

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

**Submission Deadline: 30<sup>th</sup> April 2021**

### **Darwin Plus Project Information**

Project reference	DPLUS091
Project title	Improving coastal ecosystem resilience to climate change in Anguilla
Territory(ies)	Anguilla
Lead organisation	Department of Disaster Management
Partner institutions	Department of Natural Resources, Anguilla National Trust
Grant value	£267,984.00
Start/end dates of project	April 2019-March 2022
Reporting period (e.g. Apr 2020-Mar 2021) and number (e.g. Annual Report 1, 2)	Apr. 2020-Mar. 2021. Annual Report 2
Project Leader name	Calvin Samuel
Project website/blog/social media	
Report author(s) and date	Louise Soanes, Farah Mukhida, Sharmer Fleming April 2021

### **1. Project summary**

Anguilla's coastal habitats have suffered severe degradation in recent years and were severely impacted by the 2017 hurricane season. This project uses coastal habitat vulnerability assessments and an ecosystem modelling approach to identify and prioritise key coastal habitats for restoration activities, so as to increase the resilience of Anguilla's natural coastal assets to extreme weather events induced by climate change. The restoration of Anguilla's coastal habitats is crucial because of the plethora of benefits derived from their ecosystem services. They support the well-being of the people through cultural (boat racing), recreational and therapeutic services, livelihoods (fishing) as well as vulnerable coastal communities (coastal flooding) and Anguilla's economy (Government and Private Sector) through its main industry, tourism.

### **2. Project stakeholders/partners**

A Project Steering Committee (PSC) oversees the overall implementation of the DPLUS091 project and has met on two occasions over the last year (Annex 3 – Evidence 1). The PSC is comprised of representatives from the Department of Disaster Management (DDM) (project lead), the Department of Natural Resources-Environment Unit (DNaR-EU), and the Anguilla National Trust (ANT). During the 22 June 2020 PSC meeting, stakeholders from the Department of Physical Planning, Department of Lands and Surveys, and the DNaR-Fisheries and Marine Resources Unit were also in attendance with the prioritisation of sites for coastal resilience-building actions (Annex 3 – Evidence 2).

Over the last year, important collaborations were formed with local groups to engage them in resiliency building activities. These collaborations included: (1) the Albena Lake Hodge Comprehensive School; (2) The Dove Centre; (3) Blakes Academy; (4) the Anguilla Enhancement Project, particularly with the village groups formed at Little Harbour (Little Harbour Community Anguilla) and East End (Inspire Community Group); (5) Anguilla's National Youth

Ambassador Corps; (6) The Organisation of Eastern Caribbean States (OECS) Sustainable Development Movement Ambassador's Programme; and local businesses and landowners (Annex 3 - Evidence 3). These partnerships have been invaluable for undertaking both restoration and public awareness and outreach activities.

### 3. Project progress

#### 3.1 Progress in carrying out project Activities

**Output 1: Prioritisation of coastal ecosystems (coral reefs, sand dunes, beaches, mangrove forests, and coastal hillsides) that are most vulnerable to the impacts of climate change (including extreme weather events) and that have the greatest restoration capacity through the application of a robust modelling procedure**

Coastal ecosystem vulnerability (flood risk models) were updated (**Activity 1.1**) and scenario and opportunity maps were created, focusing on the restoration of red mangroves, buttonwoods, sand dunes, reefs and inland dry forests (**Activity 1.2**). These outputs were completed by the project consultant Environment Systems Ltd. All data in the form of GIS shapefiles and .tif files have been made available to project partners (Annex 3 - Evidence 4).

Scenario and opportunity models have been used to identify the extent of mitigation and restoration action required to ascertain the desired ecosystem resiliency levels (**Activity 1.3**). These models were used to inform the prioritisation of sites for restoration work (**Activity 1.4**) (Annex 3 - Evidence 2)

**Output 1 has been fully completed.**

**Output 2. Implementation of climate change models and stakeholder-informed conservation action plans**

Following the production of vulnerability and opportunity models and maps (**Output 1**), project partners and stakeholders (Department of Physical Planning, DNAR-Fisheries & Marine Resources Unit, and Department of Lands and Surveys) met to review and verify the results of the vulnerability models in order to prioritise sites for restoration (**Activity 2.1-2.2**). Seven priority sites were identified: (1) Meads Bay Pond, (2) Cove Bay Pond, (3) Cove Bay sand dunes, (4) Forest Pond, (5) Forest Bay beach, (6) Long Salt Pond, and (7) Long Pond Bay (Annex 3 - Evidence 2) (**Activity 2.3**). Stakeholder-informed, site-specific mitigation and restoration action plans have been drafted, and will be developed and refined during Year 3. Annex 3 - Evidence 5). In addition, to ensure mangrove restoration works are specifically-targeted to site conditions, we collaborated with the Department of Health Protection –Water Lab to conduct salinity and pH testing at each of the sites targeted for mangrove restoration (Annex 3 - Evidence 6).

A seedling nursery for native coastal vegetation was established at the DNR-Agriculture Unit grounds where coastal vegetation including red mangrove *Rhizophora mangle*, white mangrove *Laguncularia racemosa*, black mangrove *Avicennia germinans*, buttonwood *Conocarpus erectus*, sea grape *Coccoloba uvifera*, sea bean *Canavalia rosea*, coco-plum *Chrysobalanus icaco*, and bay cedar *Suriana maritima* are being grown to allow implementation of restoration efforts (**Activity 1.4**) (Annex 3- Evidence 7). Air layering of wild buttonwood and seagrape is also ongoing.

Drawing on both local and regional knowledge and experience, we have reviewed and developed a best practice guide for both mangrove and sand dune restoration (Annex 3 - Evidence 8). Beginning in Q1Y2, we began piloting propagation and out-planting techniques to determine what methods work best for Anguilla's environment and habitats. Since April 2020, we have now out-planted 539 red mangroves (with a survival rate of 64%), 123 black mangroves (with a survival rate of 91%), 76 white mangroves (with a survival rate of 72%), 91 buttonwood (with a survival rate of 78%), and 63 seagrape (with a survival rate of 63%) at the seven identified sites (Annex 3 - Evidence 9). Survival rates were lower during our initial stages of propagation and out-planting but have since improved significantly; we are now observing higher levels of survivorship, comparable with other mangrove restoration projects in the region.

To monitor restoration success and landscape/habitat changes, we developed and conducted site baseline assessments at each priority sites (transect surveys and photo-point counts) prior to the implementation of any restoration interventions (**Activity 2.6**) (Annex 3 - Evidence 9 & 10).

**Activities under Output 2 are on-going.**

### **Output 3. Enhancement of national and regional capacity to understand small island vulnerability to climate change and to undertake actions to increase resiliency**

We have provided six in-field training events to community members in coastal ecosystem mitigation and restoration protocols and methods (including mangrove planting and air-layering and debris clearance). In this reporting period, 72 residents of Anguilla have been involved in restoration activities (**Activity 3.3 & 3.4**) (Annex 3 - Evidence 3).

This project has been publicised and reported on through numerous channels (**Activity 3.4**) including: **Internationally:** On 22<sup>nd</sup> August 2020, a presentation on the results of the vulnerability and opportunity modelling results to Anguilla's Toastmasters' Club (25 attendees, in person and remotely) was made. On September 17<sup>th</sup> 2020, details of this project were presented as part of the RSPB's *Shovel-ready Nature-based Solutions in the UK Overseas Territories Webinar* Annex 3 - Evidence 11). Eighty-seven people joined the webinar, including representatives from other UKOTs, the UK House of Lords, UK House of Commons, the Government of Anguilla, JNCC, and international NGO's (RSPB, FFI, WWF). On the 3<sup>rd</sup> March 2021, this project was presented at the UKOTCF meeting "*Staying Connected for Conservation in a Changing World*" with 56 people in attendance (Annex 3 - Evidence 12). As a result of our contribution to this session, we made recommendations that were included in the Conference Conclusions and Recommendations that will be circulated to both UK and Territory Governments (Annex 3 - Evidence 12).

**Locally:** On 14<sup>th</sup> August 2020, an at-sea coastal and marine resiliency outreach day was held as part of the OECS Sustainable Development Ambassadors Program (12 staff and students) (Annex 3 - Evidence 13). Presentations have also been made to the Albenia Lake Hodge High School 6<sup>th</sup> Form students (25 staff and students) and at the Dove Centre (17 staff and students). On September 10<sup>th</sup>, 2020, the newly elected Minister for Natural Resources, Mr. Kyle Hodge was informed about this project, its purpose, value, and expected results as a part of a presentation on ongoing initiatives. On 7 December 2020, details of this project were presented at the ANT's Annual General Meeting with 50 persons in attendance (Annex 3 - Evidence 14). One press release was issued along with 16 social media posts including a series of Facebook trivia questions (with associated prizes) that were posted on Radio Anguilla's Facebook page (Annex 3 - Evidence 15). However, the trivia was discontinued after three weeks due to too much traffic on the media used as well as a number of socio-political issues dominating the media at the time. The trivia will be reinstated in Year 3 using the Facebook and website pages of the partnered agencies. In February 2021, eight Public Service Announcements were recorded by project staff for airing on Radio Anguilla (Annexe 3 - Evidence 16).

Data produced during this project have already been utilised by project partners when commenting on development proposals (**Activity 3.7**). For example, using data created by, and drawing on the training provided by Environment Systems Ltd., flood risk maps were created for Sandy Ground, Anguilla. This information was requested by the Ministry responsible for Natural Resources and used to inform the discussion related to the development of a mega-yacht marina in Sandy Ground (Annexe 3 - Evidence 17). These maps were further shared with Sandy Ground community members. Project partners will continue to use the outputs of this project to inform, review and comment on planning applications and the development of policies through the remainder of this project and beyond (**Activity 3.7**).

**All activities that were scheduled to have taken place by this stage of the project (as detailed in the implementation schedule) have been completed. Training and outreach activities will continue into Year 3.**

## 3.2 Progress towards project Outputs

### **Output 1. Prioritisation of coastal ecosystems that are most vulnerable to the impacts of climate change and that have the greatest restoration capacity through the application of a robust modelling procedure.**

This output has been achieved and the models and maps that were created have been used to as a basis for Output 2 and Output 3 (Annex 3 - Evidence 4).

### **Output 2. Implementation of climate change models and stakeholder-informed conservation action plans:**

Using data created in Output 1, seven priority restoration sites were identified, drafted conservation action plans were developed, and restoration activities are now underway at all sites, with nearly 900 plants already planted. The development of a seedling nursery has allowed us to be in the position where we have an almost continuous supply of seedlings for re-planting. Restoration work is expected to continue seamlessly into Year 3.

We have established monitoring programs for each of the restoration sites to record survival and growth of plants and improvement in overall habitat quality over time (Annex 3 - Evidence 9). Project partners are also committed to collecting seeds and propagules as they emerge at natural sites to allow us to be in the position to continue with restoration efforts into the final year of this project and beyond. The indicators in use for Output 2 remain appropriate, including the production of maps detailing the locations of plantings and survival. The use of fixed-point photography for monitoring restoration sites is also being utilised Annex 3 - Evidence 9).

### **Output 3. Enhancement of national and regional capacity to understand small island vulnerability to climate change and to undertake actions to increase resiliency:**

This output is on-going but is very likely to be achieved by the end of the project. Our progress in meeting this objective can be evidenced by the training events and public awareness activities that were undertaken (Annex 3 - Evidence 3). A total of 202 persons have already been involved in habitat restoration training and/or targeted outreach activities. These initiatives will be scaled up in Year 3. The indicators stated in the project's log frame remain appropriate for the measurement of this Output.

## 3.3 Progress towards the project Outcome

Significant progress has been made towards achieving this project's intended Outcome "*Improved coastal ecosystem resilience and protection through collaborative evidence-based conservation action planning, restoration action, and policy development*". Given the significant progress to date, we are confident that we will achieve the project's outcome within the stated timeframe.

As measurable indicators of the progress made, site-specific draft action plans for Anguilla's most at-risk coastal ecosystems – wetlands (mangroves), beaches, sand dunes – have been developed and are being implemented. These will be further refined taking into account lessons learnt. (**Measurable indicator 01**) (Annex 3 - Evidence 5). Seven priority sites are in the stages of restoration, with almost 900 coastal plants already used in restoration activities (**Measurable indicator 02**) (Annex 3 - Evidence 9). We also have approximately 500 seedlings currently growing in the project's nursery and we have plans to increase out-planting efforts into Year 3.

The establishment of a plant nursery as a project activity and the observable increase in local capacity and understanding on the subject of restoration techniques, including propagation and out-planting, demonstrates the intention and ability of project partners to continue implementing action plans beyond the life of this project. In addition, the ANT and DNaR have applied for further Darwin Plus funding to support additional re-wilding of Anguilla with the aim of increasing habitat resilience for the benefit of island biodiversity (**Measurable indicator 03**).

Seventy-two residents have been trained in restoration activities and 130 persons were engaged directly through face-face outreach activities. Through the many promotional activities done with the aim of increasing local capacity and understanding, the capacity-building goals originally stated in this project's log frame were accomplished (**Measurable indicator 04**). In an effort to build adaptation to climate change and promote native biodiversity, the outreach activities

associated with this initiative are enshrined in the programme areas executed by the respective partnered entities.

### **3.4 Monitoring of assumptions**

Six main categories of critical conditions (risks and assumptions) were identified by DDM and project partners during the project development stage:

#### **Assumption 1. Severe storms hamper fieldwork**

**Comments:** Fieldwork was planned to be undertaken in both Years 2 and 3 of this project, allowing time to recover from severe storms if they occurred at any time during the project period. Storms remain a risk into Year 3 of the project particularly to plants currently housed in the project's nursery. The nursery frame, however, can be partially dismantled and nursery plants moved to an even more secure location on-site, if required.

#### **Assumption 2. National stakeholders are not willing to be involved**

**Comments:** Government and non-government stakeholders continue to show interest in the project as evidenced by the numbers involved in restoration activities. We will continue to engage stakeholders through community meetings, one-on-one discussions, and provide opportunities for active engagement in the restoration activities. We hope that by involving stakeholders in the development of site restoration action plans and reiterating the tangible positive impacts that restoration actions will have on both coastal ecosystems and personal properties, stakeholders' interest will be maintained (if not increased).

#### **Assumption 3. Trained expertise remains in Anguilla**

**Comments:** Training of multiple individuals amongst project partners as well as external agencies and the local community, increases the island's technical capacity. Knowledge sharing and training of individuals within multiple stakeholder groups greatly reduces the risk of lost expertise through emigration and/or change in employment.

#### **Assumption 4. Improved knowledge/access to knowledge leads to improved habitat conservation**

**Comments:** One of the aims of this project is to apply an evidence-based approach to natural resources management and habitat restoration. Through our public outreach activities and stakeholder meetings, we continue to advocate for science-based approaches to be used as the basis of restoration action plans.

#### **Assumption 5. The Government of Anguilla continues to conduct public consultation regarding draft legislation and legislative amendments.**

**Comments:** The Government of Anguilla is currently reviewing two drafted pieces of legislation that will further contribute to the sustainability of this project: The Physical Planning Bill and the Environmental Management Bill. Project partners have been engaged in these consultations. When applicable, the modelling and restoration work conducted as part of this project may also be used to inform the general public on the importance of these legislations as it pertains to building adaptation to changing environmental conditions and climate change and variability.

#### **Assumption 6. Planning Applications continue to be circulated to government and statutory bodies.**

**Comments:** Planning applications are circulated and reviewed by the partnering agencies. Although no applications were shared in Year 2 of the project with project partners.

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

The purpose of this project is to increase Anguilla's resiliency to climate change through coastal restoration efforts as well as increased national capacity.

This project directly supports Anguilla's ability to achieve strategic long-term outcomes for the natural environment and, more specifically, commitments made under the Anguilla Climate Change Policy, Anguilla Comprehensive Disaster Management Policy, National Biodiversity

Strategy and Action Plan (NBSAP), and the National Environmental Management Strategy (NEMS). This project improves natural resource managers' and decision makers' capacity to carry out mitigation and adaptation planning by providing critical data and showing possible outcomes for a range of scenarios (and decisions) – from a do-nothing approach to predicted sea level rise and storm surge to broad-based comprehensive action. It uses scientific data that is verified by local knowledge and experience, and provides opportunities for communities to be active participants in climate change mitigation actions.

This collaborative project enhances already-established partnerships and networks and is on target to **achieve tangible conservation actions that improve the resiliency of Anguilla's critically important coastal ecosystems**. Through inter-agency training and project implementation and monitoring, technical skills and knowledge are shared and national capacity to implement coastal restoration actions and adaptively manage coastal ecosystems is built and ensures long-term sustainability of the project.

This project also helps to achieve multilateral agreements commitments under the United Nations sustainable Development 2030 Agenda, the Paris Agreement (even though it has not been extended to Anguilla). The project uses science and modelling projections to identify sites most vulnerable to climate change impacts, to inform conservation action, climate change mitigation strategies, and to safeguard Anguilla's natural coastal heritage through targeted actions that will increase coastal resilience to climate change. More specifically, as Y1 of this project has focused on prioritising coastal ecosystems (coral reefs, sand dunes, beaches, mangrove forests, and) that are most vulnerable to the impacts of climate change (including extreme weather events) and that have the greatest restoration capacity through the application of a robust modelling procedure. This project contributes to:

- Anguilla Climate Change Policy (Objectives 3, 4, and 9)
- NBSAP (Strategy 2, Actions a and b)
- NEMS (Principle 1, Strategy 5; Principle 9, Strategy 27; Principle 11, Strategy 32; Principle 15, Strategies 43, 44, and 45)
- 2030 Agenda (Goals 11, 13, and 15)
- Paris Agreement (Article 5; Article 7; Article 8; Article 10; Article 11)

As we work to enhance national and regional capacity to understand small island vulnerability to climate change, this project contributes:

- Anguilla Climate Change Policy (Objectives 1 and 5)
- Anguilla Comprehensive Disaster Management Policy (Objective 3)
- NBSAP (Strategy 8, Actions a and b)
- NEMS (Principle 7, Strategies 22 and 23; Principle 11, Strategy 34)
- Paris Agreement (Article 12)

## **5. OPTIONAL: Consideration of gender equality issues**

The project partner team working on this project are of mixed gender, with 7 members of the core staff being female and 4 (including the project lead) are male.

The project aims to engage key stakeholders irrespective of gender and our public engagement strategy has been to target all members of society irrespective of age, gender, or social background to ensure that all parts of the local community are invested in the project. Restoration activities, training, and public outreach have been inclusive.

## **6. Monitoring and evaluation**

The project is effectively governed through an established Project Steering Committee (PSC). All project partners sit on the PSC. The PSC is tasked with ensuring that the project delivers its outputs on time and on budget. At each PSC meeting, the logframe is reviewed and indicators of achievement are discussed and compared to logframe targets.

## **7. Lessons learnt**

We conducted a background review on the best practice methodologies of seedling propagation, growth, and restoration techniques, including frequent communication with colleagues from the British Virgin Islands (following their experiences with a similar Darwin Plus project DPLUS073). However, during the early stages of our attempts to propagate seeds, we had mixed success and also recorded relatively low survival, particularly of red mangroves when out-planted. Further consultation with colleagues from the region enabled us to fine-tune our approach and led us to conduct salinity and pH testing at our restoration sites. This approach has resulted in greater successes during more recent propagation and re-planting efforts. Thus, we would always recommend consulting with colleagues from the region who have undertaken similar projects to benefit from their experiences and advice before embarking on any restoration activities.

Ecological-based modelling work conducted during the first year of this project proved invaluable in the prioritisation of restoration sites for Anguilla, however these models and maps also need to be complimented with more detailed on-the-ground assessments and trials of what restoration methods would be most effective at each site (for example the addition of water salinity testing).

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

We previously responded to the issues raised by reviewers on our Year 1 Annual report within our Year 2 Half-Year report. These comments predominantly focused on the production of the habitat and vulnerability models which had been slightly delayed but were completed during Quarter 1 Year 2.

No additional comments

## **9. Sustainability and legacy**

A public awareness plan has been developed and is being implemented throughout this project. Details of training and engagement opportunities are described in Section 3.3, but stated expectations on the level of public involvement in the project have already been exceeded.

Sustained legacy is ensured through inter-agency training and project implementation. Technical skills and knowledge are also being shared (e.g. through workshops and on-the-ground activities). National capacity is being built to implement coastal restoration actions and adaptively manage coastal ecosystems. By involving coastal communities in restoration actions, design and implementation, local buy-in to project impact, outcomes, and outputs will be fostered.

This project has also been presented at three international meetings (Caribbean Initiative, the RSPB Shovel Ready – nature-based solutions webinar series, and the UKOTCF meeting). Representatives from UKOT and regional Governments, NGO's, academic institutions, as well as UK government agencies were present at these meetings. In addition, a regional workshop focusing on this project is scheduled to be held in Year 3 that will help in ensuring that both national and regional capacity is increased within the Caribbean UKOTs.

## **10. Darwin identity**

The Darwin logo has been used in all project PowerPoint presentations ( Annex 3 Evidence 11 & 12) and reports produced (Annex 3 Evidence 5 & 8). The Darwin initiative has been

mentioned and linked in all project social media posts, trivia, interviews, and discussions (Annex 3 Evidence 15).

This project is a stand-alone project funded entirely by Darwin Plus. There is generally a good knowledge of the Darwin funding initiative in Anguilla through previous projects.

We have also produced a project logo and slogan that is being used on all outreach materials to increase the awareness of the project. (Annex 3- Evidence 18).

### 11. Impact of COVID-19 on project delivery

To date, Anguilla has been extremely fortunate in terms of the impact of Covid-19 on our lives. Anguilla was locked down for one month during March and April 2020. However, this short lockdown did not significantly affect project activities. As we had not scheduled any travel for project partners or project consultants during Year 2 of this project, we did not have to delay any of our project activities over the last year due to travel restrictions.

In terms of planning for Year 3 of the project, future lockdown or travel restrictions have the potential to reduce our undertaking of restoration activities and the hosting of the planned in-person regional conference/workshop. However, all signs appear to indicate that the Government of Anguilla will lift travel and quarantine restrictions by July for fully vaccinated persons. In addition, Anguilla’s vaccination program is progressing well.

### 12. Safeguarding

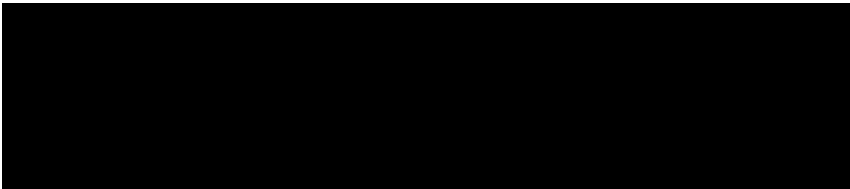
This project abides by the corresponding national laws and regulations. These laws include those related safeguarding children and adults. The ANT also follows its Child and Vulnerable Adult Policy. No safeguarding issues were reported during Year 1.

### 13. Project expenditure

**Table 1: Project expenditure during the reporting period (1 April 2020 – 31 March 2021)**

<b>Project spend (indicative) in this financial year</b>	<b>2020/21 D+ Grant (£)</b>	<b>2020/21 Total actual D+ Costs (£)</b>	<b>Variance %</b>	<b>Comments (please explain significant variances)</b>
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others (Please specify) Nursery and planting materials (potting soil, nursery shading, fertiliser) Public awareness trivia prizes (water bottles, notebooks, memory sticks, field guides)				



Public awareness display (ink, plotter paper)	
Water quality testing	
<b>TOTAL</b>	

## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2020-2021

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
<p><b>Impact</b></p> <p>Enhanced understanding amongst local communities and national decision-makers of the importance and value of restoring and increasing Anguilla's resilience to climate change and natural disasters.</p>			
<p><b>Outcome</b> : Improved coastal ecosystem resilience and protection through collaborative evidence-based conservation action planning, restoration action, and policy development</p>	<p>0.1 Comprehensive conservation action plans for Anguilla's most at-risk coastal ecosystems: wetlands (mangroves), beaches, sand dunes, coastal hillsides and coral reefs developed</p> <p>0.2 At least five restoration actions outlined in conservation action plans are implemented by end of project</p> <p>0.3 Work plans and budgets of the responsible national agency and supporting partners demonstrate intention and ability to continue implementing action plans beyond the life of this project</p> <p>0.4 Through collaborative work with natural resources managers and conservation officers, at least 30 residents of Anguilla capacity in to manage coastal ecosystems is improved by the end of the project</p>	<p>0.1 Draft conservation plans have been developed and are being used to inform restoration activities at seven sites.</p> <p>0.2 Seven sites are currently being restored (Cove Pond, Cove Bay, Forest Pond, Forest Bay, and Meads Bay, Lond Salt Pond and Long Salt Bay. To date 829 red, white and black mangroves, buttonwoods and seagrape have been planted at restoration sites.</p> <p>0.3 A project proposal has been submitted to Darwin Plus to continue re-wilding activities. Coastal resilience-building activities and continued outreach that focuses on coastal resiliency have been incorporated into project partner's strategic plans.</p>	<ol style="list-style-type: none"> <li>1. Continue restoration activities into Y3, and refine and develop conservation action plans to reflect results of pilot restoration activities and to include long-term actions</li> <li>2. Continue work to secure additional funding to support coastal restoration activities post-project.</li> <li>3. Continue community outreach to enhance local understanding and offer additional training opportunities in habitat restoration techniques</li> </ol>

		0.4 To date 72 persons have been trained in coastal resiliency building activities and direct presentations detailing the project have been given to 130 locally-based persons. In addition, project partners have posted 16 on their social media platforms with the aim of increasing the extent of public outreach.	
<b>Output 1. Prioritisation of coastal ecosystems (coral reefs, sand dunes, beaches, mangrove forests, and coastal hillsides ) that are most vulnerable to the impacts of climate change (including extreme weather events) and that have the greatest restoration capacity through the application of a robust modelling procedure</b>	<p>1.1 Existing vulnerability and climate change models for Anguilla strengthened to include newly available detailed bathymetric data by Q3Y1</p> <p>1.2 Coastal areas most at risk to extreme weather events and climate change-driven disasters are identified from data revealed in vulnerability and climate change models by Q3Y1</p> <p>1.3 Scenario modelling used to identify the opportunities for site-specific ecosystem mitigation and restoration actions and, the level of action required to maximise value for money by end of Q4Y1</p> <p>1.4 Top five sites prioritised for restoration action based on the results derived from the modelling and mapping by end of Q4Y1</p>	<p>Completed</p> <p>1.1 Vulnerability and climate change models include bathymetric data</p> <p>1.2 Coastal area most at risk to extreme weather events and climate change driven disasters identified and presented visually in vulnerability maps</p> <p>1.3 Opportunity maps for site-specific ecosystem mitigation and restoration actions produced for Anguilla</p> <p>1.4 Seven sites identified for restoration action, including Long Salt Pond, Long Pond Bay, Forest Bay, Forest Bay Pond, Meads Bay Pond, Cove Bay, and Cove Pond</p>	
1.1 Collate existing and any new coastal ecological and vulnerability data (for example biodiversity assessments, habitat assessments), including the new highly detailed bathymetry data collected in DPLUS045 to inform coastal ecosystem vulnerability models		Completed in Year 1	

1.2 Update coastal ecosystem vulnerability models and develop scenario and opportunity maps to identify coastal priority sites for mitigation and restoration action		Completed in Year 1
1.3 Use scenario models to identify the extent of mitigation and restoration action required to ascertain the desired ecosystem resiliency levels		Completed: Opportunity maps for the Anguilla mainland and most offshore cays created to inform potential restoration action.
<b>Output 2. Implementation of climate change models and stakeholder-informed conservation action plans</b>	<p>2.1 Four stakeholder meetings to review results of vulnerability models and to develop site-specific mitigation and restoration action plans in Q4Y1</p> <p>2.2 Stakeholder-informed conservation action plans developed and implemented to restore identified priority sites by end of Q4Y2</p> <p>2.3 Monitoring protocols developed for measuring impact of mitigation and restoration action at priority sites by end of Q2Y2, and implemented during the remainder of Y2, Y3 and beyond</p>	<p>Completed and being implemented</p> <p>2.1 Only one meeting required to review results of vulnerability models and to inform mitigation and restoration action plans</p> <p>2.2 Draft conservation action plans developed for Long Salt Pond, Long Pond Bay, Forest Bay, Forest Bay Pond, Meads Bay Pond, Cove Bay, Cove Pond, with plans currently being implemented, these will be adapted throughout Year 3 to include long-term (post-project) restoration</p> <p>2.3 Monitoring protocols developed.</p>
2.1 Identify additional site-specific stakeholders for each priority site, based on the results of Activities 1.1 through 1.3		<p>Completed</p> <p>Site-specific stakeholders identified and listed within draft action plans.</p>
2.2 Hold stakeholder meetings to review and verify the results of vulnerability models		Completed

		Stakeholder meeting held on 22 June 2020 to review and verify the vulnerability model results.
2.3 Develop stakeholder-informed site-specific mitigation and restoration action plans based on Activities 1.2 and 1.3		Completed Draft mitigation and restoration action plans developed for Long Salt Pond, Long Pond Bay, Forest Bay, Forest Bay Pond, Meads Bay Pond, Cove Bay, Cove Pond
2.4 Establish nursery for native coastal vegetation seedlings		Completed Nursery constructed and being used to house coastal vegetation seedlings
2.5 Review and implement best practice methodologies to increase resilience of coastal ecosystems at five priority sites identified by stakeholders through Activity 2.1 and 2.2		Completed Best practice methodologies established for site restoration, based on regional and national experiences
2.6 Develop and implement monitoring protocols for restored coastal ecosystems		Completed and being implemented Monitoring protocols established for restored coastal ecosystems; sites monitored at least monthly
<b>Output 3. Enhancement of national and regional capacity to understand small island vulnerability to climate change and to undertake actions to increase resiliency</b>	<p>3.1 Public awareness campaign plan developed by Q2Y1 and implemented throughout project</p> <p>3.2 At least 75% of a random sample of 300 residents of Anguilla know about the project and understand why coastal ecosystems are important</p> <p>3.3 At least 30 residents of Anguilla gain advanced technical skills and experience in developing conservation action plans and implementing key actions by end of project</p>	<p>3.1 Public awareness campaign plan developed in Year 1</p> <p>3.2 Four presentations given to local community groups, reaching 132 local community members.</p> <p>3.3 72 individuals, including students, National Youth Ambassadors, and members of community groups involved in the Anguilla Enhancement Project, trained in restoration technique</p> <p>3.4 Project methodology and results presented to international community through 2 international meetings (RSPB Shovel Ready Nature-based Solutions Webinar, UKOTCF meeting).</p> <p>3.6 Models and maps created during this project shared with the Ministry of Natural Resources and the Sandy Ground community to help guide discussions related to the development of a mega-yacht marina at Sandy Ground</p>

	<p>3.4 Project methods and lessons learned disseminated regionally and internationally by end of project</p> <p>3.5 Results of modelling and mitigation and restoration action used to inform development of comments on draft legislation, policies, and strategies throughout the project period</p> <p>3.6 Results of modelling and mitigation action used to inform partners' comments on Planning Applications</p>	
3.1 Develop public awareness campaign plan	Completed and being implemented Completed in Year 1	
3.2 Implement public awareness campaign plan and monitor its effectiveness using pre- and post-public awareness campaign random sample surveys and data analytics tools	On-going Public awareness activities have included presentations, social media posts (Facebook and Instagram), public service announcements, fieldtrips, site clean-up, trivia contest (through Facebook)	
3.3 Undertake training of natural resource managers in ecosystem resiliency modelling	Completed in Year 1	
3.4 Provide in-field training to coastal community members in coastal ecosystem mitigation and restoration protocols and methods by natural resource members	72 people have been involved with restoration activities during Year 2 of this project	
3.5 Hold Caribbean UKOT meeting to review project results, lessons learned, and opportunities for replication	Scheduled for Quarter 4 Year 3	

<p>3.6 Publicise and report on project progress and results through the Darwin platform, stakeholders' engagements, radio programmes and the newspaper</p>	<p>On-going throughout project. – 16 social media posts have been made on project partner sites, 8 public service announcements have been recorded and one project-related article has been published in the National newspaper.</p>
<p>3.7 Advocate for climate change-informed policies, legislation, and decision-making</p>	<p>On-going throughout the project – Project partners created vulnerability maps of Sandy Ground Village at the request of the Ministry of Natural Resources and shared with the Government of Anguilla and the Sandy Ground community.</p>

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

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: Enhanced understanding amongst local communities and national decision-makers of the importance and value of restoring and increasing Anguilla’s resilience to climate change and natural disasters.			
Outcome: Improved coastal ecosystem resilience and protection through collaborative evidence-based conservation action planning, restoration action, and policy development	<p>0.1 Comprehensive conservation action plans for Anguilla’s most at-risk coastal ecosystems: wetlands (mangroves), beaches, sand dunes, coastal hillsides and coral reefs developed</p> <p>0.2 At least five restoration actions outlined in conservation action plans are implemented by end of project</p> <p>0.3 Work plans and budgets of the responsible national agency and supporting partners demonstrate intention and ability to continue implementing action plans beyond the life of this project</p> <p>0.4 Through collaborative work with natural resources managers and conservation officers, at least 30 residents of Anguilla capacity in to manage coastal ecosystems is improved by the end of the project</p>	<p>0.1 Conservation action plans for each of the coastal ecosystems of concern are produced</p> <p>0.2 Vulnerability, scenario and opportunity maps and evaluation reports</p> <p>0.3 Institutional work plans, staff work plans, institutional budgets</p> <p>0.4 Trainer’s reports, self-assessment using competency framework</p>	Project outputs are met as outlined
<p>Outputs:</p> <p><b>1. Prioritisation of coastal ecosystems (coral reefs, sand dunes, beaches, mangrove forests, and coastal hillsides ) that are most vulnerable to the impacts of climate change</b></p>	<p>1.1 Existing vulnerability and climate change models for Anguilla strengthened to include newly available detailed bathymetric data by Q3Y1</p> <p>1.2 Coastal areas most at risk to extreme weather events and climate change-driven disasters are</p>	<p>1.1 Coastal ecosystem vulnerability models; climate change models; habitat assessment data records</p> <p>1.2 Coastal ecosystem vulnerability maps</p>	Field activities can be re-scheduled if affected by hurricanes, tropical storms, or severe sea swells



<p><b>(including extreme weather events) and that have the greatest restoration capacity through the application of a robust modelling procedure</b></p>	<p>identified from data revealed in vulnerability and climate change models by Q3Y1</p> <p>1.3 Scenario modelling used to identify the opportunities for site-specific ecosystem mitigation and restoration actions and, the level of action required to maximise value for money by end of Q4Y1</p> <p>1.4 Top five sites prioritised for restoration action based on the results derived from the modelling and mapping by end of Q4Y1</p>	<p>1.3 A series of vulnerability and opportunity maps showing the impacts and range of mitigation and restoration actions for the coastal ecosystems of concern</p> <p>1.4 Site prioritisation matrix; site priority list</p>	
<p><b>2. Implementation of climate change models and stakeholder-informed conservation action plans</b></p>	<p>2.1 Four stakeholder meetings to review results of vulnerability models and to develop site-specific mitigation and restoration action plans in Q4Y1</p> <p>2.2 Stakeholder-informed conservation action plans developed and implemented to restore identified priority sites by end of Q4Y2</p> <p>2.3 Monitoring protocols developed for measuring impact of mitigation and restoration action at priority sites by end of Q2Y2, and implemented during the remainder of Y2, Y3 and beyond</p>	<p>2.1 Stakeholder meeting attendance sheets; conservation action plans developed for the coastal ecosystems of concern</p> <p>2.2 Landscaping diagrams; plant inventory for each identified site; site photos (before and after habitat restoration)</p> <p>2.3 Ecosystem monitoring protocols; time-elapse photo series for each priority site; biodiversity and site monitoring datasheets and database</p>	<p>Field activities can be re-scheduled if affected by extreme weather events</p> <p>National and regional stakeholders continue to willing cooperate on habitat and resiliency initiatives</p>

<p><b>3. Enhancement of national and regional capacity to understand small island vulnerability to climate change and to undertake actions to increase resiliency</b></p>	<p>3.1 Public awareness campaign plan developed by Q2Y1 and implemented throughout project</p> <p>3.2 At least 75% of a random sample of 300 residents of Anguilla know about the project and understand why coastal ecosystems are important</p> <p>3.3 At least 30 residents of Anguilla gain advanced technical skills and experience in developing conservation action plans and implementing key actions by end of project</p> <p>3.4 Project methods and lessons learned disseminated regionally and internationally by end of project</p> <p>3.5 Results of modelling and mitigation and restoration action used to inform development of comments on draft legislation, policies, and strategies throughout the project period</p> <p>3.6 Results of modelling and mitigation action used to inform</p>	<p>3.1 Communications and public awareness plan; newspaper articles; social media; radio press releases; PowerPoint presentations; community meeting presentations; minutes of meetings; leaflets; billboards</p> <p>3.2 Random sample pre- and post-project awareness survey report; newspaper articles; social media posts; radio press releases; PowerPoint presentations; leaflets; billboards; social media analytics</p> <p>3.3 Training evaluation sheets; training workshop agenda; workshop attendance sheet; monitoring protocol; self-assessments</p> <p>3.4 Case studies; presentation abstracts; PowerPoint presentations; UKOT meeting agenda; UKOT meeting attendance sheet</p> <p>3.5 Project lead and partner comments on national plans and bills</p>	<p>Trained expertise remains in Anguilla</p> <p>Improved knowledge/ access to knowledge leads to improved habitat conservation</p> <p>GOA continues to conduct public consultations regarding draft legislation and legislative amendments</p> <p>Planning Applications continue to be circulated to government and statutory bodies for comments</p>
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	partners' comments on Planning Applications	3.6 Project and lead partner comments on Applications for Planning Permission	

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

All links to evidence can be found here:

<https://www.dropbox.com/sh/y7v5foogs0lk6ob/AAAZ8G2T5zBteOPuUTQMAQLZa?dl=0>

**Evidence 1:** Minutes of Project Steering Group meetings

**Evidence 2:** Minutes of site prioritisation meeting.

**Evidence 3:** Facebook posts/ photographs related to restoration activities.

**Evidence 4:** Flood risk, vulnerability and opportunity maps created by Environment Systems Ltd.

**Evidence 5:** Site Action Plans

**Evidence 6:** Water testing results

**Evidence 7:** Photographs of seedling nursery

**Evidence 8:** Best practice guides for mangrove and sand dune restoration

**Evidence 9:** Planting and survival maps

**Evidence 10:** Monitoring protocols

**Evidence 11:** RSPB Webinar presentation

**Evidence 12:** UKOTCF presentation

**Evidence 13:** Boat trip

**Evidence 14:** ANT AGM presentation

**Evidence 15:** Social media posts

**Evidence 16:** Public Service Announcements

**Evidence 17:** Sandy Ground flood risk maps created for the Ministry of Natural Resources

**Evidence 18:** Project logo and slogan

## Checklist for submission

	Check
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> putting the project number in the Subject line.	Yes
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> about the best way to deliver the report, putting the project number in the Subject line.	NA
<b>Have you included means of verification?</b> You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Yes
<b>Do you have hard copies of material you need to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	