

Darwin Plus:

Overseas Territories Environment and Climate Fund

Annual Report

To be completed with reference to the “Project Reporting Information Note”
(<https://darwinplus.org.uk/resources/information-notes>)

It is expected that this report will be a **maximum of 20 pages** in length, excluding annexes)

Submission Deadline: 30th April 2023

Submit to: BCF-Reports@niras.com including your project ref in the subject line

Darwin Plus Project Information

Project reference	DPLUS129
Project title	Understanding Ramsar wetland dynamics for marine conservation and environmental resilience
Territory(ies)	Turks and Caicos Islands
Lead Partner	Environment Systems Ltd
Project partner(s)	Department of Environment and Coastal Resources (TCI); Marine Conservation Society (UK); University of Exeter (UK); Joint Nature Conservation Committee (UK); Wavehill (UK)
Darwin Plus grant value	£251,807.00
Start/end dates of project	01-07-21 — 30-03-24
Reporting period and number	APR 2022 — MAR 2023 Annual Report 2
Project Leader name	Katie Medcalf
Project website/blog/social media	https://www.envsys.co.uk/ramsar-wetlands/
Report author(s) and date	Samuel Pike & Christopher May, March 2023

1. Project summary

The project will provide evidence of the dynamic resilience of Caicos Islands’ wetlands, and how they support biodiversity, coastal protection, and natural capital.

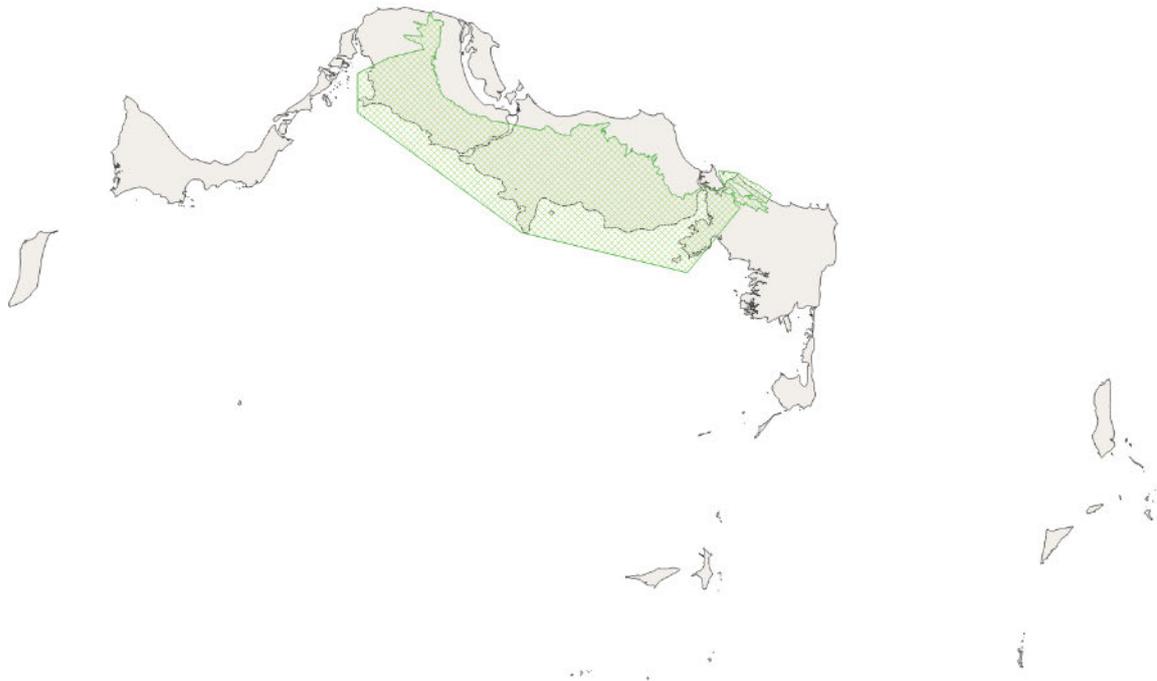


Figure 1 Turks and Caicos Islands, with the boundary of the Ramsar site (green)

It will evaluate historic change, show how future climate could impact the wetlands, and provide evidence to review the Ramsar extent. It will develop a monitoring framework and system to view project and ongoing monitoring data, build technical and scientific capacity in local staff, in order to help sustain wetland management in the long term.

2. Project stakeholders/partners

The recruited Wetland Ecologist arrived on-island in May 2023, and was able to start an induction to the ecology, project, and island in June. Unfortunately, due to a previous departmental split, and increasing workload pressures on the DECR, the lead within this department has had to significantly reduce their role in the project. The Wetland Ecologist is now the main point of contact for this project, supported by an Environmental Officer.

There have been monthly calls with DECR to discuss all aspects of the project (19.1). The first half of the year focussed on organising the first on-island workshop, and the delays to the project from the acquisition of essential topographic data and the recruitment of the Wetland Ecologist. The second half focussed on data acquisition, modelling, and the proposals for the monitoring platform. A week-long project planning meeting was also held on-island between ESL and DECR.

The project partners met virtually at the end of the reporting year, composed of Environment Systems Ltd (ESL, lead), Department of Environment & Coastal Resources (DECR), Marine Conservation Society (MCS), and Joint Nature Conservation Committee (JNCC). University of Exeter (UoE) provided their apologies (19.2).

The DECR project team have been actively engaging with the several island communities through school visits and international events, various government agencies through invitations to the GIS surgeries and November workshop, and received direct involvement from the Minister and Permanent Secretary responsible for the Ministry of Tourism, Environment, Heritage & Gaming (19.3).

3. Project progress

3.1 Progress in carrying out project Activities

Output 1: Documentation, maps and methods:

- a) evidence of the ecological, climate mitigation and socially important functions of the wetland**
- b) measures of good ecological condition established by the project**
- c) reporting agreed that take into account the changing climate.**

Activities for Output 1 for this second year of the project include the continual acquisition and processing of satellite imagery; developing models to describe the current, potential, and future functions of the wetlands, and developing models to understand the impact that climate change might have on the wetlands.

Sentinel-1 and Sentinel-2 satellite imagery has been routinely acquired and processed throughout the year. These have been used to continue the creation of indicators of monthly, seasonal and annual wetland dynamics. I.e., which areas are more frequently inundated, for how long, and how variable (19.1).

During the week-long on-island project planning meeting with DECR in November 2022, the following priority ecosystem services were identified as priorities for modelling:

- Coastal protection (storm surge vulnerability)
- Carbon storage
- Water quantity
- Biodiversity
- Social benefits (e.g., fishing, eco-tourism, cultural etc)

Key input data for these models, specifically topography, and benthic habitat are still being sourced. However, the development and requirements of each of these models have been identified and prepared (19.3). This means that when the data does become available, the modelling can start straight away, with the bulk of the research and background work already complete.

During the same November planning meeting, the priority species for modelling distribution and ecological envelopes were identified:

- Island Heather
- Caribbean pine
- Flamingo
- West Indian Whistling Duck
- Black-faced grassquit

Each of these species can be seen as a representative of a distinct Ramsar habitat, and can be used as a proxy of habitat quality. An extensive desk-based, and on-island local knowledge study was performed by DECR, to understand the ecological requirements of each of the species (19.2). The species distribution models are currently being designed. As with the Ecosystem Services models, these require the benthic and topographic data, so cannot yet produce any outputs. However, the development and pre-processing of the models has started, in order to reduce the delay when these datasets become available.

Output 2: A monitoring system enables users to access and view the latest in-situ and remotely sensed data.

A monitoring system for on-the-ground collection of data within the Ramsar site has been devised by DECR. This is an annual cross-disciplinary groundwork metric, that collects data within predominantly vegetated areas, of insects, birds, habitats, substrate, hydrology, and

weather. The data is collected along routes and areas defined by current access points, and includes control areas outside of the Ramsar site for comparisons (19.4).

Fieldwork has routinely been undertaken into sections of the Ramsar Site, via accessible trails in North Caicos. These trails have had to be hand cut by DECR to create access (19.10). Waypoints were recorded along the respective trails to denote changes in the predominant ambient habitat type (19.9). These waypoints were then assessed for vegetative composition and coverage, observed hydrology, observed fauna and indicators, and potential threats. The data is to be detailed, logged, and assessed to seek the potential capacity and functionality of the surveyed areas, and to understand how similar habitats, which may be otherwise be inaccessible, may also function.

At the week-long planning meeting with DECR in November, five key wetland conditions were prioritised for the satellite-based monitoring system, across two different time-scales:

- short term / drastic change
 - land clearance
 - fire damage
- medium & long term
 - drought stress
 - suspended solid
 - coastal change

For each of these conditions, appropriate indicators have been researched and devised.

Sentinel-2 imagery has been used to create indicators of short-term land clearance (19.7), and annual/seasonal shallow water marine suspended sediment (19.11). Methodologies have been designed, and are being tested, for locating fire damage, and identifying drought stress, and coastal change.

It was suggested by DECR, that it would be preferable for Government staff, and the local community, to be able to access the monitoring data and analytics through the existing [TCI Data Portal](#), created as a part of Darwin Plus Project: Developing Marine Spatial Planning (MSP) tools for Turks and Caicos. This would be instead of creating a new dashboard centre, and would mean that all spatial data created for, and on, TCI, would be accessible on one single website. Efforts are underway within DECR to identify the on-island point of contact for the TCI Data Portal, so that the project lead can collaborate with them, and understand the technical requirements of pushing routine data onto the system.

Output 3: Participants in the project develop the knowledge and skills necessary to effectively use the project tools required.

DECOR have almost finished creating the communication plan that would outline the priority on-island stakeholders, the key messages the project needs to convey, the main method of message delivery, and indicators of success.

The Wetland Ecologist arrived on island in May 2022, was promptly inducted to DECR and the ecology of TCI. The IT equipment was already on-island at the end of March 2022, but this did take a few extra months to get to the new recruit.

Due to the delay in the recruitment of the Wetland Ecologist, and staff pressures on DECR, it was decided that the project launch would be held the morning of the first day on the November workshop. This was held on the morning of 7th November 2022, and attended by 12 persons represented by staff from the Department of Environment and Coastal Resources (DECOR), Department of Disaster Management Emergencies, Environmental Health, Energy and Utilities Department and the Turks and Caicos National Trust. Notably the Minister and Permanent

Secretary responsible for the Ministry of Tourism, Environment, Heritage & Gaming were also present (19.19).

The rest of the day and week focussed on the workshop objectives that included:

- Understand the issue of climate change, and how this might impact on the biodiversity of the Turks and Caicos Islands
- Understand how we can use data, together with local and scientific knowledge to build ecological models that highlight vulnerabilities and opportunities
- Identify threats to the Ramsar site and the monitoring methods we can use to identify them
- Consider how local fieldwork and remote sensing techniques can help monitor the condition of wetland habitats
- Identify important stakeholders and develop a communication and outreach strategy

Monthly, virtual GIS surgeries have taken place, led by ESL. This has taken the form of drop-in surgeries following self-taught GIS training modules. Sessions start with each delegate describing their current GIS work/activity, before moving on to individual problems which the group as a whole, led by ESL, aim to solve. At least 28 individuals across 15 different organisations have attended (19.12)

3.2 Progress towards project Outputs

Output 1: Documentation, maps and methods.

There has been a significant delay to the modelling for this output due to the difficulties in acquiring three key datasets — lidar bathymetry, lidar topography, and benthic habitats. During the project bid process, all data was confirmed as existing and obtainable. Requests for acquiring the lidar began in February 2022; these were delivered by DECR in November 2023 as part of a 14TB harddrive. The topography data is still unprocessed and not yet useable. Through JNCC, the project lead has begun to identify how to process this data. The bathymetry data is now in hand and ready for use. Since February 2022, DECR have attempted to also obtain the license to use the existing benthic habitat data.

To ensure that progress is not stalled, the lead partner has been focussing on the design of all the models that were identified as a priority by DECR. These have been developed in collaboration with the main local project partner. This means that, when the appropriate data is made available, or suitable alternatives found, all the draft models can be run. This includes the ecosystem services (19.3), the opportunities to enhance those systems (19.5), and priority species distribution models (19.2).

Output 2: A monitoring system enables users to access and view the latest in-situ and remotely sensed data.

A ground collection data plan has been created, tested and is being routinely collected by DECR (19.4).

The priority condition threats, both short-term and long-term, have been identified and confirmed by DECR. Radar and optical data throughout April 2022 – March 2023 have been acquired and processed (19.8). Research and testing have begun on creating the Earth observation-based condition indicators, with some draft outputs ready for field validation by DECR (19.7).

For the monitoring system, DECR confirmed the preference for monitoring data to be delivered straight to an existing data portal. Efforts have been made by DECR to identify a point of contact for the data portal, to enquire about technical feasibility and access.

Output 3: Participants in the project develop the knowledge and skills necessary to effectively use the project tools required.

From April 2022, at least 21 on-island organisations, and the general public, have been actively engaged through the project. This includes 12 government departments, three non-government organisations, four schools, two articles in on-island magazine, and an international film festival. Communication has been through mixed media of workshops, fieldwork training, online GIS surgeries, posters, seminars, fieldtrips, and on-island publications (19.12, 19.15, 19.21, 19.14).

From the on-island workshop, participants anonymously self-evaluated themselves out of 5 (1 being very low, 5 being very high), on a variety of questions that relate to increases in understanding the impacts that climate change may have on the Ramsar Site, and the mitigations that can be put into place. In total, across the week, 78% of the responses returned 4- or 5-out-of-5 (19.20).

The locally-based Wetland and Terrestrial Ecologist are continuing to strengthen their GIS and modelling understanding, through self-study and making use of the GIS surgeries. A case study to test their ability will begin when the topographic data is made available. Across the island, Government and NGOs are attending the wider, drop-in surgery sessions (19.12).

3.3 Progress towards the project Outcome

The outcome is for TCI Government to create and maintains scientifically robust evidence to support, and potentially extend the Ramsar Site, through understanding and monitoring of key wetland natural functions to support future TCI resilience.

01. Sufficient evidence is produced to support the proposed Ramsar Site extension, by Dec 2023

Whilst there has been a delay in recruiting the Ecologist, acquiring key datasets, and defining the priority models, the design of these models has been established, and are ready to produce drafts outputs when the data, or suitable alternatives, have been sourced and pre-processed (19.3). The indicator for this output could be enhanced, by understanding what evidence is sufficient. The project lead will work with DECR and JNCC to identify the specific requirements.

0.2: An environmental monitoring system is set-up and fully functioning for long-term operation. It feeds in-situ and remotely sensed data to key agencies (e.g., DECR), by the end of the project

In situ data is being routinely collected by DECR from within the Ramar site (19.4). Condition indicators from satellite imagery are being designed (19.7), and will be tested in the field by DECR, and the methodology validated by JNCC.

The monitoring system has changed, at DECRs request, to instead be a series of data feeds and maps, that feed into an existing data portal. We are currently working with local partners to identify the relevant data managers of the portal, and to understand the mechanics of the feed.

03. Increased awareness, understanding, and skill capacity within key agencies (e.g., DECR), which will allow for data to be created, interpreted, and used for monitoring purposes by the end of the project

The DECR team are doing a fantastic job of community and government engagement for the project, laying the ground work for further, more in-depth involvement and collaboration in Y3. Through workshops, videos, posters and articles, there has already been an increase in the awareness and understanding of climate change and the Ramsar site (19.20).

The skill capacity is ongoing, but the project lead is very impressed with the level of technical capability achieved by the DECR team, since their arrival to the island. The next reporting year will focus on developing their spatial modelling skills, to ensure they can interpret the monitoring data effectively.

3.4 Monitoring of assumptions

Risk/Assumption	Activated (Y/N)	Notes
Decision makers / stakeholders are on board and there are no other major barriers to action	Y	<p>Due to staff resourcing and workload, the DECR lead has significantly reduced their role and availability for the project.</p> <p>The Wetland and Terrestrial Ecologists are working together to take on the DECR lead's role, but are routinely taken away from the project due to the scale of the DECR workload.</p>
Covid-19 mitigating strategies remain robust and operating	N	
No major natural disasters	Y	Hurricane Fiona made landfall on North Caicos on 19-20 September 2022. This resulted in significant impacts on fieldwork for several months. The lack of reliable internet meant communication with the DECR team was very unstable, at a time when planning for the first workshop was at its peak.
On-island activities can take place, or remotely if required	N	
The financial, human and IT resource available is sufficient to deliver the project	Y	<p>There have been significant difficulties in transferring any all payments to DECR. Similarly, it is difficult for DECR to finance fieldwork and conference expenditures.</p> <p>As such, a CRF transferred all funds originally allocated for DECR, to the project lead. These funds are specifically to be spent within TCI only.</p>
The reasons for designation of the Ramsar Site do not deteriorate - there may be less reason to expand the site if	N	

Risk/Assumption	Activated (Y/N)	Notes
the justifications and objectives of designation were being lost or not deliverable		
Key input data is available, and suitable for use.	Y	<p>Since February 2022, the project has been attempting to acquire benthic, bathymetric, and topographic data.</p> <p>Bathymetry data is now available.</p> <p>The topography is being examined for processing. There is an alternative available if this is unsuccessful.</p> <p>The license to use the benthic data is being sourced. If this is not possible, the models must continue without this data</p>
Climate prediction data is accurate/precise enough for the modelling to be locally applicable.	N	
Non-referenced information / expert opinion is accurate	N	
The data/models produced are fit-for-purpose	N	
Ramsar Site conditions allow for data collection	Y	Hurricane Fiona made landfall on North Caicos on 19-20 September 2022. This resulted in significant impacts on fieldwork for several months
DECR staff are able to collect field data when required	Y	<p>Hurricane Fiona also affected the physical ability of DECR staff to collect data.</p> <p>On January 14, 2023, the DECR truck on-island had been involved in an accident, rendering it unusable. The loss of the vehicle has significantly affected the</p>

Risk/Assumption	Activated (Y/N)	Notes
		progress and extent of the surveys since then. An application for a new vehicle had been sent in the days following the incident, but delivery is unknown.
Sentinel satellites remain operational for their expected lifetime.	Y	Sentinel-1B is unavailable due to a power issue since 23 December 2021 — mission end declared 3 August 2022. Sentinel-1C is scheduled for launch in Q1 2024

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

This project focuses on the important multiple values of, and potential changes to, the Ramsar site, including considering the impact of climate change issues affecting TCI. It focuses on the following priorities:

- Conservation, restoration, and wise use of wetlands.
- Conservation and effective management of coral reef, seagrass-meadows and mangrove forest ecosystems.
- Raising awareness of these wetlands' role in coastal protection

The project will directly contribute to the Ramsar Convention by seeking to provide robust scientific evidence for the management of the TCI site and establishing the evidence-base for potentially extending the Ramsar site into East Caicos.

It will help address commitments made by UK Government in various Ramsar Resolutions, including:

- XI.14 Climate change and wetlands: implications for the Ramsar Convention on Wetland,
- XIII.16 Sustainable urbanisation, climate change and wetlands
- XIII.24 The enhanced conservation of coastal marine turtle habitats and the designation of key areas as Ramsar Sites.

It will help TCI further meet commitments set out in the three pillars of the Convention:

- work towards the wise use of all their wetlands;
- designate suitable wetlands for the list of Wetlands of International Importance (the "Ramsar List") and ensure their effective management;
- cooperate internationally on transboundary wetlands, shared wetland systems and shared species.

In terms of local initiatives, the project will help TCI further the objectives of its Environment Strategy and contribute to meeting the Convention's mission "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world".

This project will help the Turks and Caicos Islands Government meet Guiding Principles and Commitments of the 2001 TCI Environment Charter including:

- Using natural resources wisely,
- contributing towards the protection and improvement of the global environment;
- safeguarding and restoring native species, habitats and landscape features, and
- studying and celebrating the environmental heritage as a treasure to share with our children.

The project has made good progress in supporting the project partners in identifying the key ecosystem services, functions, and threats that face the wetlands, as well as designing and developing model rulesets to spatially map them (19.3, 19.5). These have been identified as key for the current timeframe, as well as the future in relation to the impacts of climate change. The project continues to process satellite imagery across the region, and describe the dynamics of the wetlands. Key species that represent the wetlands have been identified, with an extensive desk study to understand their specific environmental requirements that make a good quality habitat (19.2).

Efforts are underway to ensure that all the above information is made available, for free and under an open license, using an existing data portal. This ensures that all the spatial data created under this Darwin project, is managed and obtainable with other complimentary data, that can be used by anyone.

Capacity for the awareness and understanding of the importance of wetlands, the impacts that climate change will have, and the interpretation of models has increased. This is across the island, across all ages, and across all sectors (19.12, 19.15, 19.21, 19.14).

5. Gender equality and social inclusion

There has been an unbiased approach to target audiences, with regards to gender, age, academia, social or cultural affiliations. The audiences targeted included all age schools, educators, governmental technical staff, and passers-by. Invitations to GIS workshops and surgeries are sent to associated organisations and directly to personnel who have made their interest known. 46% of the delegates to the workshop, and 54% of the GIS surgery attendees were women (19.13, 19.18).

Public outreach events organised by DECR have had a greater proportion of women in attendance, ~66% in total. ~67% of school-aged children engaged in the activities have been girls (19.16).

Where the project will engage with more stakeholders and other members of society in Y3, this will continue to be irrespective of age, gender, social or cultural background.

Please quantify the proportion of women on the Project Board ¹ .	25%
Please quantify the proportion of project partners that are led by women, or which have a senior leadership team consisting of at least 50% women ² .	33%

6. Monitoring and evaluation

The M&E system remains unchanged and will outline the key evaluation questions and the approach to monitoring that will help to design evaluations and data collection activities. This

¹ A Project Board has overall authority for the project, is accountable for its success or failure, and supports the senior project manager to successfully deliver the project.

² Partners that have formal governance role in the project, and a formal relationship with the project that may involve staff costs and/or budget management responsibilities.

will allow us to identify the information we need to collect, how we can collect it, and who will collect it. The data collection methods will include:

- Analysis of project management and monitoring data
- Surveys of stakeholders and project participants
- In-depth stakeholder and participant interviews
- Analysis of open access / published data

There are 3 phases to the M&E plan:

- Evaluation design
- Mid-term evaluation report
- Final evaluation report & legacy workshop

The Theory of Change Workshop, led by Wavehill and focusing on ESL and DECR, was conducted in September 2022, in order to set out the things that need to happen to achieve the intended final outcome of the project (19.23). The workshop imagined starting the project from scratch, to identify:

- What is the final goal of the project and its ultimate impact?
- What will be the interim outcomes of the project?
- What needs to happen before the final goal/ultimate impact of the project can be achieved?
- How will we know that we're making progress towards the final goal?
- What assumptions are being made, and what's the basis for those assumptions?
- What are the key barriers that will need to be overcome if the project is going to be a success?
- What are the key enablers?
- What has to be in place if the project is going to work, and are they in place?

Following this, a week-long on-island project planning meeting between ESL and DECR took place in November 2022, to redefine the specific requirements of the project, taking into account the difficulties experienced since the project start, and the ongoing resourcing issues within DECR. This led to a CRF and an overhaul of the project logframe, in collaboration with the project partners in Q4 2023, to bring it in line with the outputs from the theory of change, and the project planning meeting (DPLUS129_CRF_04).

The mid-term evaluation report is scheduled for early Q1 2024.

7. Lessons learnt

The importance of identifying and engaging with other governmental, departmental, technical, social, and local institutions early on in the planning process. This is particularly crucial when working in remote areas such as North and Middle Caicos, where the project is heavily reliant on local staff who may be isolated from other departments and organizations. It is also important to recognize the unique social structures and cultures of the local communities and tailor outreach and engagement efforts accordingly. In North and Middle Caicos, meetings and gatherings tend to only occur during larger social events, making it challenging to convey specific messages about environmental issues. Lastly, it is important to consider the declining population and emigration in certain areas and adjust project plans and expectations accordingly.

Technical training opportunities on the island are scarce and limited to a few technical groups located primarily on other islands. This scarcity, coupled with the unavailability of technical staff due to their engagement with other activities or disciplines, has restricted training opportunities via the project. It is recommended that smaller, targeted training sessions be conducted instead

of general invitations or meetings. Additionally, the limited designated meeting areas and conference rooms on the island, particularly North Caicos, hinder the physical hosting of training sessions, which provides a more personal and detailed training experience. Therefore, future projects should consider the need for virtual training or consider holding physical training sessions on other islands with better infrastructure

From a field survey perspective:

- Appreciating the scale of the Ramsar Site: It is important to fully appreciate the scope of a project's area of study, especially in terms of its size and accessibility. In the case of the Ramsar Site, the sheer size and inaccessibility of the landscape made it challenging to conduct surveys efficiently.
- Planning for accommodations: When conducting surveys in remote areas, it is important to plan for accommodations that are accessible and within budget. Future projects should explore and settle for accommodations in advance to ensure time availability is maximized.
- Digital mapping limitations: The use of digital composition maps, like Google Maps, can be an efficient way to plan field expeditions. However, it is important to note that the accuracy of the topography may not always be up to date. In this case, GIS software can be used to attain relatively recent imagery and highlight potential routes for consistency in location and reference points.
- Transitioning to digital data logging: While physical data sheets can be useful, they are limited in their ability to record a large amount of information. Transitioning to digital data logging can improve efficiency and accuracy, but proper planning is necessary to ensure proper file management and device functionality in the field.
- Ensuring appropriate technology and equipment: Field work can pose risks to technology and equipment due to environmental factors like heat and weather. Using personal devices may not be the best solution as they may not be secured or rugged enough for field use. Proper equipment, such as rugged tablets housed in shock-proof casing and virtual storage accounts, are necessary to ensure the safety and efficiency of data collection in the field.

One of the key lessons learned from this project is the importance of access to key datasets in modelling, particularly lidar data. The exclusion of processing the topographic lidar has created substantial delays in accessing these datasets, in addition to the time it took to acquire them in the first place. It is recommended that when procuring large and expensive data, consideration should be given to who else might benefit from the project beyond its own specific requirements. For instance, in this case, the DECR project team collect fieldwork data that exceeded the project's requirements, owing to the remote locations they visited. By considering the broader applications of such data, the potential for collaboration and cost sharing can be maximised.

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

The project may wish to reconsider Activities relating to Output 2, as progress is described in the main text, but none is shown against the activities listed in the Logframe.

This should be now rectified in this review.

Consider how you can address the comments in the gender section.

During the November workshop, a session on local communication was discussed. A particular topic of this was how to reach target audiences disaggregated by gender, age, profession etc,

and considered the different cultural attitudes across TCI. This is being adapted for use by DECR within their communication plan.

With regards to 'elevating the voices of women', as discussed in Section 5 the majority of the outreach has been engaging a higher proportion of women, across all ages, and across all activities.

The Report refers to on-site evidence of turtle nesting activities but no further information is provided. More evidence of this and other fieldwork should be provided with the next annual report.

Please see the full turtle survey report provided (19.6)

Other fieldwork evidence is here (19.9, 19.10, 19.4)

Does the project have any assurances that the DECR will retain the new member of staff beyond the lifetime of the project?

This will be a focus for Y3.

9. Risk Management

The residential community where the DECR team lives is humid and heat retentive, which can cause heat exhaustion for personnel and stress for electrical equipment. In the field, workers can experience the effects of humidity and extended sun exposure, while dynamic weather patterns can range from extreme heat to heavy rain and lightning storms in a single day.

During the on-island stay in North Caicos, living amongst the DECR staff, the project lead was made acutely aware of the potential strain of the isolation, and working conditions, on the staff in DECR. The conditions had been outlined and discussed during the advertising of the Ecologist post, but may have not done the situation justice. Although the project design remains the same, the project lead will significantly increase their contact time with DECR for social interaction, and change their management style to a more single-task based approach.

10. Other comments on progress not covered elsewhere

On January 14, 2023, the DECR truck on island had been involved in an accident, rendering it unusable. The cause was determined to be due to inclement weather (heavy rainstorm), which altered the road conditions, allowing for the vehicle to hydroplane and lose control. Both occupants were cleared by a medical professional on island. The loss of the vehicle has significantly affected the progress and extent of the surveys since then. An adaptation to the lack of transportation was to revisit the North Caicos trails which were within walking distance of the residential area, to redevelop the survey data sheets and methodology. However, the inconvenience of the lack of mobility has added increasing strain on the operational capacity of the North Caicos DECR team; especially when disasters like wildfires and deforestation events were reached with resulting delays. An application for a new vehicle had been sent in the days following the incident, however there still remains ambiguity as to when a next vehicle will be procured and delivered to North Caicos.

The Wetlands Officer has provided support to various projects including DPLUS114 with Kew Botanical Gardens, which aims to identify tropical important plant areas in the Turks and Caicos Islands. Additionally, the officer has assisted with interdepartmental collaborations such as avian surveys with the Royal Society for the Protection of Birds, environmental inspections by the DECR, and Queen Conch surveys with the Department of Fisheries and Marine Resources

Management as part of the RESEMBID program. The officer's contributions include providing videographic and photographic imagery of the North, Middle, and East Caicos Nature Reserve and other TCI features for documentaries and video promotions.

Apart from on-site training, the Wetlands Officer has also completed a UAV Drone training workshop with DECR in December 2022 and is scheduled to attend further workshops, such as DPLUS181, which aims to protect the Caribbean's largest uninhabited island in May 2023. The officer will also collaborate with members from DECR, RSPB, TCNT, and other departments for joint expeditions into East Caicos in the following year.

11. Sustainability and legacy

The processed Sentinel-1 and -2 data is open license, and the derived data and models will be published under Creative Commons, to be freely shareable and distributed.

During the on-island workshop, participants assessed themselves anonymously on a range of questions related to understanding the impacts of climate change on the Ramsar Site and the measures that could be taken to mitigate them, with 78% of the responses during the week indicating a score of 4 or 5 out of 5 in increased awareness, understanding, and capacity (19.20).

The exit strategies in place are still valid, and include:

- ensuring all project outputs are available on-line, and under an open licence for others to use and build upon
- submitting proposals for funding to various grant aid bodies in order to maintain the ecologist post, to ensure that this staff member, who will be fully trained in the project, could be available to feed any field work data into the monitoring in the future. This will be a focus in Year 3.
- delivering a sustainable monitoring plan, together with an ongoing source of very low-cost data from satellites, that can be blended with local field work.

12. Darwin Plus identity

The Darwin logo has been highlighted in all video, Power Point and poster presentations specific to the DPLUS129 Project. Darwin as an entity has been made mentioned in verbal presentations to corporate and executive intergovernmental bodies.

The Darwin Plus and Darwin Local opportunities are known amongst the various environmentally focused departments and associated organizations such as the DECR, Department of Fisheries and Marine Resources, and Turks and Caicos National Trust. Outside of other departments in the TCIG, the Darwin Plus funding opportunities and projects are not fully made aware to the general public.

The project's social awareness and local support were strengthened primarily through public outreach and the use of video presentations. One of the videos (see Section 15) impressed the Hon. Josephine Connolly, the current Minister of Tourism, Environment, Fisheries and Marine Affairs, Culture and Heritage, Agriculture and Religious Affairs, who advocated for its use in other mediums, including the Turks and Caicos International Film Festival in November 2022.

Furthermore, the video has been employed in subsequent school visits, and was uploaded to the [DECR Environmental Education & Outreach Facebook Page](#), with an audience capture of 1.2k members.

In addition, a submission was made to the "Times of the Island Magazine" Green Pages (Winter 2022/2023 Edition) to promote the natural environment within the North, Middle, and East Caicos Nature Reserve and other habitats (pgs. 35-40) (19.17).

Following a change in ministerial positions in February 2023, a call for project poster summaries was issued, and a summary poster of the DPLUS129 project was submitted for both digital and physical presentations. These posters were also exhibited during the Earl and Countess of Wessex's visit on February 23rd (19.14).

13. Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?	No
Have any concerns been investigated in the past 12 months	No
Does your project have a Safeguarding focal point?	Mr Graeme Summers, [REDACTED]
Has the focal point attended any formal training in the last 12 months?	No
What proportion (and number) of project staff have received formal training on Safeguarding?	Past: 0% [0] Planned: 0% [0]
Has there been any lessons learnt or challenges on Safeguarding in the past 12 months?	No
Does the project have any developments or activities planned around Safeguarding in the coming 12 months?	No

14. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2022 – 31 March 2023)

Project spend (indicative) in this financial year	2022/23 D+ Grant (£)	2022/23 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others (Please specify)				
TOTAL	134,274	104,000		

	Matched funding secured to date	Total matched funding expected by end of project
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Matched funding leveraged by the partners to deliver the project.		
Total additional finance mobilised by new activities building on evidence, best practices and project (£)		

15. OPTIONAL: Outstanding achievements or progress of your project so far (300-400 words maximum). This section may be used for publicity purposes

I agree for the Biodiversity Challenge Funds Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here).

The DPLUS129 DECR project team have a secret talent that has not gone unnoticed, as evidenced by the Minister of Tourism, Environment, Fisheries and Marine Affairs, Culture and Heritage, Agriculture and Religious Affairs, the Hon. Josephine Connolly. In anticipation of the November 2022 workshop, Mr Christopher May, the project wetland officer, created a video showcasing the high biodiversity of the Ramsar Site. The showreel, titled “DECR DPLUS129- The North Middle and East Caicos Nature Reserve 2022”, was particularly impressive to the Minister, who saw the potential for it to be used in other mediums.

The Ministerial enthusiasm led to the video being presented at the Turks and Caicos International Film Festival on November 11, 2022. The festival was attended by professionals from the local, and international, film industry, as well as local residents and schools. Being chosen as the final showreel of the festival was a huge honour for the DPLUS129 project team, and it highlighted the importance of their work to preserve and protect the Ramsar Site.

Following the successful screening of the video at the film festival, the DPLUS129 project team has used it for subsequent school visits. The video has proven to be an effective educational tool in showcasing the biodiversity of the Ramsar Site and raising awareness about the importance of conservation efforts. Overall, the success of the video at the film festival and its continued use in educational settings highlights the importance of using various mediums to share information and raise awareness about conservation efforts.

The DPLUS129 project team's efforts to showcase the biodiversity of the Ramsar Site through the video has not only garnered recognition from the Minister, but it has also provided a valuable tool for educating the public about the importance of preserving and protecting the natural environment, and ensuring their island remains beautiful by nature.

Image, Video or Graphic Information:

File Type (Image / Video / Graphic)	File Name or File Location	Caption, country and credit	Online accounts to be tagged (leave blank if none)	Consent of subjects received (delete as necessary)
Video	DECR DPLUS 129- The North Middle and East Caicos Nature Reserve 2022	This cinematic-style video was created to highlight the rich biodiversity and textured environments within the TCI North, Middle and East Caicos Ramsar site. Turks and Caicos Islands Credit: Mr Christopher May	Instagram: seathroughmyeyescm	YES

16. Annex 1: Report of progress and achievements against logframe for Financial Year 2022-2023

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
<p>Impact</p> <p>TCI wetlands and their internationally significant biodiversity are maintained into the long-term despite a changing climate, due to the enhanced understanding, monitoring and knowledge of what contributes to their resilience.</p>			
<p>Outcome</p> <p>TCI Government creates and maintains scientifically robust evidence to support, and potentially extend the Ramsar Site, through understanding and monitoring of key wetland natural functions to support future TCI resilience.</p>	<p>0.1: Sufficient evidence is produced to support the proposed Ramsar Site extension, by Dec 2023</p> <p>0.2: An environmental monitoring system is set-up and fully functioning for long-term operation. It feeds in-situ and remotely sensed data to key agencies (e.g., DECR), by the end of the project.</p> <p>0.3: Increased awareness, understanding, and skill capacity within key agencies (e.g., DECR), which will allow for data to be created, interpreted, and used for monitoring purposes by the end of the project</p>	<p>0.1. The majority of the key input data has been acquired. The models have been designed and developed.</p> <p>02. A data portal has been confirmed, and efforts are underway to identify the data manager. Remote-sensed models of wetland condition have been identified and designed, and are in development. In situ data is being routinely collected by DECR.</p> <p>0.3 The first workshop demonstrated an increase in awareness and understanding of the key issues. GIS surgeries have ensured that government agencies have access to experts, and the DECR project team have increased the GIS skills.</p>	<p>0.1. There is a need to acquire the final key input data, or use alternative sources. The models can then be run, validated, the reports written.</p> <p>0.2 The data portal needs testing. The remote sensing models need to be completed, validated, and fed into the data portal for sign off.</p> <p>0.3 The GIS surgeries are to continue. A case study project will be devised for the DECR project team. A training and awareness workshop is planned for the end of the year.</p>
<p>Output 1.</p>	<p>1.1: Detailed models show the current functions of the Ramsar Site, by Sep 2023</p>	<p>1.1. The models to be created have been identified. These include 5 ecosystem services, and 5 species distribution models. The scientific rulebases for the ecosystem services have been developed. An extensive desk study has</p>	

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
<p>Documentation, maps and methods:</p> <p>a) evidence of the ecological, climate mitigation and socially important functions of the wetland</p> <p>b) measures of good ecological condition established by the project</p> <p>c) reporting agreed that take into account the changing climate.</p>	<p>1.2: Detailed models show the potential functions of the Ramsar Site, by Sep 2023</p> <p>1.3: Detailed models show the impact that future climate may have on the functions of the Ramsar Site, by Sep 2023</p> <p>1.4: Data-driven evidence supports the expansion of the Ramsar Site, by Dec 2023</p>	<p>outlined the requirements for the species distribution models. The majority of the input data has been collected.</p> <p>1.2. The models for mapping the opportunities to enhance the ecosystem services, and mitigate the risks/vulnerabilities, of the Ramsar Site have been designed</p> <p>1.3. The different climate scenarios have been identified from the WorldClim climate projections</p> <p>1.4. No activity</p>	
Activity 1.1 Historic change		Verification was put on hold in preference of organising the workshop and getting key data and information for the rest of the project.	Verification from DECR
Activity 1.2 Current wetland dynamics		Dynamic models are routinely produced every month. Verification was put on hold in preference of organising the workshop and acquiring key data, and information, that underpins the rest of the project.	Verification from DECR
Activity 1.3 Ecosystem Services (Stock / Opportunities)		The models to be created have been identified. These include 5 ecosystem services, and 5 species distribution models. The scientific rulebases for the ecosystem services have been developed	<p>Source missing key data</p> <p>Run draft models and validate from DECR.</p> <p>Iterate until they are signed-off</p>
Activity 1.4 Ecological Envelopes		The key species for modelling have been identified.	Run draft models and validate from DECR.

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
		<p>An extensive desk study has outlined the requirements for the species distribution models.</p> <p>The design of the models is in progress.</p>	Iterate until they are signed-off
Activity 1.5 Species modelling		<p>No activity, as this requires the missing very high-resolution topographic data. This has now been delivered, but as >6,000 individual raw lidar files, >7TB in data size, that require expert processing</p>	<p>Asses if JNCC can process the terrestrial lidar data.</p> <p>Continue pushing for licenses to use identified alternatives, but these are not at the required resolution.</p>
Activity 1.6 Modelling climate change		<p>No activity, as this requires outputs from 1.3 and 1.4</p>	<p>Run the same models from 1.3 and 1.4, but using climate prediction data from 2041-2016, and 2061-2080</p>
<p>Output 2.</p> <p>A monitoring system enables users to access and view the latest in-situ and remotely sensed data.</p>	<p>2.1: Ground collection data plan created, tested and routinely collected, by Mar 2023</p> <p>2.2: The design, creation, validation and routine collection of Earth observation-based wetland condition indicators is complete by Jun 2023</p> <p>2.3: The design, development, testing, and operation of the monitoring system is live by Dec 2023.</p> <p>2.4: By the project end, funding is secured to ensure the continuation of the monitoring system</p>	<p>2.1. Ground data routinely collected</p> <p>2.2. Satellite imagery continues to processed throughout the year. Short-term and long-term condition metrics have been defined by DECRA, which include land clearance, fire damage, drought stress, suspended solids, and coastal change. The design of these indicators is complete, and are being developed.</p> <p>2.3. DECRA decided to use the existing TCI Data Portal. Efforts are underway to contact the data manager for the technical understanding of how to feed monitoring data into it on a routine basis.</p>	
Activity 2.1. Establish a monitoring plan		<p>Short-term and long-term condition metrics have been defined by DECRA.</p>	<p>Complete the development of the remote sensing indicators.</p>

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
		These have been translated into remote sensing indicators, which have been designed and are in development.	Verify the outputs with DECR fieldwork Verify the methodology with JNCC
Activity 2.2a. Design monitoring system		It was originally planned for the project lead to build a system from scratch. This has now changed to utilise the existing TCI data portal. DECR are attempting to find the individual who is responsible for this system.	Define the feasibility of feeding data into the TCI Data Portal. If this is not possible, the project lead will need to design one from scratch.
Activity 2.2b. Build the monitoring system		No activity	Automate all the remote sensing data and indicators to feed into the data portal.
Activity 2.3. Testing the monitoring system		No activity	Populated the data portal with data and confirm its usability.
Activity 2.4. Future funding		No activity	Identify cases and grants for future funding, and write proposals.
Output 3. Participants in the project develop the knowledge and skills necessary to effectively use the project tools required.	3.1: At least 10 organisations actively engage with the project and are aware of its value, by Sep 2023. 3.2: At least 75% of actively engaged participants understand the impacts that climate change may have on the Ramsar Site, and the mitigations that can be put into place, by Dec 2023	3.1. The project actively engaged ten on-island organizations, including four government departments, a non-governmental organization, four schools, and an international film festival. 3.2. At the on-island workshop, the delegates anonymously assessed their understanding of the impacts of climate change on the Ramsar Site and possible measures to mitigate them using a range of questions, with 78% of responses scoring 4 or 5 out of 5. 3.3. The DECR project team have attended every monthly GIS surgery session. The Wetland ecologist started with no GIS history, and can now	

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
	3.3: Capacity within DECR is increased to the extent that key personnel can create, interpret, visualise, and use GIS data for modelling and monitoring the Ramsar Site, by Mar 2024	create and manipulate data, and make maps to help him with his every day fieldwork activities.	
Activity 3.1 Communication plan		A communication plan is in development with DECR that identifies the key stakeholders, the key messages and the communication tools.	DECR to complete the communication plan
Activity 3.2 Recruitment		The new Wetland Ecologist arrived on island, and was able to start induction to the project in mid-May. Internal issues within TCI meant that the equipment was delivered to the ecologist a few months later.	Complete
Activity 3.3 Project launch		The project launch was pushed back to November due to the delay in the recruitment of the Wetland Ecologist. The project was officially launched on 7th November 2022, attended by various government departments including the Minister and Permanent Secretary.	Complete
Activity 3.4a Workshop 1		An on-island workshop was held the week of the 7 th November. The	Complete

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
		workshop focused on understanding climate change impacts on biodiversity, using data and knowledge to build ecological models, identifying threats and monitoring methods for Ramsar sites, utilizing fieldwork and remote sensing for monitoring wetland habitats, and developing a communication strategy for stakeholders.	
Activity 3.4b Workshop 2		Not yet started	The monitoring data needs to have drafts available An online steering group will be organised to evaluate the data, and agree on the systems put into place
Activity 3.4c Workshop 3:		Not yet started	Establish dates, send invites, organise T&S.
Activity 3.5a DECR GIS training		Both the North Caicos DECR ecologists have regularly attended 3.5b, and are actively encouraged to incorporate GIS into their everyday routines.	Define, and supervise a case study project

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
Activity 3.5b Wider GIS training		Monthly GIS surgeries have been ongoing since Sept 2022. These are informal, relaxed, and non-compulsory environments.	Ongoing.
Activity 3.6 On-island training		<p>The wetland ecologist has continued their training in the TCI ecology and wetland field survey techniques. They even designed the Ramsar Sampling Template.</p> <p>The North Caicos DECR team are also learning how to incorporate drones, where applicable.</p>	Ongoing.
Activity 3.7 Monitoring system		Not yet started.	<p>Date and training format to be decided on (e.g., during an on-island workshop or virtually).</p> <p>Key stakeholders to be identified</p> <p>Training to take place.</p>

17. Annex 2: Project's full current logframe (from DPLUS129_CRF_04)

Project Summary	Measurable Indicators	Means of Verification	Important Assumptions
Impact: TCI wetlands and their internationally significant biodiversity are maintained into the long-term despite a changing climate, due to the enhanced understanding, monitoring and knowledge of what contributes to their resilience.			
Outcome: TCI Government creates and maintains scientifically robust evidence to support, and potentially extend the Ramsar Site, through understanding and monitoring of key wetland natural functions to support future TCI resilience.	0.1: Sufficient evidence is produced to support the proposed Ramsar Site extension, by Dec 2023	0.1: Technical and policy report that outline the methods, results and recommendations	<ul style="list-style-type: none"> Decision makers / stakeholders are on board and there are no other major barriers to action Covid-19 mitigating strategies remain robust and operating No major natural disasters On-island activities can take place, or remotely if required The financial, human and IT resource available is sufficient to deliver the project The reasons for designation of the Ramsar Site do not deteriorate - there may be less reason to expand the site if the justifications and objectives of designation were being lost or not deliverable
	0.2: An environmental monitoring system is set-up and fully functioning for long-term operation. It feeds in-situ and remotely sensed data to key agencies (e.g., DECR), by the end of the project	0.2: Sign off and subsequent press release	
	0.3: Increased awareness, understanding, and skill capacity within key agencies (e.g., DECR), which will allow for data to be created, interpreted, and used for monitoring purposes by the end of the project	0.3: Interviews with senior officials of key stakeholder organisations, short surveys disseminated via key organisations to their own stakeholders and a series of case studies as feedback to support learning around how to improve awareness of climate resilience issues and activities on the island to strengthen climate resilience.	
Output 1: Documentation, maps and methods:	1.1: Detailed models show the current functions of the Ramsar Site, by Sep 2023	1.1: Data and maps of wetland dynamics, stock ecosystem services, current risks/vulnerabilities, and habitat quality	<ul style="list-style-type: none"> Key input data is available, and suitable for use. Climate prediction data is accurate/precise enough for the

<p>a) evidence of the ecological, climate mitigation and socially important functions of the wetland</p> <p>b) measures of good ecological condition established by the project</p> <p>c) reporting agreed that take into account the changing climate.</p>	1.2: Detailed models show the potential functions of the Ramsar Site, by Sep 2023	1.2: Data and maps of the opportunities to enhance the ecosystem services, and mitigate the risks/vulnerabilities, of the Ramsar Site	<p>modelling to be locally applicable.</p> <ul style="list-style-type: none"> • Non-referenced information / expert opinion is accurate • The data/models produced are fit-for-purpose
	1.3: Detailed models show the impact that future climate may have on the functions of the Ramsar Site, by Sep 2023	1.3: Data and maps of the ecosystem services, risks/vulnerabilities, and habitat quality, under different climate scenarios	
	1.4: Data-driven evidence supports the expansion of the Ramsar Site, by Dec 2023	1.4: Documents, data and maps produced showing the extent the Ramsar Site needs protecting, in order to maintain its current function into the future	
<p>Output 2: A monitoring system enables users to access and view the latest in-situ and remotely sensed data.</p>	2.1: Ground collection data plan created, tested and routinely collected, by Mar 2023	2.1: Sign-off on ground collection plan, fieldwork reports	<ul style="list-style-type: none"> • Ramsar Site conditions allow for data collection • DECR staff are able to collect field data when required • Sentinel satellites remain operational for their expected lifetime.
	2.2: The design, creation, validation and routine collection of Earth observation-based wetland condition indicators is complete by Jun 2023	2.2: Sign-off on condition indicators, data and maps of wetland condition	
	2.3: The design, development, testing, and operation of the monitoring system is live by Dec 2023	2.3: Stakeholder feedback, sign-off, press release	
	2.4: By the project end, funding is secured to ensure the continuation of the monitoring system	2.4: Signed-off departmental plans/funding applications	
<p>Output 3:</p>	3.1: At least 10 organisations actively engage with the	3.1: Communication plan, publicity material, event attendance lists,	

Participants in the project develop the knowledge and skills necessary to effectively use the project tools required.	project and are aware of its value, by Sep 2023.	attendee feedback surveys, stakeholder interviews, press releases Press release and recording of workshop 2 webinar	<ul style="list-style-type: none"> • Key staff are available to participate in workshops/training. • A wetland ecologist can be employed in a timely manner • Current levels of knowledge/skill/understanding can be baselined for M&E purposes. • Staff retention and progression allows them to implement and share knowledge/skills • TCI Gov infrastructure allows for a web-based data portal/dashboard to be build
	3.2: At least 75% of actively engaged participants understand the impacts that climate change may have on the Ramsar Site, and the mitigations that can be put into place, by Dec 2023	3.2: Event materials, attendee feedback surveys, stakeholder interviews	
	3.3: Capacity within DECR is increased to the extent that key personnel can create, interpret, visualise, and use GIS data for modelling and monitoring the Ramsar Site, by Mar 2024	3.3: Case study reports of the models created by DECR for Output 1	
	3.4: By the end of the project, DECR independently use the monitoring system to plan fieldwork activities in the Ramsar Site	3.4: Evaluation report / field officer log books	
<p>Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <p>1.0 Mapping and modelling</p> <p>1.1 Historic change: Data collation and modelling to show the longer-term changes for the wetlands since Darwin Project 8146.</p>			

1.2 Current wetland dynamics: Data collation to provide the current data on the wetland dynamics and to develop useful indicators that can be automated to describe good ecological condition.

1.3 Ecosystem Services (Stock / Opportunities): Modelling to describe key ecosystem services/vulnerabilities, and the opportunities to enhance/mitigate them, respectively.

1.4 Ecological Envelopes: Modelling to describe the spatial quality/extent of wetland habitats, for key wetland species.

1.5 Species modelling: Modelling to describe the spatial quality/extent of habitats used by turtles, from the [Turks and Caicos Islands Turtle Project](#).

1.6 Modelling climate change: Modelling to describe the climate change impacts on the ecosystem services, ecological envelopes, and species.

2.0 Monitoring

2.1 Establish a monitoring plan: Design a monitoring plan based on frequency and importance of, seasonal, annual and long-term change. Design the indicators of significance and consider aspects such as their frequency of assessment and ease of collection.

2.2a Design monitoring system: document the full specifications, software and ease of communication with other on-Island systems, data capture systems, ongoing management and maintenance systems.

2.2b Build the monitoring system: build the monitoring system and trial its use for both remote sensing and field data, with the involvement of new wetland officers and other key staff.

2.3 Testing the monitoring system: the monitoring system is populated with data and its usability confirmed. This is validated by relevant project partners.

2.4 Future funding: Cases written for future funding, including sourcing funding types and writing the application, to take the most important aspect of natural capital opportunities modelling forward at the end of this project to retain the Wetland Officer.

3.0 Capacity building

3.1 Communication plan: Establish an outreach calendar, identifying the key stakeholders, the key messages and the communication tools.

3.2 Recruitment: Recruitment a Wetland Officer for North Middle and East Caicos, and ensure access to GIS-capable IT.

3.3 Project launch: online/on-island event with key stakeholders.

3.4a Workshop 1: Educating stakeholders about wetland function, modelling and remote sensing, and monitoring.

3.4b Workshop 2: Defining the monitoring options and agreeing methods/systems to be put into place.

3.4c Workshop 3: Ramsar Site evidence and project show and tell. Monitoring system goes live.

3.5a DECR GIS training: case studies and training for modelling ecosystem services, ecological envelopes, and climate scenarios.

3.5b Wider GIS training: setting up and running monthly GIS surgeries for TCI Government departments.

3.6 On-island training: in-field work methods and turtle survey and update on history of original Ramsar Site designation.

3.7 Monitoring system: Training to key stakeholders, on how to use and interpret the monitoring data.

18. Annex 3: Standard Indicators

The Biodiversity Challenge Funds (BCFs) use high quality and accessible Monitoring, Evaluation and Learning (MEL) to enable scaling, replication and increase the impact of the funds and the projects we support.

The project lead recognises, and agrees with, the importance of the Standard Indicators. The Biodiversity Challenge Funds Standard Indicator Webinar was attended on 18th April 2023.

It is understood that Standard Indicators are a requirement for new projects, and that current projects are encouraged to review their existing indicators against the Standard Indicators, and report against as many as is feasible to the design of their project. However, the indicators for this project changed through a CRF a few days before the Annual Review deadline, and the inclusion of this section was not whole feasible. The project lead is committed to review their new indicators against the Standard Indicators, but will not be able to for this reporting round.