

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

### Darwin Plus Project Information

Project reference	DPLUS091
Project title	Improving coastal ecosystem resilience to climate change in Anguilla
Territory(ies)	Anguilla
Contract holder institution	Department of Disaster Management
Partner institutions	Anguilla National Trust, Department of Environment
Grant value	£267,984.00
Start/end date of project	01/04/2019-31/03/2022
Reporting period (e.g., Apr 2017-Mar 2018) and number (e.g., AR 1,2)	Apr 2019 – Mar 2020
Project leader name	Calvin Samuel
Project website/blog/Twitter	N/A
Report author(s) and date	Louise Soanes, Farah Mukhida, Sharmer Fleming 29/04/2020

### 1. Project overview

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) and the vulnerable coastal communities (coastal flooding) as well as Anguilla's economy (Government and Private Sector) through its main industry, tourism.

### 2. Project stakeholders/partners

A Project Steering Committee oversees the overall implementation of the DPLUS 091 project and has met a total of three times since the commencement of the project (Annex 3 – Evidence 1). The Project Steering Committee is comprised of representatives from the Department of Disaster Management (DDM) (project lead), the Department of Environment (DOE), and the Anguilla National Trust (ANT). Environmental Systems Ltd. (ES) has also been invited to participate in Project Steering Committee meetings related to coastal resiliency opportunity and vulnerability mapping/modelling. Key Government stakeholders and NGO's have also been engaged in this project through a three-day QGIS workshop and a one-day meeting that introduced the project. Through these engagements, stakeholders were asked for feedback on the project's objectives. Representatives from DDM, DOE, ANT, Department of Physical Planning, Department of Fisheries and Marine Resources, Department of Information

Technology and E-Government Services, and the Anguilla branch of Red Cross International were all in attendance at these meetings (Annex 3 – Evidence 2).

Local stakeholder engagements and consultations will begin in year two when we present and ask for feedback on the coastal resilience modelling that is currently in progress.

### **3. Project Progress**

#### **3.1 Progress in carrying out project Activities**

Activities being conducted through this DPLUS 091 project fall within three main Outputs: 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; 2. Implementation of climate change models and stakeholder-informed conservation action plans; and 3. Enhancement of national and regional capacity to understand small island vulnerability to climate change and to undertake actions to increase resiliency.

##### **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**

Activities under Output 1 for the first year of this project include collating existing and new coastal ecological and vulnerability data and updating coastal ecosystems vulnerability models.

In addition to the data already held by the UK-based project consultant ES, local partners provided ES with the following to enable them to perform the ecosystem modelling work for this project: (1) UKHO Bathymetry data for Anguilla; (2) field data describing the benthic substrates around Anguilla's coastline – particularly areas covered by cloud in the last set of LiDar satellite images (Annex 3 – Evidence 3); (3) field data describing the current status of mangroves and wetlands in Anguilla, including soil properties, presence of artificial structures and the presence of any new buildings or infrastructure.

ES has been working on coastal ecosystem vulnerability models since January 2020 and have to date produced a draft storm surge vulnerability map for the island based on a vulnerability rule-base developed by ES and local partners. Vulnerability and scenario maps are in progress and are expected to be available for review by the end of April 2020. These models and maps will then be used by ES and local partners in Y2 of the project to identify the extent of mitigation and restoration action required to ascertain desired ecosystem resiliency levels.

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

Activities under Output 2 for the first year of this project include the establishment of a nursery for native coastal vegetation seedlings and the review of best practice methodologies to increase coastal ecosystem resilience.

A site at the Department of Agriculture's agricultural grounds has been allocated for the development of the nursery. A call for tender for the nursery design was circulated in December 2019 and resulted in two tenders being put forward. Project partners have awarded the tender to Mr Andrew Compton who will begin building the nursery once Covid-19 related restrictions have been lifted (Annex 3 – Evidence 4). Materials for the nursery have already been purchased. We anticipate this will be completed by June 2020 should restrictions be lifted by the end of April 2020.

In June 2019, six staff from the Anguilla National Trust visited the L'Etang, wetland restoration site in St Barthelemy. The site provided a good example of mangrove and coastal vegetation restoration. The project coordinator, Mr Jim Boos, has been invited to Anguilla to advise on restoration activities in 2020 (Annex 3 – Evidence 5).

Stakeholder meetings to review and verify the results of the models, development of stakeholder-informed site-specific mitigation and restoration plans, and on-the-ground restoration work and monitoring of that work at priority sites will be conducted in Y2 (and Y3) of the project.

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

Activities under Output 3 for the first year of this project include the development (and implementation) of a public awareness plan, measuring level of public awareness about coastal resiliency, and training of natural resource managers in ecosystem resiliency modelling.

A public awareness plan was developed collaboratively by DDM, DOE, and the ANT in Q1 of Y1 (Annex 3 – Evidence 6). In an effort to measure the effectiveness of this plan and to target future public awareness activities, 100 community surveys were completed in Q1Y1 (Annex 3 – Evidence 7). The surveys will be repeated in Q4Y3 to assess the campaign's effectiveness.

Between the 24 and 26 February 2020, Dr Katie Medcalf and Mr, Samuel Pike (ES) facilitated training for local project partners on the use of QGIS software for coastal resiliency mapping. 12 persons attended representing DDM, DOE, ANT, Department of Physical Planning, Department of Information Technology and E-Government Services, and Department of Fisheries and Marine Resources (Annex 3 – Evidence 2). In addition, on 27 March 2020, a one-day stakeholder meeting was held, in which ES presented on the work they are undertaking as part of this project. This meeting also involved gathering stakeholder feedback on data resources available and useful project outputs. In addition to the agencies attending the three-day QGIS workshop, the Red Cross Anguilla, Royal Society for the Protection of Birds, and Fauna and Flora International also attended this one-day meeting (Annex 3 – Evidence 2).

This project has been reported in local media through two press releases (Annex 3 – Evidence 8). Project coordinator, Dr. Louise Soanes, co-facilitated a coastal resilience symposium at the regional Caribaea Initiative conference held in Dominican Republic, May 2019 (Annex 3 – Evidence 9), where she presented on this project. DOE focused their outreach activities on coastal resiliency at Anguilla's Risk Assessment and Safety Fair held on 29 June 2019 (Annex 3 – Evidence 10). In September 2019 the project was introduced to a UK- and UKOT audience at the Alderney Wilder Islands Conference (Annex 3 – Evidence 11) and, in December 2019, details of the project were presented at the ANT's Annual General Meeting (approximately 40 Anguilla-based persons were in attendance) (Annex 3 – Evidence 12)..

## **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.**

While this Output was delayed by several months due to the unexpected amount of time it took to source UKHO Bathymetry for Anguilla and a delay in finalising contracts between DDM and ES, this output is on track to be achieved by the end of April 2020. The production of vulnerability and opportunity maps and the inclusion of these into a prioritisation plan will act as evidence that this Output has been completed.

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

This output depends on the completion of Output 2 but is scheduled to take place between Q1Y2 and Q2Y2. While public meetings during this period may not be permissible due to Covid-19 restrictions, project partners will (as far as possible) consult with and gather feedback from stakeholders remotely. Recordings and/or minutes of telephone/skype/zoom meetings or email dialogues will be used as evidence that stakeholders have been consulted. Stakeholder-informed action plans will provide evidence that this Output has been achieved.

### **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 throughout the project and is achievable by the end of the project. Baseline surveys of public opinion at the start of the project have informed the project's public awareness plan and will be repeated in Q4Y2 to evaluate the impact of our work (see 3.1 above for activities already undertaken related to this Output).

### **3.3 Progress towards the project Outcome**

Having only completed Year 1 of a three-year project, we have created the framework for realising the project's Outcome.

The project Outcome is the improved coastal ecosystem resilience and protection through collaborative evidence-based conservation action planning, restoration action, and policy development.

Although still early into project implementation, significant progress has been made towards the Outcome primarily through the development of models (and maps) to inform coastal restoration programmes (developed and implemented in collaboration with stakeholders) in Y2 and Y3 of the project.

### **3.4 Monitoring of assumptions**

There are six main categories of critical conditions (risks and assumptions) that were identified by DDM and project partners during the project development stage: 1. Severe storms hamper fieldwork; 2. National stakeholders are not willing to be involved; 3. Trained expertise remains in Anguilla; 4. Improved knowledge/access to knowledge leads to improved habitat conservation; 5. The Government of Anguilla continues to conduct public consultation regarding draft legislation and legislative amendments; and 6. Planning Applications continue to be circulated to government and statutory bodies for comments.

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

Fieldwork for this project has been scheduled for Y2 and Y3. Early predictions of the 2020 hurricane season suggest a more active year than usual with 16 named storms, eight of which will be named hurricanes (four of which are expected to become major hurricanes – Category 3, 4, 5). Fieldwork is stretched over a two-year period, allowing us to make up time lost in Y2 in Y3 if necessary. The nursery that is being constructed is in a relatively sheltered area, will be no taller than 9-feet, and can be partially dismantled if required. Nursery plants will be moved to an even more secure location on-site, if required.

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

Government and non-government stakeholders have already shown interest in the project and have been involved during Y1. 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 through 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).

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

Training of multiple individuals amongst project partners as well as external agencies increases the island's 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.

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

One of the aims of this project is to apply an evidence-based approach to natural resources management and habitat restoration. Information gained through the modelling and mapping activities will be used as the basis of restoration action plans.

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

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 (Annex 3 – Evidence 13). The project partners have been engaged in these

consultations, and when available the modelling and restoration work conducted as part of this project will also be used to inform draft legislation development.

**6. Planning Applications continue to be circulated to government and statutory bodies.** Planning applications are circulated and reviewed by the partnering agencies. When completed the modelling work will be used as an additional tool in reviewing planning applications.

#### **New Risk- COVID-19**

A risk that was not predicted and that has had a profound impact is the Covid-19 pandemic. As of March 20, 2020, the Government of Anguilla implemented restrictions on persons' movement and has ordered non-essential workers to stay at home until further revision and notice. If the period of isolation continues beyond April, our ability to facilitate stakeholder meetings to present the results of the coastal ecosystem modelling will be hampered. We are, however, exploring ways to conduct this work remotely (through telephone interviews or by email).

#### **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 Strategy, 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 strategies.

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 is 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 2030 Agenda, the Paris Agreement (even though it has not been extended to Anguilla). This project uses science and modelling projections to identify sites most vulnerable to climate change, to inform conservation action, climate change mitigation strategies, and to safeguard Anguilla's natural coastal heritage through targeted action 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 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, this project contributes to:

- Anguilla Climate Change Policy (Objectives 3 and 9) which calls for the conservation and protection of “national biodiversity and national heritage while enhancing the resilience of natural ecosystems to climate change impacts” as well as for the creating and sustaining “viable communities” to “ensure maintenance of livelihoods, social well-being, and the protection of social capital while enhancing the resilience of existing critical infrastructure to climate change impacts and avoiding the construction of new infrastructure in areas or with materials prone to climate hazards.” As part of this project, we are in the process of identifying Anguilla's most vulnerable coastal areas. Once identified, we will engage in coastal restoration initiatives and use models and maps to help guide future development decisions.
- NBSAP (Strategy 2, Actions a and b) which calls for the development and use of “a national system for data gathering and management” by expanding “the Anguilla Coastal

Resource Information System to include attribute data” thereby creating a “fully functional conservation data centre” and by gathering and collating “data on the components of biological diversity that are important for conservation and sustainable use.”

- NEMS (Principle 1, Strategy 5; Principle 9, Strategy 27; Principle 11, Strategy 32; Principle 15, Strategies 43, 44, and 45) which calls ensuring meaningful participation of various stakeholder groups in decision making, minimising and managing the causes and impacts of disaster, ensuring sustainable use of natural resources, and promoting cooperating in science and technology.
- 2030 Agenda (Goals 11, 13, and 15) which calls for cities and human settlements to be inclusive, safe, resilient, and sustainable, for urgent action to be taken to combat climate change and its impacts, and for the protection, restoration, and sustainable use of ecosystems.
- Paris Agreement (Article 5; Article 7; Article 8; Article 10; Article 11) which calls for action to conserve and enhance sinks and reservoirs of greenhouse gases, the enhancing of adaptive capacity and the strengthening of resilience to climate change, the averting, minimising, and addressing the loss and damage associated with climate change, the use of technology (and supporting transfer of technology) to improve resilience to climate change, and building capacity to adapt to and develop mitigation actions in response to climate change.

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) which calls for the education of “key stakeholders concerning climate change risk to coastal marine resources and to protect and enhance the resilience of these resources” and to “discuss climate change impacts on health, wellbeing, and quality of life while promoting sustainable development and sound economic growth.”
- Anguilla Comprehensive Disaster Management Policy (Objective 3) which calls for the provision of community outreach preparedness and education programmes that “promotes a safer way of life, sustainable development, and gender equity” amongst residents of Anguilla.
- NBSAP (Strategy 8, Actions a and b) which calls for the promotion of “environmental awareness and education” by developing “a national awareness and education programme on issues related to conservation and sustainable use of biodiversity” and by fostering “collaboration with other organisations in developing awareness programmes.
- NEMS (Principle 7, Strategies 22 and 23; Principle 11, Strategy 34) which calls for the fostering broad-based environmental education, training, and awareness and ensuring sustainable use of natural resources.
- Paris Agreement (Article 12) which for the enhancement of climate change education, training, public awareness, public participation, and public access to information.

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

Day to day management of the project is handled by a team (Project Steering Committee) primarily comprised of females (67% female, 33% male). Project implementation and training has so far been gender balanced (project implementation: 50% female, 50% male; training: 55% female, 45% male). Females are well represented both as decision-makers and as participants.

## **6. Monitoring and evaluation**

Project partners have met on 3 occasions during the first year of the project (Annex 3 – Evidence 1), two of these meetings have also included ES to discuss the coastal ecosystem modelling work. Project partners reviewed the project’s logframe and timetable for activities and delegated

tasks that required action (such as press- and media-related activities). Regular meetings have ensured project activities are up-to-date and will be even more important in Y2 and Y3, when more on-the-ground work is scheduled to take place.

## **7. Lessons learnt**

As always with these types of projects that have multiple partners and contractors/consultants, it often takes longer than anticipated to put contracts in place (between the lead agency and local partners and consultants) which can delay the start of some activities. Nonetheless, delays in the signing of contracts for this project only setback modelling work by one or two months; this will not significantly affect project outcomes.

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

N/A

## **9. Other comments on progress not covered elsewhere**

This project encountered a change in project lead within the first four months. Ms Melissa Meade (then Director of DDM) was transferred to the Department of Environment. Mr Calvin Samuel was transferred as the Director of DDM. Ms Meade's position as the Director of DOE (Project Partner) has enabled her continued involvement in the project. As the former Director of the DOE, Mr Samuel was up-to-date on the project's objectives and activities. The change in project lead was relayed to Darwin Plus/LTS and this had no implications on the project's activities.

The unexpected global Covid-19 pandemic has made us review and adapt our project activities (see Section 3.4) but is not anticipated to affect this project's outcomes in a significant way.

## **10. Sustainability and legacy**

DPLUS 091 is one of the major projects being implemented on Anguilla by DDM and local partners.

A public awareness plan has been developed and is being implemented. We have also been using the questionnaire survey as an opportunity to share information about Anguilla's coastal ecosystems, climate change, and the project. Approximately 100 individuals have been reached through direct contact. We will see increased public involvement in this project, however, in Y2 and Y3 through stakeholder consultation and on-the-ground activities.

Sustained legacy is ensured through inter-agency training and project implementation. Technical skills and knowledge is also being shared (e.g. through workshops and on-the ground activities) and 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.

## **11. Safeguarding**

This project abides by the laws and regulations established by Government of Anguilla (enacted by the Governor of Anguilla). 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.

## **12. Darwin identity**

See 3.6 above for examples of where the Darwin logo and fund has already been highlighted. 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.

## **13. Project Expenditure**

**Table 1: Project expenditure during the reporting period (1 April 2017 – 31 March 2018)**



## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2017-2018 – if appropriate

Project summary	Measurable Indicators	Progress and Achievements April 2017 - March 2018	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>In progress, we are awaiting the completion of coastal resiliency modelling before further actions can be taken</p>	<ol style="list-style-type: none"> <li>1. Stakeholder consultation on coastal resiliency modelling scheduled for May-June</li> <li>2. Incorporation of maps, models and stakeholder feedback into action plans scheduled for June-July</li> <li>3. On-the ground coastal resiliency actions initiated by Y2Q4, in collaboration with local community groups and stakeholders</li> </ol>
<p><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</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>In progress, vulnerability and climate change models for Anguilla due to be completed by end of April. The rest of the outputs will follow on from this.</p>	

<p><b>events) and that have the greatest restoration capacity through the application of a robust modelling procedure</b></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>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</p>		<p>Completed</p>
<p>1.2 Update coastal ecosystem vulnerability models and develop scenario and opportunity maps to identify coastal priority sites for mitigation and restoration action</p>		<p>In progress, due for completion by the end of April 2020</p>
<p>1.3 Use scenario models to identify the extent of mitigation and restoration action required to ascertain the desired ecosystem resiliency levels</p>		<p>In progress, due for completion by the end of April 2020</p>
<p><b>Output 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>In progress, vulnerability and climate change models for Anguilla due to be completed by end of April. The rest of the outputs will follow on from this.</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	
2.1 Identify additional site-specific stakeholders for each priority site, based on the results of Activities 1.1 through 1.3		Scheduled to take place May-June 2020
2.2 Hold stakeholder meetings to review and verify the results of vulnerability models		Scheduled to take place May-June 2020
2.3 Develop stakeholder-informed site-specific mitigation and restoration action plans based on Activities 1.2 and 1.3		Scheduled to take place June-July 2020
2.4 Establish nursery for native coastal vegetation seedlings		Scheduled to take place May-June 2020
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		On-going
2.6 Develop and implement monitoring protocols for restored coastal ecosystems		Scheduled to take place June-July 2020
<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>	A public awareness plan has been devised and is being implemented. Training and capacity building will continue through years 2 and 3 of this project.

	<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
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		100 community surveys have been completed and used to inform the public awareness plan
3.3 Undertake training of natural resource managers in ecosystem resiliency modelling		A workshop on the use of QGIS for coastal resource mapping was facilitated in February 2020, with 12 persons in attendance
3.4 Provide in-field training to coastal community members in coastal ecosystem mitigation and restoration protocols and methods by natural resource members		Scheduled for Q2Y2-Q4Y3
3.5 Hold Caribbean UKOT meeting to review project results, lessons learned, and opportunities for replication		Scheduled for Q4Y2
3.6 Publicise and report on project progress and results through the Darwin platform, stakeholders' engagements, radio programmes and the newspaper		On-going throughout project
3.7 Advocate for climate change-informed policies, legislation, and decision-making		Scheduled for Q4Y3

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

*N.B. if your application’s logframe is presented in a different format in your application, please transpose into the below template. Please feel free to contact [Darwin-Projects@ltsi.co.uk](mailto:Darwin-Projects@ltsi.co.uk) if you have any questions regarding this.*

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 (including extreme weather events) and that have the greatest</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 identified</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>restoration capacity through the application of a robust modelling procedure</b></p>	<p>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</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;</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>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 partners' comments on Planning Applications</p>	<p>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>3.6 Project and lead partner comments on Applications for Planning Permission</p>	<p>Planning Applications continue to be circulated to government and statutory bodies for comments</p>
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## 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.	x
<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.	
<b>Have you included means of verification?</b> You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	x
<b>Do you have hard copies of material you want 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.	
Have you involved your partners in preparation of the report and named the main contributors	x
Have you completed the Project Expenditure table fully?	x
Do not include claim forms or other communications with this report.	