellows trained in surveying, monitoring, and management best practices for their allocated EDGE species by end of Year 3.</p> <p>1b. Five EDGE Fellows embedded in local NGO's and/or government leading conservation programmes for their EDGE species.</p> <p>1c. Five EDGE Fellows trained in conservation leadership skills through DICE-based training course.</p> <p>Five of our six fellows are still embedded in NGO's and government and continue to lead conservation programmes for their particular EDGE species (throughout the project and post project close).</p> <p>Comprehensive tailored training programmes for our six EDGE project fellows through 27 visits by 18 UK partner expert staff on 13 different occasions (providing one-on-one personal training + targeted training workshops) and ongoing support and guidance via email and Skype.</p> <p>Training provided to a much larger group of Seychelles conservation community through participation in our workshop series.</p> <p>Feedback received testified to the excellence of both the workshops' contents' and of the facilitators' knowledge and delivery (see annex 15)</p> <p>Both the numbers of participants (10-30 participants at each workshop) and the number of workshops (16) exceeded the 6-8 planned for the project. This was possible largely due to a collaboration initiated between this project and the newly established University of Seychelles. The university provided a venue and facilities for our workshops free of charge and their BSc Environmental Science students attended all our workshops as part of their university course studies.</p> <p>All 6 project fellows trained in Conservation Leadership through participation in a 2-day DICE-led workshop on Conservation Leadership Development run in Seychelles by conservation planning expert Dr Simon Black from DICE. And additionally our three fellows who also pursued ZSL-EDGE of existence fellowships (Diana, James, Sylvanna) participated in a 2-week long ZSL conservation leadership course at ZSL-London Zoo.</p> <p>Indicators remained appropriate</p>
Activity 1.1 EDGE Fellows Identified	All 6 EDGE fellows identified in year 1 and still in place at the end of the project implementing projects on their respective EDGE species/taxonomic group.
Activity 1.2. Personally tailored training programmes designed and implemented for each EDGE Fellow, designed by PL, PO and UK partner experts (with input from EDGE Fellow) to maximise training uptake and benefit for EDGE fellow and target EDGE species needs	<p>Personally tailored training programmes were developed near the beginning of the project between each project fellow, their employer (a project partner organisation), the PL the PO and the relevant UK project partner experts to maximise relevance and benefit for each fellow. Training programmes all included a mix of; one-on-one training provided to each fellow by their respective UK partner expert; a 1-month long overseas trip to their UK experts institution to gain further training specific to their needs; a series of 16 training workshops run by UK and local partner experts on Seychelles EDGE species and other relevant topics highlighted as priorities by the fellows themselves which were run in Seychelles for the fellows and the wider Seychelles conservation community spread across the 3 years of the project. A total of 27 training visits were undertaken to Seychelles by UK project partner staff who were selected for their expertise in Seychelles EDGE species/taxa.</p>

<p>Activity 1.3. Bi-annual training workshops for EDGE Fellows and potentially the wider Seychelles conservation community as appropriate led by UK partner experts</p>	<p>A total of 16 training workshops between 1-3 days in length (totalling 27 full days) and facilitated by 18 different experts were run under this project.</p> <p>Workshops covered a range of topics including current knowledge, gaps and priorities for each of our EDGE species; conservation leadership development; conservation social science; survival blueprints/species conservation assessments and action plans; report writing; project development, planning and management; disease, small population genetics, evolutionary change and extinction; developing effective education and awareness campaigns for your EDGE species etc (see annex 17 for list of project-run workshops)</p>
<p>Activity 1.4. 1x 3 week trip for each EDGE Fellow to appropriate UK partner institution for UK based training</p>	<p>Our 3 fellows following formal ZSL EDGE fellowships in addition to project fellowships went to 4 week ZSL EDGE fellowship 'Conservation tools' training course in Kenya at the start of their ZSL EDGE fellowships, and a 2 week 'Conservation Leadership' course at ZSL-London near the end of their fellowships.</p> <p>Our 3 project fellows not following ZSL fellowships went for training to: Charles Morel and Berthilde Belle (our caecilian fellows) went to the Natural History Museum in London to receive mentoring from the caecilian experts (Dr David Gower and Dr Mark Wilkinson), and Terance Payet our Black parrot fellow went to Mauritius Wildlife Foundation (MWF) where he was embedded in the MWF echo parakeet recovery team and received training in field techniques from MWF expert team who have rescued the Mauritius echo parakeet from a low of c.5 individuals in the 1990's to over 500 individuals today.</p>
<p>Output 2. Best practice research, best practice monitoring and best practice adaptive management researched, agreed by all stakeholders and implemented for each EDGE species.</p>	<p>2a. Species Action Plans and accompanying work programmes detailing priority actions and best practice for each EDGE species, agreed by all stakeholders.</p> <p>2b. Species Action Plans (SAP) and accompanying work programmes and priority actions for each EDGE species implemented by appropriate government and NGO bodies, and led by respective EDGE Fellows under the guidance of UK project partners (ongoing).</p> <p>Indicators remained largely appropriate, although it was decided and reported to LTS near the beginning of the project that Survival Blueprints/SAPs would be produced at the end of the project in order to be able to use our project work to inform the action plans.</p> <p>Each fellow with input and guidance from their employer, UK expert partner and the PO wrote and agreed their own project work-plans early in the project based on the activities listed as priorities for their particular EDGE species under this project. They have implemented their work programmes throughout the project and reported on progress in annual progress reports which have been submitted as annexes with our 3 project annual reports.</p> <p>Survival Blueprint (alternative to SAP recommended by ZSL) for EDGE coral <i>Physogyra lichtenstieni</i> has been compiled (see annex 11)</p> <p>The existing sheath-tailed bat SAP has been updated during the project (see annex 12) and a survival blueprint is being compiled by bat fellow Dana Renaud to be completed and submitted at the end of her ZSL EDGE fellowship in c. March 2016.</p> <p>Sooglossid frog Survival blueprint is being compiled and will be submitted at the end of James Mougals's ZSL EDGE fellowship in c. March 2016.</p> <p>Caecilian conservation recommendations are provided in annex 7.</p> <p>There is an existing black parrot SAP, which is scheduled to be updated—led by project partner SIF, through stakeholder participation and incorporating knowledge gained during this project (black parrots are a priority</p>

		species for SIF and a part of their organisation's ongoing work programme)
<i>Amphibians (Sooglossid frogs and caecilians)</i>		
Activity 2.1. Sooglossid frog distribution surveys undertaken on the main islands		Sooglossid frog surveys completed on the main island of Mahé and in areas of Silhouette and Praslin (see annex 13).
Activity 2.2. Sooglossid frog ecology researched and potential effects of climate change explored		Completed (J.Labisko PhD due for submission this month+ see annex 13).
Activity 2.3. Sooglossid frog Species Conservation Action Plans drafted, finalised and agreed		Species survival blueprint is under development and will be finalised in the next 3 months as James Mougall our frog fellow completes his ZSL EDGE fellowship on sooglossid frogs. Participatory meetings of stakeholders on sooglossid frog threats (climate change and disease) have been undertaken during project years 3 & 4 as part of the survival blueprint participatory process.
Activity 2.4. Investigate potential of captive-breeding for conservation of sooglossids in partnership with Amphibian Ark		<p>Investigated through (i) discussions with Ministry of Environment officials and preparation and submission of a brief on amphibian emerging infectious diseases in year 2; (ii) a high level stakeholder meeting and discussion panel on amphibian emerging infectious diseases, the threat to Seychelles amphibians and potential mitigation actions that Seychelles could implement was arranged and chaired by the PO in year 3 with input from frog fellow James Mougall and BNHM caecilian experts; and (iii) discussions with amphibian captive management specialists – Ben Tapley at ZSL Mike Bungard at Paignton Zoo, both of whom are experienced, capable and ready to captively manage Seychelles amphibians in partnership with Seychelles. Please note the subject is <u>delicate</u> with Seychelles government and is still being discussed at government level, therefore this feedback is for LTS/DI information only and we request it is kept CONFIDENTIAL at this stage to prevent possible negative ramifications.</p> <p>The current state of play is that (i) Seychelles government officials are now very aware of and acknowledge the real threat of amphibian infectious diseases to Seychelles amphibians (particularly 'chytrid' but also other infectious diseases) however they are still undecided as to whether they are prepared to allow Seychelles amphibians to be captively managed ex-situ. The PO and the frog fellow believe that the government officials will come around to the idea of ex-situ captive management as mitigation against infectious diseases (for both caecilians and frogs)- and as a way to answer unknowns regarding aspects of their life history and reproduction, however it will take time. Both the frog fellow and the PO are continuing to pursue this post project completion.</p> <p>The government has banned the import of aquarium fish to Seychelles (in project year 4) -partly as mitigation against accidental introduction of amphibian diseases.</p>
Activity 2.5. Precautionary disease monitoring for sooglossid frogs and caecilians undertaken, especially for 'chytrid'		Swabbing of all species of sooglossid and caecilian and at multiple localities across the islands they occur has failed to detect the presence of 'chytrid' in Seychelles
Activity 2.6. Research yellow crazy ant ecology, dynamics		At all survey sites for frogs and caecilians the presence/absence of crazy ants was recorded. No correlation

and methods of control, to understand their threat to sooglossid frog and caecilian populations	was found between crazy ants and frog presence, therefore we conclude that at the current prevalence of crazy ants (not forming super colonies at super high densities) they appear not to be a threat to sooglossid frogs. Crazy ants were only detected at one caecilian survey location so no conclusion can be drawn except that they are probably not a concern for caecilians as caecilians like wet habitat and crazy ants prefer drier areas.
Activity 2.7. Develop caecilian survey methodology with NHML experts	Caecilian survey methodologies developed (see annex 7)
Activity 2.8. Caecilian distribution surveys conducted on all relevant islands	Completed (see annex 7)
Activity 2.9. Genetics studies on the caecilians to clarify species present	In progress. Fieldwork and genetic analysis completed and manuscript due to be submitted for publication in 2016- however appears that at least one new caecilian species discovered during this project (see annex 7)
Activity 2.10. Investigation into potential and real threats to caecilians and recommended mitigation actions	Completed (see annex 7)
Activity 2.11. Caecilian Species Conservation Action Plans developed, finalised and agreed by relevant stakeholders	Not completed, but information collected during this project to inform future management (see annex 7)
<u>Black parrot</u> Activity 2.12. Black parrot repeat survey in 2014 to determine population size	A full population survey was undertaken in 2011-12 just prior to the start of this project and in the species management plan it is agreed that population surveys will be undertaken every 5 years (more often is considered unnecessary and not best use of resources) therefore other priority research was undertaken instead (nest location and monitoring to determine breeding ecology and breeding success, and factors limiting breeding success/population growth)
Activity 2.13. Continued research into black parrot breeding ecology including limiting factors	Nests have been located and monitored throughout the project during the breeding season to determine breeding success and cause of failure. Additionally phenology monitoring of 23 plant species that BP eats was undertaken monthly for the duration of the project to measure food availability. See annex 14 for the most recent breeding season report. Previous reports have been already been submitted as annexes to project annual reports.
Activity 2.14. Provide support to SIF (existing project) ring-necked parakeet eradication on Mahé	Support was provided by: (i) providing training in mitigation methods against disease transfer to the Black parrot fellow Terance Payet during his training visit to Mauritius where Psittacine beak and feather disease (Pbfd) was transferred from introduced ring necked parakeets (RNPs) to endemic echo parakeets in the 1990's and greatly affected the echo parakeet recovery programme, and (ii) monitoring Praslin for the presence of ring-necked parakeets. It was agreed that the ring-necked parakeet and the black parrot teams should be kept completely separate and not swap personnel or equipment in order to mitigate/minimise the risk of any potential disease transfer from the RNP's on Mahé to the Black parrots on Praslin. Testing for Pbfd in both the RNP and the BP populations was undertaken during the project and all samples tested negative, however one can never be too careful. The RNP population has been reduced from c.500 individuals in 2012 to c.20 individuals currently and the SIF eradication programme continues

Activity 2.15. Confirm status of Seychelles black parrot species through molecular genetics work	Completed. Black parrot officially recognised as a full species. The status of the Seychelles black parrot species (BP) was investigated in the PL's genetics lab using molecular phylogenetic techniques and a manuscript reporting the results has been published (see Annex 5). In summary the research found that BP's should be considered a full species as they are genetically diverged and basal to other <i>Coracopsis</i> taxa. In April 2014 BirdLife International officially recognised the Seychelles black parrot as a full species citing the recent molecular genetic work as instrumental in this taxonomic change see (http://www.birdlife.org/globally-threatened-bird-forums/2014/04/black-parrot-coracopsis-nigra-is-being-split-request-for-information-on-c-sibilans-and-list-c-barklyi-as-vulnerable/).
Activity 2.16. Undertake screening for Psittacine beak and feather disease (Pbfd) in the black parrot population	Completed. Both the black parrot population (restricted to Praslin) and the introduced ring-necked parakeet population (restricted to Mahé) were thoroughly sampled and tested cross 3 years for Pbfd using PCR techniques in the PL's genetics lab and all samples tested negative.
Activity 2.17. Utilise existing Seychelles black parrot Species Conservation Action Plan (SAP) as guiding document, produce annual work-programmes, implement and report and assist with development of next Action Plan in 2013	BP SAP is used as guiding document. SIF plans to update the BP SAP through a participatory stakeholder process during 2016-2017 incorporating findings from the past few years of intensive research into breeding success and limiting factors.
<i>Sheath-tailed bat</i> Activity 2.18. Utilise the existing Seychelles sheath-tailed bat Conservation Action Plan as guiding document, agree annual work programmes, implement and report.	Completed -see annex 12
Activity 2.19. Work with Seychelles government to produce guiding document to mitigate impact of hotels and any other developments near sheath-tailed bat roosts	Completed. The STB is finally a protected species! Legislation protecting the bat itself, its roosts and the areas surrounding its roosts from a suite of potentially detrimental 'activities' was passed on 18 August 2014 (citation: Wild Animals and Birds Protection (Sheath-tailed bat) Regulations 2014). This project cannot claim full credit for the legislation as many people have called for legal protection of the bat for over 15 years. However this project was instrumental in getting the bat protected NOW rather than taking at least 2-3 more years, as it was us who insisted forcefully that the bat must be protected under the existing Wild Animals and Birds Protection Act ASAP, rather than waiting to include it in new Protected Areas legislation that has not even been drafted yet (which was how government was thinking to protect the bat). Secondly this project successfully contributed to the halting of a large proposed hotel development that would have put the largest STB roost on Mahé in grave danger. We contributed project STB monitoring data to the EIA process and were instrumental in launching a campaign that resulted in cancellation of the development.
Activity 2.20. Surveys to locate any further sheath-tailed bat roosts on Mahé and Silhouette, and re-check historical roosts on Praslin	Extensive bat detector surveys of La Digue, Praslin and St Anne Island completed including locating and checking historical roosts, but no STB were detected. We can conclude that STB no longer occur on these 3 islands. Extensive hand-held bat detector and automated bat recorder surveys of Mahé have detected 4 new areas of regular bat activity in west and south-west Mahé. Two of these areas are located several kilometres from

	<p>known bat roosts and could therefore be bats from currently unknown roosts- however many man-hours of searching has failed to locate any new roosts on Mahé.</p> <p>Hand-held bat detector and automatic bat recorder surveys of areas historically used by bats on Silhouette in the Grande Barbe area failed to detect any bats.</p> <p>Further STB surveys on Mahé and Silhouette are planned post-project by the PO and project partner ICS.</p>
Activity 2.21. Evaluate role of barn owls in the decline of the sheath-tailed bat (ongoing-to coincide with roost counts and all bat surveys)	Only one barn owl was heard on one occasion c.200 metres from the roost on Silhouette after a roost emergence count. No barn owls were noted in the immediate vicinity of the 3 known active bat roosts during regular visits to the roosts throughout the project on Mahe. No barn owls were noted near bats detected away from roosts during monitoring activity and no STB-barn owl interactions were noted during the project.
Activity 2.22. Bat surveys to locate new bat feeding/activity areas	See activity 2.20 above. Four regular STB feeding/ activity areas have been located in West Mahé, at Cap Ternay plateau, Beioliere, Maravie and Intendance.
Activity 2.23. Regular roost counts to monitor numbers	Roost counts were undertaken every 2 months at all 4 known roosts.
<p><u>Coral species</u></p> <p>Activity 2.24. Build a network of local and international experts to advise on conservation actions for priority EDGE corals in the Seychelles</p>	<p>Completed. Project EDGE corals Fellow Sylvanna Antat has built a network of local and international coral experts who helped her design her EDGE fellowship project and work-programme, who have provided advice and assistance throughout implementation, reporting, and with formulation of Seychelles EDGE corals survival blueprint.</p> <p>Sylvanna was also involved in setting up a permanent Seychelles National Coral Reef Network (SNCRN) and she is a member of the SNCRN.</p>
Activity 2.25. Develop a single Conservation Action Plan for EDGE coral species in Seychelles	A survival blueprint has been drafted for <i>Physogyra lichtensteini</i> , the only EDGE coral found during extensive surveys under taken by project EDGE corals fellow Sylvanna Antat and team around the granitic islands (see annex 11). Survival blueprint is recommended in place of a species action plan by the ZSL EDGE of existence team. The SNCRN is producing a national coral reef action/management plan as a first task which will incorporate Sylvanna's EDGE corals work and her EDGE coral survival blueprint information. The SNCRN is also advising on coral reef marine protected area planning and Sylvanna's work on EDGE corals is being incorporated into this MPA planning. One finding is that coral species cannot be protected or managed isolation so a whole reef action plan is recommended.
Activity 2.26. Begin implementing priority actions determined by coral network and resulting Species Conservation Action Plan.	<p>Priority research, monitoring and education and awareness activities have been completed. Sylvanna and team have completed mapping EDGE coral distribution in the granitic Seychelles, surveying EDGE corals distribution, abundance and sizes inside versus outside Marine Protected Areas in the granitic Seychelles and written an EDGE coral project report (see annex 10).</p> <p>Educational activities including presentations to schools, snorkelling activities with school children and reef safaris at environmental theme days have been undertaken during this reporting period to educate youth about coral reef ecosystems and the importance of healthy reefs to humans as well as to corals and other reef life.</p>

<p><u>All EDGE species</u></p> <p>Activity 2.27. Annual progress reports for each EDGE species based on work programmes developed from Species Conservation Action Plans</p>		<p>Annual reports have been written by each EDGE fellow detailing progress against their work programmes (submitted as annexes to project annual reports). The 3 EDGE fellows following ZSL EDGE fellowships have to write brief monthly progress reports to ZSL and to avoid over burdening them with reporting- they use the same reports for this project.</p>
<p>Output 3. Research information about EDGE species produced and disseminated.</p>	<p>Knowledge increased regarding the conservation importance, knowledge base, gaps and needs of Seychelles EDGE species by Year 3.</p>	<p>End of project ½ day open public lecture organised on October 30th. All project fellows, the PO and BHMN caecilian expert each gave a short presentation on the work we had done under the project and our key findings to an audience of over 60 local conservation practitioners, interested public and government officials (annex 16).</p> <p>Four peer reviewed papers resulting directly from this projects work published to date, and several more are in the pipeline.</p> <p>One book chapter on Sheath-tailed bats. Reference: P. A. Racey (2015) The rarest bat in the world pp 212-217 in No More Endlings Ed Allison Hegan. Motivational Press, Melbourne, Florida</p> <p>Indicator remains appropriate</p>
<p>Activity 3.1. 2-3 peer reviewed publications resulting directly from this DI projects work</p>		<p>Four peer reviewed papers published on work undertaken as part of this project. See annex 5 for publication details.</p> <p>Several more are due to be published in 2016.</p>
<p>Output 4. Education, Awareness and Outreach programme increases local knowledge of EDGE species status and their needs.</p>	<p>4a. Awareness of Seychelles citizens about the uniqueness, vulnerability and management actions necessary for recovery of EDGE species has increased, including an awareness of what the local public can do to help.</p> <p>4b. Evidence of project-based activities that have promoted development of a CEPA (Communication, Education and Public Awareness) strategy for Seychelles' EDGE species.</p>	<p>Each EDGE Fellow had a CEPA component to their project and accompanying work- programme specifically designed to increase awareness of Seychelles citizens about Seychelles EDGE species including their uniqueness and specialness, their vulnerability and what we can all do to help conserve them.</p> <p>Four social questionnaire surveys were conducted to understand the general public's knowledge and feelings towards caecilians, black parrots, sooglossid frogs and Sheath-tailed bats (STB) in order to inform our CEPA activities for those species. Renaud our bat fellow is currently undertaking a follow-up social questionnaire survey to measure change in knowledge post CEPA campaign. Her results will be presented in her ZSL EDGE of existence final report.</p> <p>In addition to the activities 4.1 - 4.9 described below we undertook additional activities aimed at increasing local awareness and knowledge of EDGE species:</p> <ul style="list-style-type: none"> • The PO has worked the Central Bank of Seychelles since 2014 to feature Seychelles EDGE species on National Currency. Please keep this information CONFIDENTIAL as the Central Bank requests confidentiality regarding currency. • End of project public presentations – described in output 3 above. • Caecilians and frogs feature on new Air Seychelles in-flight video, including information about their uniqueness and the threats they face • SIF (project partner) scientific symposium was held in April 2015 where project black parrot fellow presented his black parrot research and findings to a large audience. The Darwin Project contribution

		<p>was clearly acknowledged in his presentation and he wore a Darwin project Ti-shirt.</p> <ul style="list-style-type: none"> • Black parrot fellow Terance Payet regularly gives presentations to school children at all schools on Praslin about black parrots, their uniqueness and habitat requirements. He takes along Rio a pet black parrot with a damaged wing who cannot fly. Rio is a hit with the kids –a rare opportunity to see a black parrot up close! • Participation in a c.7 environmental theme days throughout the project with a manned project stall with displays and information about Seychelles EDGE species and often also live caecilians. • Our project activities have regularly featured in project partner newsletters • ICS Project partner along with bat fellow Diana Renaud have a Sheath-tailed bat roadshow that is visiting all schools in the country to educate about STB. The road show has visited many schools on Mahé and will continue into 2016 and also visit schools on Praslin and La Digue. • Sylvanna Antat –EDGE corals fellow undertook a holiday snorkelling programme with a series beach presentations followed by snorkelling activities with school children across Mahé to raise awareness amongst school children about coral, coral reefs, their importance and the threats they face • A cartoon competition and exhibition was organised by EDGE corals fellow Sylvanna in 2013 to raise awareness of EDGE corals, coral reefs and the threats they face. The exhibition toured the 3 main islands (Mahé, Praslin, La Digue).
<p>Activity 4.1. Displays produced and installed in SNHM and Vallee de Mai Visitors Centres on each of the EDGE species</p>		<p>Two portable displays on Seychelles black parrot and sooglossid frogs were are on long-term display at the Vallee de Mai World Heritage Site visitors' centre which is visited by approximately 85,000 people annually.</p> <p>Two large displays produced in year 1 about this project and Seychelles EDGE species are still on long-term display in the Seychelles Natural History which is visited by around 6,500 people annually</p> <p>All these displays are portable and have been displayed at other events and theme days throughout the project (including annual National Day 3 day-expo's x2, World Earth Day Festival, International Biodiversity day x2, project partner Wildlife Clubs 20th anniversary celebrations, Seychelles national parks 35 years anniversary celebrations, etc where we participate with Seychelles EDGE Project displays and activities)</p> <p>A Seychelles amphibian display (caecilians and frogs) is completed and awaiting launch at the official re-opening of the Seychelles Natural History Museum that is currently closed for refurbishment.</p>
<p>Activity 4.2. Education and Awareness Leaflets designed, produced and disseminated amongst local Seychelles communities for all Seychelles EDGE species, tailored to each EDGE species and target audiences</p>		<p>Completed and disseminated at environmental theme days, to all schools and all wildlife clubs in the country. See annex 18 for a sample some of the posters and leaflets produced under this project.</p> <p>In addition we have produced info sheets on each EDGE species that we regularly reprinted and disseminated to the public at environmental theme days</p>
<p>Activity 4.3. 6x Seychelles National Radio programmes/interviews about EDGE species and this DI project</p>		<p>Five radio interviews specifically about this project and the work we are doing have featured on National radio during the project.</p> <p>1x Pure FM radio station 45 minute slot about this EDGE species project in 2014</p>

	<p>1x radio interview on Seychelles radio in April 2014 about Black Parrot new full species status</p> <p>1x radio interview (2015) with James Mougale –our sooglossid frog fellow talking about sooglossid frogs, why they are so special and the threats they face</p> <p>1x radio interview with Sylvanna Antat (2013) on EDGE corals, the importance of protecting coral reefs and speaking about the cartoon competition and exhibition she and team organised to raise awareness of EDGE corals, coral reefs and the threats they face.</p> <p>1x paradise FM radio programme “Nature Trail” featuring frog fellow James Mougale discussing key species found on mountain trails – where he spoke about sooglossid frogs.</p>
Activity 4.4. 3x Seychelles National TV coverage of this project and EDGE species	<p>Twelve national TV programmes covering this project and EDGE species:</p> <p>Six short 8-10 minute documentaries were produced by this project and aired on National TV -one documentary on each EDGE species/taxonomic and one about the project itself. The documentaries are in the local language Creole and feature our project EDGE fellows and the PO.</p> <p>1x News Extra ½ hour TV slot on black parrot being recognised as a full unique species.</p> <p>1x International TV programme filmed on Seychelles EDGE species, featuring our project fellows, by Grain Media for Al Jazeera Earthrise series. This film was played on Al Jazeera Earthrise series English TV channel daily 20- 24th April 2015 It can be viewed here: https://www.youtube.com/watch?v=ttm3uW6yzSc</p> <p>Additionally Dr Hazel Jackson (DICE, University of Kent) was interviewed by national TV (news item on National News) alongside SIF (project partner) CEO Dr Frauke Dogley following Hazels public lecture about the genetics work that she undertook at DICE (in the PL’s genetics lab) that provided definitive evidence that black parrot is a unique species in Jan 2015.</p> <p>1 x national TV news coverage of the opening of our end of project open public presentation showcasing the key work and findings from this project – November 2015.</p> <p>2x national TV news coverage of project activities (Prize giving for cartoon competition and opening of EDGE corals exhibition in October 2013, and Black parrot workshop on Praslin in November 2013.)</p>
Activity 4.5. 6x Seychelles National Newspaper articles about the DI project and Seychelles EDGE species	<p>Six national newspaper articles during project:</p> <p>1x article in Seychelles Nation introducing this project and our workshops series run in 2012</p> <p>2x newspaper articles run in the Seychelles Nation in September and October 2013 covering the EDGE corals exhibition and cartoon competition opening in October 2013 and caecilians in September 2013</p> <p>3x national newspaper articles run in Seychelles Nation during 2014 about black parrots, caecilian fieldwork and EDGE project activities</p>
Activity 4.6. Information boards designed, produced and installed at trail entrances with information about EDGE species likely to occur in the area	<p>Not done as we decided that they would have a very limited audience and therefore information displays were installed in the Vallee d Mai world heritage site visitors centre and the Natural History Museum instead where they have a larger audience (annual visitors 85,000 & 6,500 respectively).</p>
Activity 4.7. T-shirts and postcards produced for each EDGE species for project staff uniform and for sale and distribution at partner visitor centres	<p>Project logo designed and printed on Ti-shirts with DI logo and strapline. We did not sell Ti-shirts but gave them away to project partner organisations and to our project EDGE fellows. They were so popular we had to print a second batch of Ti-shirts (-total of 110 ti-shirts printed and distributed) (see annex 18).</p>

<p>Activity 4.8. Each EDGE Fellow will have a webpage on the ZSL EDGE of Existence website, they will contribute to the EDGE blog, and the project will have a dedicated webpage on the DICE website</p>	<p>Project webpage on DICE website http://www.kent.ac.uk/sac/research/projects/jg_biodiversity.html Our 3 project fellows that are also ZSL EDGE fellows regularly contribute to ZSL EDGE of Existence blog http://www.edgeofexistence.org/edgeblog/</p>
<p>Activity 4.9. Project blog set up where all 5 EDGE Fellows regularly blog about their work and findings.</p>	<p>Following advice of local education and awareness experts in Seychelles, instead of a blog we decided to set up a project Facebook page. We maintained a project Facebook page (Edge Seychelles) for the duration of the project where we regularly posted updates and news.</p>

Annex 3 Standard Measures

Code	Description	Total	Nationality	Gender	Theme	Language	Comments
Training Measures							
1a	Number of people to submit PhD thesis	2	English	male	Evolutionary history and conservation of Seychelles sooglossid frogs + see below for second PhD submitted + passed	English	Thesis to be submitted in January 2016. Submitted in c. July 2015
1b	Number of PhD qualifications obtained	1	English	male	The phylogeographic patterns, systematics and conservation of Seychelles caecilians, tree frogs and snakes	English	VIVA successfully passed in November 2015.
2	Number of Masters qualifications obtained						
3	Number of other qualifications obtained						
4a	Number of undergraduate students receiving training	15	Seychelles	mixed	Seychelles EDGE species	English	
4b	Number of training weeks provided to undergraduate students	7	Seychelles	mixed	Seychelles EDGE species	English	
4c	Number of postgraduate students receiving training (not 1-3 above)						
4d	Number of training weeks for postgraduate students						
5	Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification(e.g., not categories 1-4 above)						

Code	Description	Total	Nationality	Gender	Theme	Language	Comments
6a	Number of people receiving other forms of short-term education/training (e.g., not categories 1-5 above)	6	Seychellois	3x female 3x male	Research, conservation & management of Seychelles EDGE species	English	
6b	Number of training weeks not leading to formal qualification	30	Seychellois	3 x female 3 x male	Research, conservation & management of Seychelles EDGE species	English	
7	Number of types of training materials produced for use by host country(s) (describe training materials)						

Research Measures		Total	Nationality	Gender	Theme	Language	Comments
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (ies)	2	Seychelles	female	<i>Coleura seychellensis</i> <i>Physogyra lichtensteini</i>	English	Yes No
10	Number of formal documents produced to assist work related to species identification, classification and recording.						
11a	Number of papers published or accepted for publication in peer reviewed journals	4	English	2x male 2x female		English	
11b	Number of papers published or accepted for publication elsewhere	1	English	male	Seychelles sheath-tailed bat book chapter		Book chapter
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country						
12b	Number of computer-based databases enhanced (containing species/genetic information) and handed over to host country						

13a	Number of species reference collections established and handed over to host country(s)	1			Caecilians		Reference specimens of each Seychelles caecilian species deposited at Seychelles Natural History Museum
13b	Number of species reference collections enhanced and handed over to host country(s)						

Dissemination Measures		Total	Nationality	Gender	Theme	Language	Comments
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work	17	Seychelles	mixed	Seychelles EDGE species	English	Workshop series facilitated by UK project partner experts + end of project public presentation by local project fellows
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/disseminated.						

Physical Measures		Total	Comments
20	Estimated value (£s) of physical assets handed over to host country(s)	£6,300	Laptop computers x 5, bat detectors x 11, wildlife (frog) song meters x2
21	Number of permanent educational, training, research facilities or organisation established		

22	Number of permanent field plots established		
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Financial Measures		Total	Nationality	Gender	Theme	Language	Comments
23	Value of additional resources raised from other sources (e.g., in addition to Darwin funding) for project work	£ 394,642	UK + Seychelles				

Annex 4 Aichi Targets

	Aichi Target	Tick if applicable to your project
1	People are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.	x
2	Biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.	x
3	Incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.	
4	Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.	
5	The rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	
6	All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	
7	Areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	
8	Pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	
9	Invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.	
10	The multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.	
11	At least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	
12	The extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.	x
13	The genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.	

14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	
15	Ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	
16	The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.	
17	Each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.	
18	The traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.	
19	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.	x
20	The mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.	

Annex 5 Publications

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Nationality of lead author	Nationality of institution of lead author	Gender of lead author	Publishers (name, city)	Available from (e.g. contact address, website)
Peer reviewed scientific Journal	Non-lethal DNA sampling for caecilian amphibians Maddock, Simon T.; Lewis, Claire J.; Wilkinson, Mark; Day, Julia J.; Morel, Charles; Kouete, Marcel; Gower, David T.J. 2014	British	British	male	<i>Herpetological Journal</i> 24: 255-260.	
Peer reviewed scientific Journal	Development of anonymous nuclear markers from Illumina paired- end data for Seychelles caecilian amphibians (Gymnophiona: Indotyphlidae) Lewis CJ, Maddock ST, Day JJ, Nussbaum RA, Morel C, Wilkinson M, Foster PG, Gower DJ, 2014	British	British	female	<i>Conservation Genetic Resources</i> 6: 289-291.	
Peer reviewed scientific Journal	Chytrid fungus (<i>Batrachochytrium dendrobatidis</i>) undetected in the two orders of Seychelles amphibians Labisko J, Maddock ST, Taylor MC, Chong-Seng L, Gower DJ, Wynne FJ, Wombel E, Morel C, French GCA, Bunbury N, Bradfield KS, 2015	British	British	male	<i>Herpetological Review</i> 46(1): 41-45.	
Peer reviewed scientific Journal	Evidence of evolutionary distinctiveness and historical decline in genetic diversity within the Seychelles black parrot, <i>Coracopsis nigra</i> barklyi. Jackson, H.A., Bunbury, N., Przelomska, N. & Groombridge, J.J. 2016 (has been accepted for publication)	British	British	female	<i>Ibis</i> (in press) DOI: 10.1111/ibi.12 343	
Book chapter	P. A. Racey (2015) The rarest bat in the world pp 212-217 in <i>No More Endlings</i> . Ed Allison Hegan. Motivational Press, Melbourne, Florida	British	British	male	Motivational Press, Melbourne, Florida	Book not yet available copy of the text only provided in annex 20 *

Annex 6 Darwin Contacts

Ref No	19-002
Project Title	A cutting-EDGE approach to saving Seychelles' evolutionarily distinct biodiversity.
Project Leader Details	
Name	Dr Jim Groombridge
Role within Darwin Project	Project Leader
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Partner 1	
Name	Dr Rachel Bristol
Organisation	Independent
Role within Darwin Project	Project Officer
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Partner 2	
Name	Mr Denis Matatiken
Organisation	Seychelles Ministry of Environment, Energy and Climate Change
Role within Darwin Project	Local partner + project steering committee + bats
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Email	
Partner 3	
Name	Dr Frauke Dogley/ Ms Wilna Accouche
Organisation	Seychelles Islands Foundation
Role within Darwin Project	Local partner + project steering committee + black parrots
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Partner 4	
Name	Mr Flavien Joubert
Organisation	Seychelles National Parks Authority
Role within Darwin Project	
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Partner 5	
Name	Ms Cecile Kalebi, Ms Beryl Ondiek
Organisation	National Museums of Seychelles
Role within Darwin Project	Local partner + project steering committee + caecilians
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Partner 6	
Name	Mr Terence Vel
Organisation	Wildlife Clubs of Seychelles
Role within Darwin Project	Local partner + CEPA
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Partner 7	
Name	Mr Pierre-Andre Adam
Organisation	Island Conservation Society
Role within Darwin Project	Local partner + project steering committee+ Silhouette Island
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Partner 8	
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Partner 9	
Name	Dr Nisha Owen /Ms Olivia Couchman
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Partner 10	
Name	Professor Paul Racey
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Role within Darwin Project	project bat expert
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Partner 11	
Name	Dr Justin Gerlach
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