Darwin Plus: Final 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: no later than 3 months after agreed end date.

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

Darwin Plus Project Information

Project reference	DPLUS153
Project title	Conserving tropical marine ecosystems in TCI through science-based fisheries management
Territory(ies)	Turks and Caicos Islands (TCI)
Lead Partner	South Atlantic Environmental Research Institute (SAERI) / Department of Environment and Coastal Resources (DECR)
Project partner(s)	Turks and Caicos Islands Government (TCIG), Department of Environment and Coastal Resources (DECR), Department of Fisheries and Marine Resource Management (DFMRM), Fish Ageing Services Ltd Pty (FAS), Joint Nature Conservation Committee (JNCC)
Darwin Plus Grant value	£344,905
Start/end date of project	July 2021–December 2023
Project Leader name	Tara [redacted] SAERI) and Lormeka [redacted] (DECR). Project Manager – Dr Edward [redacted]
Project website/Twitter/blog etc.	Website: https://www.south-atlantic-research.org/dplus153-conserving-tropical-marine-ecosystems-in-tci-through-science-based-fisheries-management/
Report author(s) and date	Dr Edward [redacted], February 29th 2024

1 Project Summary

The TCI is one of 14 United Kingdom Overseas Territories (UKOT) located 145 km north of Hispaniola (Haiti and the Dominican Republic) and 925 km south-east of Miami (Figure 1). The easterly occurring Turks Islands are separated from the Caicos Islands by a deep-water channel approximately 35km wide. The TCI population is approximately 42,953 (2019), and the total area of the Exclusive Economic Zone (EEZ) is 154,058 km². Tourism is the main contributor to the TCI economy, followed by the offshore financial sector and the fishing industry.

The TCI is biodiverse and the marine environment provides many important ecosystem goods and services. In part, these are provided through the health of mangroves, coral reefs and seagrasses which are barriers to storm surge. The marine environment is also at the center of the tourism industry, with many tourists coming to the islands to enjoy the pristine beaches and healthy coral reefs. Lastly and most importantly, TCI's marine environment is critically important to it's fisheries. These are not only important financially, but also culturally and through their large contribution to employment, livelihood-provision and food security.

The balance between maintaining sustainable tropical marine ecosystems and Small-Scale Fisheries (SSF) is delicate and needs to be actively managed. Overfishing and the overexploitation of marine resources can threaten the livelihoods and food security of local communities and can also impact the other ecosystem services provided by a healthy marine ecosystem. In order to promote sustainable SSF practices, data are required to inform robust evidence-based management. In the Turks and Caicos Islands (TCI), insufficient fish landings and life history data have been available to

conduct basic fishery assessments. Thus, local capacity for fisheries research and management has presented an important gap and the fishery has been undermanaged.

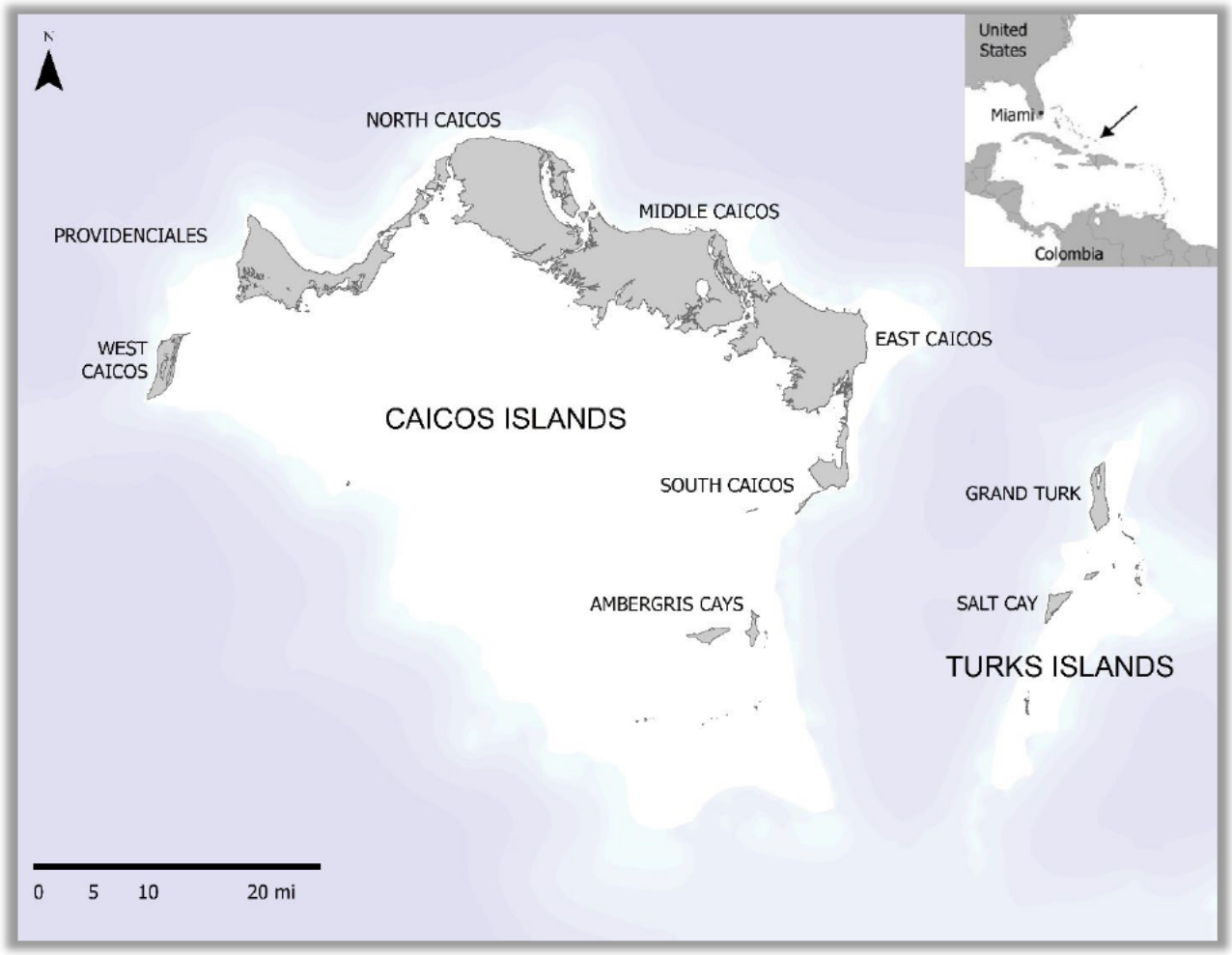

Figure 1: The Turks and Caicos Islands

Despite the importance of the marine environment, TCI has not had sufficient data available to inform fishery management. To address this, the project collaborated directly with local stakeholders and fishers, and aimed to improve local fisheries-related catch, effort and biological data in the TCI. The project also aimed to develop local capacity and resource to facilitate long-term science-driven fishery assessments locally and regionally, through the provision of a state-of-the-art fisheries laboratory. Lastly, the project worked closely with local government to ensure that the fisheries research tools which were provided could be appropriately translated into management outcomes and directives.

2 Project Partnerships

All formal project partners were identified at the application stage. The project was developed through a request from in-territory co-lead DECR, who continue to be highly involved in the project. Prior to project start-up, there was an (unforeseen) internal restructure within TCIG which resulted in the formation of a separate government department – DFMRM. The DFMRM took over the responsibility and mandate for fisheries monitoring, management and enforcement from the DECR in 2021. As such, the DFMRM have become integral project partners, working closely with project staff in several areas – including field work, routine data collections and laboratory work. The initial Memorandum of Understanding (MoU) between project co-lead organisation SAERI and TCIG was formally amended to include the DFMRM.

The project has remained aligned with the DECR through the location of the fisheries laboratory, the office of the SAERI-employed Project Manager (PM) and DECR-employed Project Officer (PO), pre-existing contractual agreements, and the office of the project co-leader – Lormeka Williams, former DECR Director. A core project group (TCIG & SAERI) met once every two weeks to progress project implementation and was comprised of the PM and PO, SAERI lead (Tara Pelembe), DECR Deputy Director, DECR Assistant Director of Research and Development, DFMRM Director,

DFMRM Deputy Director, DFMRM Assistant Director for Fisheries and two DFMRM Scientific Officers. Additional persons were invited to group meetings as and when appropriate.

Other project partners (FAS & JNCC) were involved in specific trainings or deliverables (e.g., FAS – Y1 otolith and data collection training etc.) and as members of the Project Management Group (PMG). The PMG was tasked with steering the project and contributing towards high-level decision-making. The PMG was also responsible for Monitoring and Evaluation (M&E), as outlined in the M&E plan. PMG meetings were held quarterly and the project PMG meeting minutes and M&E plan are available from the project webpage.

Project partner FAS were involved in providing ongoing support for the development of the fisheries and marine laboratory. This included formal training on island in Y1 as well as playing a large role in the development of the business case for the laboratory's operation in Y2 (see AR2). As the project now moves into the post-project phase, FAS will remain available to assist with the implementation of the laboratory's business case.

Through the project, SAERI and the JNCC have continued to strengthen their relationships in country and with TCIG. On the back-end of the project, SAERI have been invited to continue their work alongside TCIG through several other ongoing and new projects and works. SAERI project staff have also been encouraged to participate in policy workshops to assist with translating project findings and identified gaps into new policy and protocols.

The project partnerships have had many strengths as well as some challenges. A major strength of the project has been the location of the PM in country, nested within local TCIG departments. This has allowed for more meaningful and effective communication and skill share. For example, much of the data collection training which was initially delivered has required a significant amount of reiteration. Hosting the PM on island meant that they were available to provide continued support for learning.

Additionally, the PO was recruited locally and is a Turks and Caicos Islander. This has been extremely successful for improved stakeholder engagement and for ongoing training of officers on other islands. The PO is a local community member, and this has promoted trust and buy-in from the fishing community. The fact that the PO is local also ensures that there is sustainability of skill share and learning outcomes and the PO position has now been secured as a permanent DFMRM staff position as of April 1st 2024.

The main partner challenges which were met through the project surrounded capacity and resource to collect data. What was originally anticipated from local TCIG partner organisations was not available to the project, due to the departmental split. When the change occurred, a number of positions were reappointed, and the original staff capacity was lost. The newly formed department lacked capacity for research and monitoring – with only two scientific positions available on one of the islands (South Caicos). During the split, the majority of scientific staff remained with the DECR and fishery enforcement staff left to join the DFMRM. This meant that the DFMRM effectively became an enforcement agency with minimal scientific, data collection or management capacity, while scientific staff which remained with the DECR no longer had a remit to undertake fisheries work. This became increasingly evident as the project developed.

As time progressed, the DFMRM attempted to build staff capacity and appointed one additional scientific officer on Providenciales. However, this alone was not sufficient to address the lack of resource. To address this, the PM and SAERI CEO Dr Paul Brickle hosted several meetings on island in July 2023 with the DFMRM Director, DFMRM Assistant Director for Fisheries, Deputy Permanent Secretary and Permanent Secretary to discuss identified gaps and potential solutions. As an outcome of this process, a paper was compiled and submitted to TCIG Cabinet for endorsement. Based on the recommendations of the paper, TCIG have requested four new fisheries scientific staff positions in their preliminary budget for 2024. If granted, this will provide vital support for fisheries science and management in the TCI and provide critical capacity for the project outcomes to be sustained.

During the project timeline, the challenge of accessing data was partly overcome through increased independent sampling using DFMRM and DECR vessels. These were performed once a month, depending on boat availability and weather. Another successful solution was through an informal partnership with the local grocery chain store "IGA Gourmet". The vast majority of fish were landed on the islands of South Caicos and Grand Turk, where challenges with government staffing capacity prevented consistent data collection. However, IGA Gourmet purchased fish from South Caicos weekly and therefore provided an opportunity for the project to access South Caicos catch from Providenciales. This partnership was extremely beneficial and routine biological sampling of fish

lengths, weights and otoliths was undertaken by the PO and a DFMRM Scientific Officer weekly. This sampling continues post-project and, given its success, new relationships have been established with other fishery stakeholders, including a local fishmonger and a restaurant owner.

Project Stakeholders

Stakeholders lie at the core of this project. Key stakeholder engagements took place through the nationwide fishery stakeholder consultation, which was held in July 2022. This was aimed at engaging important stakeholders, identifying, and verifying important fish landing sites, harvesting historical fisher ecological knowledge and gathering perspectives from members of the fishing community regarding how best to facilitate fisheries data collection and management. The activities and results of the consultation are detailed in the consultation report, which is available from the project webpage.

Ongoing stakeholder engagements also took place through routine data collection and data collector staff developed trusted relationships with several fishery stakeholders. These relationships were integral as they often allowed for more successful access to data, by having fishers land fish whole, or contacting data collectors when approaching landing sites. Exchanges of knowledge and demonstrations about the processes of fisheries monitoring and management allowed for increased trust to be developed with the fishing community. These included bringing outputs from the laboratory such as otolith images or other samples to show fishers. The informal nature of these conversations often allowed for more meaningful exchanges (when compared with formal presentations or meetings, for example), and the regularity of these interactions allowed for a level of trust and rapport to be built. This was critical for developing an understanding, within the fishing community, of the importance of science-led fisheries management. Due to the retention of the PO post-project, these relationships persist and will likely continue to grow.

At several stages of the project, the School for Field Studies (SFS) were engaged and the PM delivered two talks at the SFS on South Caicos. The SFS Director and staff regularly engaged with workshop events and public presentations. The SFS routinely collected lionfish otoliths which were sent to the laboratory in the latter stages for processing and analysis. In the final stages of the project, SFS provided historical fishery data, collected from fish landing sites on South Caicos between the years of 2004 and 2017, which strengthened delivered stock assessments. In final discussions with the ministry, it was considered that the SFS may be contracted to assist with long term fishery monitoring through the renewal of similar directed research. Currently, a collaborative arrangement between TCIG and the SFS is in the making, providing a novel solution for addressing data shortages, driven by new partnerships between TCIG, the project and private stakeholders.

3 Project Achievements

3.1 Outputs

Output 1 – Stakeholders are meaningfully engaged in understanding the requirements for robust fisheries data and in the designation of landing sites.

The project achieved Output 1 as laid out in the logframe. The consultation process engaged with a total of 66 stakeholders and formally interviewed 34, across all major islands (**Indicator 1.1** – report available online). A major output of the consultation was the identification of major fishery landing sites across all islands (**Indicator 1.2**). Provisional recommendations were made in the consultation report (available online), and were followed by in-depth discussion with the ministry during project-end presentations in January 2024 (Figure 2).

The consultation process was successful at gaining buy-in and trust from prominent fishery stakeholders and provided a good opportunity to gather important information about fishery landings sites and other potential barriers to data collection. However, although not specifically captured in the logframe, meaningful engagements of fishers also took place at landing sites, where active learning opportunities were often greatest – see Section 2.

Figure 2: Final presentations, pictured from the left: Director Mr Clerveaux (DECR), Ms Whyte (Governor's Office), Permanent Secretary Clerveaux, Honourable Connolly, Dr Butler (SAERI), Ms Moncher & Mr Robinson (DECR). Ms Kissoonsingh (Agriculture), Director Ms Joseph & Ms Lockhart (DFMRM) were also present during the meeting.

Output 2 – TCIG staff and fishers trained in data collection and fisheries data is well managed.

The data collection manual (**Indicator 2.1**) was an important tool for fisheries data collection, and also for work in the fisheries laboratory. It was frequently used and referred to by the project staff and assisting officers and was updated periodically. This document is available online and a two hard copies were printed and bound, with one handed to the Ministry and the other available in the laboratory.

The initial training period in Y1 was successful, and the available participants provided positive feedback which indicated that they had benefited from the exercise (**Indicator 2.2** – Y1 training report available online). However, several DECR and DFMRM staff were not present at that initial training, and later became involved with project data collection. This challenge was foreseen early on in the project (as a result of the departmental split) and it was reported in AR1 that additional trainings would be required to better achieve this output. Several additional trainings, retraining's and routine trips to other islands were initiated and completed regularly to support and address this (Figure 3) and all existing DFMRM staff had received significant training and support by the end of the project.

Landings and biological data collections were not achieved to the anticipated standard, due to reduced staffing capacity and barriers to accessing data (see Section 2). However, through the implementation of regular routine fishery independent sampling, sampling at IGA Gourmet, and some support from improved DFMRM-led sampling on South Caicos and Grand Turk, routine collections were improved from August 2022 (**Indicator 2.5**). All fishery related data were regularly inputted into the developed relational data base which was handed over to the DFMRM towards the project-end (**Indicator 2.4**; Figure 4). This has been a successful and invaluable resource for TCIG, who are now interested in developing similar relational databases to house other environmental and administrative data sets. To date, the project has collected biological data, including otoliths and reproductive organs, from over 2,000 fishes belonging to 46 different species.

Figure 3: Project staff supervising ongoing data collections and providing training for DFMRM personnel, in accordance with the developed protocols. This has taken place (and continues to take place) on South Caicos (a), Providenciales (here pictured at IGA Gourmet) (b) and in Grand Turk (c & d).

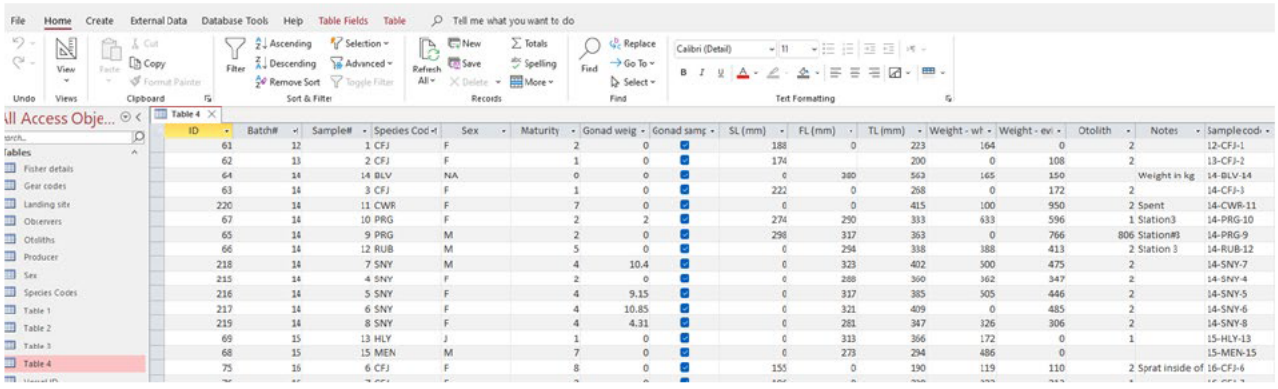

Figure 4: Screenshot of the relational database which was developed using Microsoft Access and is housed online.

Another potential tool to support fisheries data collection was the fisheries app (Figure 5). The app was initially targeted at fishers for voluntary self-reporting, but was redesigned as a fisheries data collector app which could be used by government staff at landing sites to record catch, effort and biological data. Due to the change in approach, the logframe indicator and means of verification were updated in AR2 (**Indicator 2.3**). In its current state, the app provides an important tool for improving the efficiency of data collection and entry. However, to improve the effectiveness of the app moving forward, data collectors and the DFMRM require water-proof tablets or smart devices which can host the app in the field.

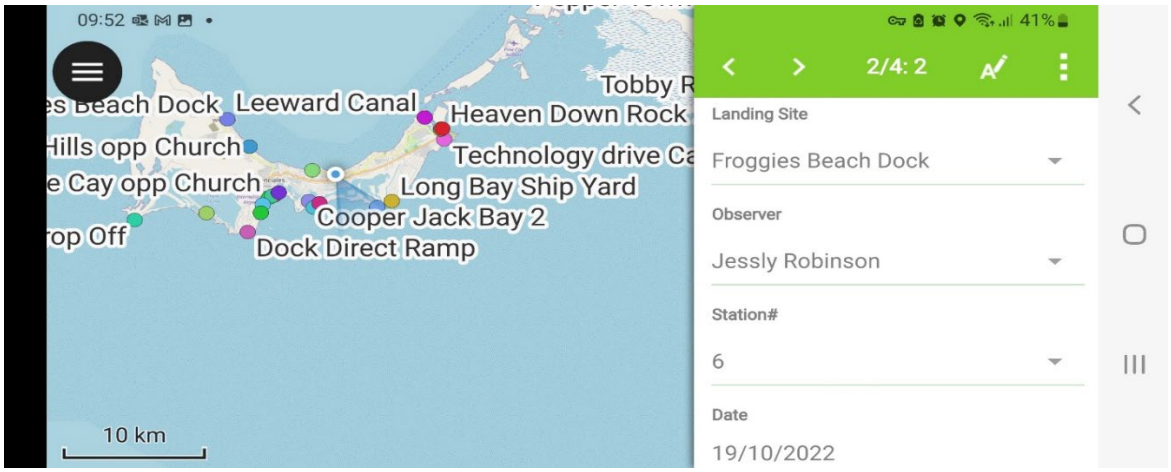

Figure 5: Screenshot of the Qfield data collection app which can be used by fisheries data collectors to record catch, effort and biological data in the field.

Fisheries spatial datasets were built throughout the project and included landing site locations, fisher spread, catch records & fishing effort. All of these datasets were prepared and made available for TCIG to upload to the TCIG WebGIS at project end (e.g., Figure 6, **Indicator 2.6**). DFMRM have indicated that some data may not be made publicly available, but will still be stored as restricted information. At the final stages of the project, the TCIG WebGIS was not operational and the DECR and TCIG were in the process of restoring the resource – all relevant data sets have been prepared in the appropriate format and will be uploaded once the system is restored by TCIG (see Figure 6).

Site	Island	Lat.	Long.	Rank – Importance per island	Boat ramp/boat access	Cleaning table	Electricity	Water	Dock/fixed moorings	Fuel	Ice
Turtle Cove Marina	Providenciales	21.785122	-72.227404	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cooper Jack Bay 1	Providenciales	21.7581184	-72.226561	2	Yes	No	No	No	No	No	No
Cooper Jack Bay 2	Providenciales	21.7628946	-72.2300819	2	Yes	No	No	No	No	No	No
Blue Hills 1 - Prophecy Church	Providenciales	21.8015583	-72.2700613	3	No	No	No	No	No	No	No
Blue Hills 2 - Froggies Beach	Providenciales	21.8208434	-72.2849206	3	No	No	No	No	No	No	No
Five Cays 1 - Brodie Fritz area	Providenciales	21.7603379	-72.2610236	4	No	No	No	No	No	No	No
Five Cays 2 - Opposite the Church	Providenciales	21.7653374	-72.2567451	4	No	Yes	No	No	No	No	No
Five Cays 3 - Pablo area	Providenciales	21.766355	-72.2548059	4	No	No	No	No	No	No	No
Five Cays 4 - End of Sand Piper Ln	Providenciales	21.7670533	-72.2528617	4	No	Yes	No	No	No	No	No
Five Cays 5 - Creek	Providenciales	21.7689769	-72.2501534	4	No	No	No	No	No	No	No
Provo Seafoods Processing Plant	Providenciales	21.7545361	-72.2623818	5	Yes	No	Yes	Yes	No	No	No
Chalk Sound - Silly Creek	Providenciales	21.7542164	-72.2989748	6	No	No	No	No	No	No	No
Venetian Rd 1 - Canal	Providenciales	21.7585785	-72.1839165	7	Yes	No	No	No	No	No	No
Venetian Rd 2 - South Side Marina	Providenciales	21.7614037	-72.2228894	8	Yes	No	Yes	Yes	No	Yes	No
Heaving Down Rock 1	Providenciales	21.8142433	-72.1407352	9	Yes	No	Yes	Yes	No	No	No
Heaving Down Rock 2	Providenciales	21.8134373	-72.1408773	9	Yes	No	Yes	Yes	No	No	No
Long Bay 2 - Caicos Marina	Providenciales	21.7627754	-72.1739763	10	Yes	No	Yes	Yes	No	No	No
Long Bay 1 - Technology Dr	Providenciales	21.8067052	-72.1384965	11	No	No	No	No	No	No	No
Blue Haven 1 - Main Dock	Providenciales	21.8173934	-72.1468829	12	Yes	No	Yes	Yes	No	No	No
Blue Haven 2 - Canal	Providenciales	21.8198101	-72.1425239	12	Yes	No	Yes	Yes	No	No	No
North West Point	Providenciales	21.8383842	-72.3333871	13	No	Yes	No	No	No	No	No
Bambara Dock	Middle Caicos	21.829426	-71.7128955	1	Yes	No	No	No	Yes	No	No
Stubb's Shop	Middle Caicos	21.8397166	-71.8482808	2	No	No	No	No	No	No	No

		PLEASE COMPLETE BELOW	
ID	region	TCI	The region where the data was collected: 'FK Falklands SH St. Helena AC Ascension TA Tristan da Cunha GS South Georgia
	organisation	DFMRM	Codes for departments and organisations: please add only the name of the organisation in few and capital letters. Examples: 'UCL' (University College London), 'UMAINE' (University of Maine), 'BGS' (British Geological Survey) etc. Examples for St Helena: 'GIS', 'SHNT', 'EMD'. Examples for the Falklands: 'AGD', 'EPD', 'PWD', 'FC', 'SAERI'
	title	Fishery landing sites	Descriptive name of the file. Possibly add the year in the title if the data is collected repeatadly every year or add year and month in case data is collected seasonally.
	language	eng	eng (english); spa (spanish); fre (french); ita (italian); ger (german)
tion	abstract	Fishery landing sites, identified through consultation with fishing community and fishery stakeholders during the Darwin Plus 153 project undertaken in 2022/23	Should provide a clear and concise statement that enables the reader to understand the content of the dataset. e.g. "SSSI in Wales classified by habitat type with the limit of each SSSI recorded as a polygon as at 2001-06-30"

Figure 6: Prepared metadata, with associated metadata forms prepared for upload to TCIG WebGIS.

Output 3 – Fisheries Science laboratory fully equipped, and staff fully trained

There were some initial delays with the arrival of laboratory equipment (**Indicators 3.1 & 3.2)**. However, all equipment was received, installed and has been in full use (Figure 7) for an extended period. Relevant TCIG staff received theoretical training in March 2022 (Y1 – see report online) and gained practical experience using all of the equipment throughout the project timeline – processing, mounting and reading more than 1,000 otoliths and processing and mounting more than fifty histological samples (**Indicator 3.2**; Figure 7).

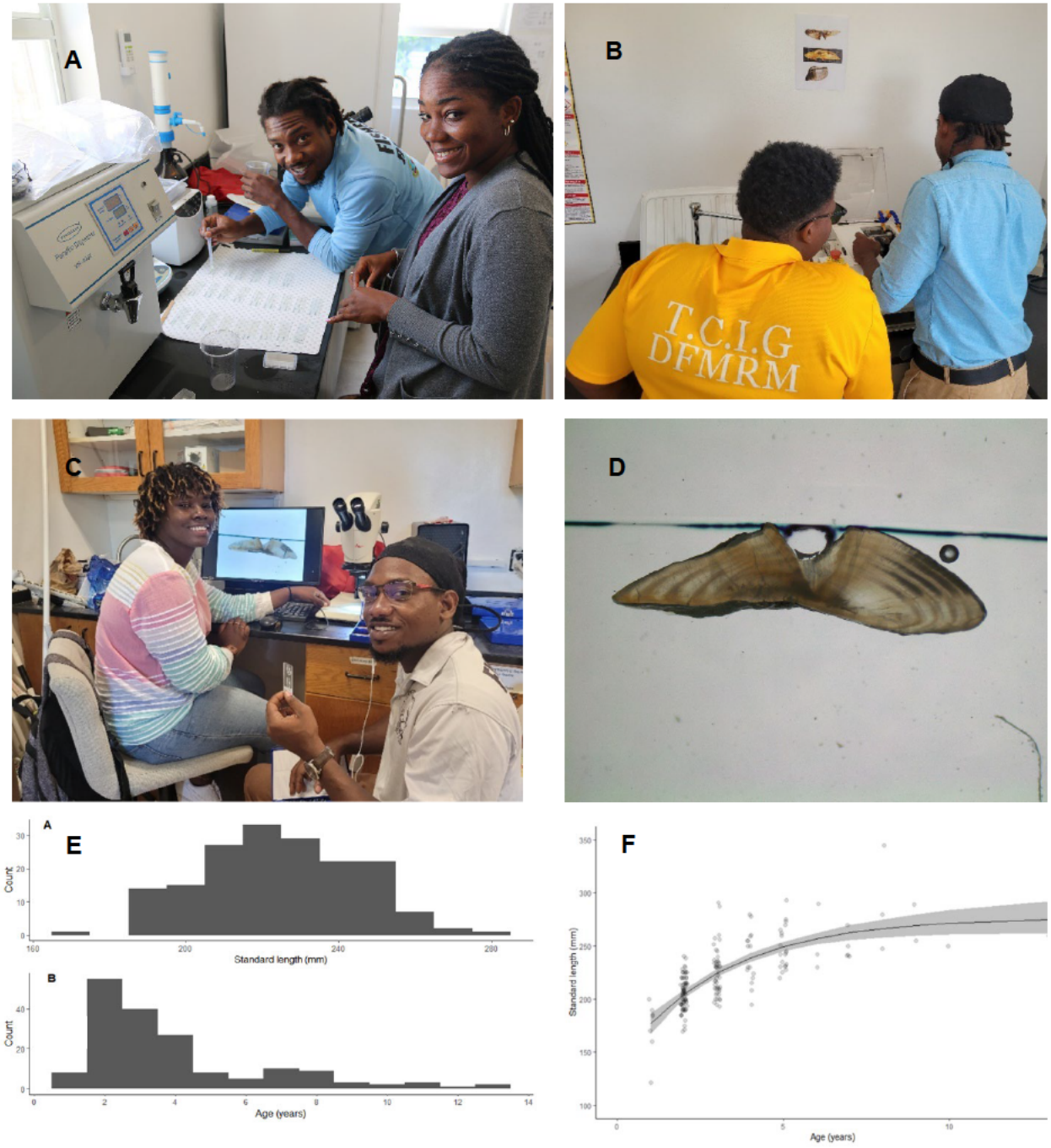

Figure 7: A-C, F: The PO (Jessly Robinson) and various DECR and DFMRM staff processing and working with otolith and reproductive samples in the laboratory to produce life history assessments (pictured from A to C, Rose Seymour DECR, Destiny Missick DFMRM, Sakilé Garland DFMRM intern). A lab-produced otolith section (gray snapper, *L. griseus* – D), length frequency plot (white grunt, *H. plumierii* – E) and age-growth curve (yellowtail snapper, *O. chrysurus* – F) are demonstrated here.

A major development towards this output was the official opening of the fisheries laboratory in May 2023. A cabinet paper was prepared and endorsed by the TCIG prior to the opening (see The Sun, Magnetic Media), which requested TCIGs support for the laboratory and its business case (**Indicator 3.5,** see AR2). The opening event further demonstrated TCIG's commitment to endorsing the laboratory and its work and sustaining it post-project. The event was covered by several media agencies and was featured in the SAERI quarterly newsletter. More information can be accessed using the following links – SAERI, The TCI Sun, Magnetic Media & Turks and Caicos Weekly News.

Age and growth and reproductive studies for four target fishery species (gray snapper, yellowtail snapper, lane snapper and white grunt) were completed in Y3 (**Indicator 3.3 & 3.4**) and the resultant report is available online. Otolith and corresponding length data were available for several species throughout the project, enabling comprehensive studies. However, consistent reproductive data were largely unavailable. Reproductive assessments require a minimum of twelve months of

consistent data collection. However, the unavailability and inconsistency of data collector staffing capacity on the islands of South Caicos and Grand Turk (where reproductive data are more readily available, because fish are more regularly landed whole – fish sampled at IGA on Providenciales are gutted and cleaned) prevented reproductive studies within the project time frame. The completion of reproductive studies is a primary target for the DFMRM and the laboratory in 2024 & 2025. Towards the project-end, recommendations were made to the ministry to restructure the DFMRM and create resource for fisheries research, science and management which ensure that strategic data collection can support assessments in the future (see Section 9). A section of the data manual outlines the methods for completing a reproductive assessment, to guide assessments at a later date (see online).

Output 4 – Data collection Standard Operating Procedures (SOPs) updated and stock assessment protocols established for priority species.

The Nature Conservancy were contracted to assist with stock assessment delivery and training in December 2023. Several workshops were held in December 2023 and January 2024 which delivered stock assessment and fisheries management training to more than 10 DFMRM staff (Figure 8, **Indicator 4.1**). Based on the outcomes of the workshops, two length-based stock assessment models were developed for Nassau grouper and yellowtail snapper. Relative stock status was estimated from the data using statistical modelling techniques with fish life-history parameters as the major inputs. Nassau grouper were estimated to have been highly reduced from an original unfished population to approximately 22% of their original stock size. Yellowtail snapper were less heavily impacted at an estimated 47% of original (unfished) stock size. These species were selected due to their status as typically sensitive (former), and more resilient (latter), indicator species – based on their life-history traits and fisheries importance locally (Figure 9, see report available online). As such, these results provide the first and only contemporary assessment of finfish stock status in the islands, indicating that sensitive species like Nassau grouper may have already been severely depleted, while more resilient species likely maintain moderately strong stocks currently.

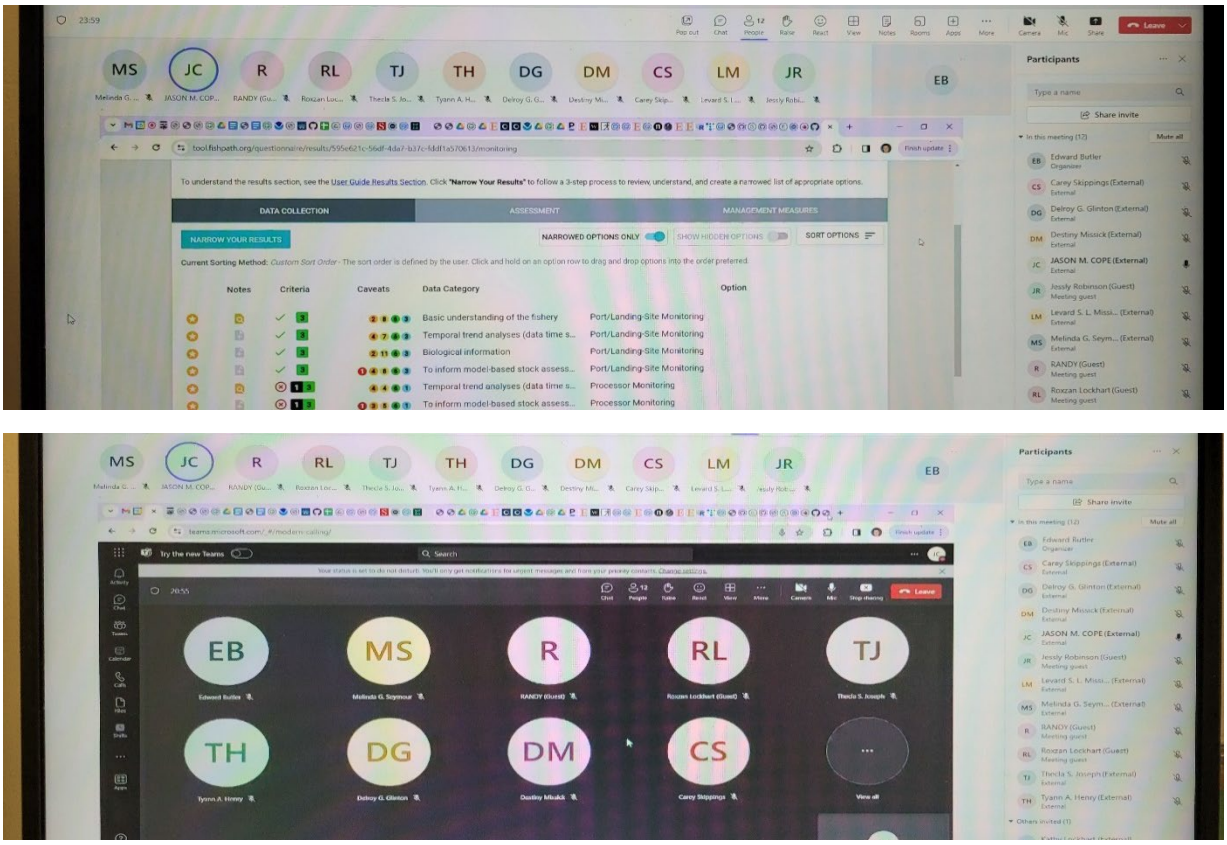

Figure 8: Participants in the FishPath stock assessment workshop. Two initial workshop days were held between project staff and TCIG stakeholders, followed by two more facilitated workshop days with the Nature Conservancy and NOAA Fisheries Scientists.

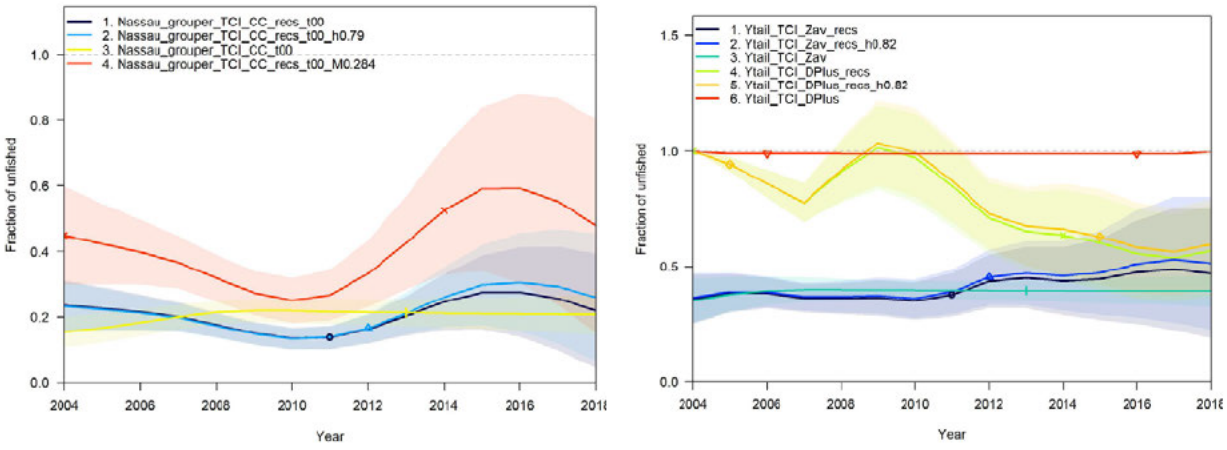

Figure 9: Sensitivity tests to the Nassau grouper (left) and yellowtail snapper (right) reference models. Nassau grouper were estimated at 22% and yellowtail snapper at 47% of unfished stock sizes (see report online).

Data collection, management and stock assessment directives were put forward as outcomes of the workshop process and were outlined in the stock assessment report and presented to the ministry in January 2024 (Figure 2, **Indicator 4.2***)*. Data collection and stock assessment protocols which were developed throughout the project and from the workshops were handed to the DFMRM Director for incorporation into DFMRM SOPs, which were under review by DFMRM Scientific Officers in 2023 (Annex 5, Stock Assessment Report).

These outcomes, along with other outputs from the projects, are being considered by TCIG towards the establishment of a renewed Fisheries Management Plan (FMP). To facilitate this, TCIG have arranged an additional two dedicated workshop days on the 20th and 21st February 2024. They have invited the project and partners to make a presentation on the first day and participate on the second day, to incorporate the developed protocols and management directives into the new piece of policy (see Section 9).

Output 5 – Project Management structure, monitoring and evaluation and communication tools established.

Management tools were established in Y1 and were effective throughout the project period (**Indicators 5.1, 5.3 and 5.4**). PMG meetings were held quarterly, with meeting minutes available online (**Indicator 5.2**), and all previous Darwin Reports (AR1, HYR2, AR2 & HY2) were completed timeously (**Indicator 5.5**).

3.2 Outcome

The stated Outcome for this project is: '*Improved landings and life history data, data management enshrined within TCIG processes, and its importance understood by the fishing community leading to a significant improvement in sustainable fisheries management*'.

Overall, the project has made an exceptional contribution towards improved fisheries management in the TCIG and towards the outcome as stated above. The fishing community was actively engaged during the landing site consultation and on several other occasions, including at ongoing landing site visits. This led to an increased awareness and understanding of landings and life history data within the fishing community. Recommendations were made to government on how to progress the centralisation of landing sites and improve data collection opportunities – see consultation report available online (**Indicator 0.1**).

From the consultation, it seems unlikely that the community will actively 'self-organise' to relocate landing sites without intervention from TCIG. There needs to likely be an incentive for fishers to use specific sites, or stricter measures need to be enforced to mandate and/or prohibit specific site use. This requires a decision by TCIG on the appropriate way forward and should be based on the recommendations which have been made in the report. These issues were further discussed during the stock assessment workshops where DFMRM staff were able to contribute their thoughts to the discussion – see stock assessment report available online.

A data collection manual was created and updated intermittently as protocols were adapted and refined and new data collection methods were developed (available online). A separate scale-fish data collection protocol for use by government staff was developed and handed to the DFMRM for

incorporation into their SOPs (Annex 5). The purpose-built relational data base was developed and is actively used to log all data, consistently (see Figure 4). Furthermore, based on the success of this, the project was approached to assist with developing similar databases for conch and lobster data and refining the data collection protocols for those species as well. Substantial training was provided to several government staff including DFMRM Assistant Director of Fisheries, Scientific Officers and Fishery Officers (this is explained in further detail in Section 3.1). Project-developed protocols and procedures for data collection and management have been absorbed by DFMRM and gaps and issues identified during the project are being actively addressed and will be specifically targeted by the renewed FMP (**Indicator 0.2**).

Although there were several delays with the laboratory, it was fully operational from the end of Y2 and trained laboratory staff successfully delivered a significant amount of life history work by the project end (see life history report – available online). By the project-end, the laboratory had also secured its first service contract to set, section and mount over 100 lionfish otoliths for the SFS in South Caicos. This opportunity is being used as a trial for future contracts, but demonstrates the available demand for laboratory services. The laboratory's vision as a regional center of excellence for fisheries science was formally endorsed by TCIG cabinet (see The Sun, Magnetic Media) and received strong support from the Caribbean Regional Fisheries Mechanism (CRFM) during a presentation given by the project during their annual general meeting (see AR2). (**Indicator 0.3**).

The first contemporary finfish-specific stock assessments were developed in Y3, creating the first step towards routine assessment-based fisheries management of the sector. The overall workshop process included training for local staff and developed routines, protocols and recommendations for fisheries management (see report available online, **Indicator 0.4**). As mentioned in section 3.1, these were well received by the DFMRM and TCIG and are being incorporated into a renewed FMP.

3.3 Monitoring of assumptions

Several risks and assumptions were identified for this project at inception. These were monitored regularly during quarterly PMG meetings and at half-yearly and yearly review periods. Throughout the project, several new assumptions were added as and where relevant. A full list of Assumptions is available from the Logframe (Annex 1). Unless stated below, all assumptions and risks were monitored and remained true throughout the project, but did not markedly impact delivery. For ease of tracking, the assumptions below are numbered in the order they appear in the logframe (Annex 1), although they are not numbered there.

Assumption 0.1: Increased awareness and understanding results in positive action for change. Fishing community, FAC, DECR, DFMRM, & TCIG supportive of the process and determined to improving data collection and ultimately fisheries management in TCI.

Although TCIG departments were supportive of the process and onboard with improving data collection and fisheries management, the departmental split and reduction in effective staffing capacity had major impacts to project delivery. TCIG remained committed to providing support, however they were limited by their available budget and staffing capacity and many of the impacts of the departmental divide were beyond the control of partner departments and the project. These impacts were monitored regularly and mitigated in several ways, as detailed in Sections 2 & 3.1.

Assumption 0.2: DECR & DFMRM personnel open to data collection training and going forward routinely follow protocols and manuals in terms of data collection. DECR & DFMRM continue to utilise the database to input data.

This assumption was monitored regularly. In certain cases, TCIG staff were tasked with assisting with data collection and were open to the process and effectively adhered to data collection protocols. However, in other cases, staff were not easily available to assist, largely due to the fact that they had little-to-no previous experience with data collection, or little interest in performing data collection duties. Many officers contracted with the DFMRM following the split were traditionally involved with enforcement duties and were not skilled or geared towards fisheries science. This was an ongoing Human Resources issue which TCIG and DFMRM attempted to address. This resulted in some delays with data collection and was addressed using several short-term solutions for data collection, including retailer site visits and fishery independent surveys etc. – see Section 2 & 3.1. In the longer term, DFMRM are aiming to address this through a departmental restructure to realign staff roles with fisheries science and through a renewed FMP to guide implementation.

Assumption 2.1: DECR & DFMRM personnel open to data collection training and going forward routinely follow protocols and manuals in terms of data collection. DECR & DFMRM continue to utilise the database to input data.

Same as Assumption 0.2

Assumption 2.3: TCIG provide direct support for data collection through the provision of data collectors.

This assumption was added in year 2, where monitoring and evaluation of the project indicated that this was an important risk which needed to be explicitly outlined. TCIG and the DFMRM provided some assistance with data collectors. However, this was insufficient to enable an effective fisheries data collection programme across all islands. Data collection capacity was an identified gap throughout the project period and was addressed in several ways – though increased retailer sampling, independent surveys etc. (see Sections 2 & 3.1) and by supporting DFMRM in requesting funds from Darwin Local for data collection support (see Section 9). Gaps in resource are being addressed by TCIG moving forward through the development of the FMP etc. (see Section 9).

Assumption 3.2: TCIG procurement processes do not unnecessarily slow the arrival of equipment required for the fisheries laboratory

This assumption was added in year 2, where monitoring and evaluation of the project indicated that this was an important risk which needed to be explicitly outlined. The assumption was realised during the procurement of laboratory equipment in the initial phases of the project. TCIG processes delayed the arrival of some of the laboratory equipment which delayed laboratory training and the finalisation and opening of the laboratory. The delays did not have an impact on the overall project delivery apart from a shift in timeline – equipment arrived with ample time to facilitate training and laboratory assessments.

Assumption 3.3: Covid-19 impacts do not delay the purchase of equipment

This assumption was monitored and did have an impact on the initial purchase of the otolith saw for the laboratory. Supplier delays due to covid restrictions across the USA at the time (March 2022) meant that the saw was not available for the delivery of the otolith training in Y2. To account for this, training was adjusted to provide theoretical guidance and practical experience with manual techniques (see report available online). Several TCIG and project staff gained practical experience with the otolith saw at a later date, once it was available and installed in the laboratory (Figure 7).

Assumption 3.5: Samples available to process.

The availability of samples was a realised risk from project inception. Due to the previously-mentioned gaps in data collection resource, sample availability was a persistent issue. Additionally, the common practice of cleaning fish at sea presented an additional complexity. This risk was monitored at several stages including quarterly PMG meetings (see minutes available online). Otoliths were collected frequently and consistently through retailer site data collections, however reproductive samples were not. An unavailability of reproductive data was identified at an early stage in the project (see PMG minutes September 2022 Agenda item #11). Due to the improved availability of whole fish on South Caicos and Grand Turk, this risk was directly addressed through increased training and issuance of SOPs to assigned staff on both of these islands (see PMG minutes available online). Unfortunately, these methods were only partly successful, due to difficulty in accessing whole fish and other assumptions and risks previously mentioned (e.g., Assumption 0.2). DFMRM are attempting to improve staff resource and data collection to address this over the long term (as mentioned in Section 2 & 9) and the DFMRM plan to undertake reproductive studies using the laboratory over the next 2 years once samples are available.

Assumption 4.4: Appropriate data available for stock assessments**.**

As mentioned previously, data availability was impacted by several previous assumptions and risks and this was identified and monitored throughout the project. This risk was addressed in several ways (see Section 2 & 3.1). Funds for the stock assessment were also redirected to provide improved resource for data collection (see Change Request 3 – November 2022) to address this risk. Overall, despite the efforts to mitigate this risk, it did have an impact on the stock assessment options which were available toward the project end. However, through collaboration with the SFS, the project was able to access additional data to support these and successfully delivered two stock assessments for Nassau grouper and yellowtail snapper.

Assumption 5.2: Continued resource from project partners available to engage with the project for its duration.

Overall there were minimal issues with project partner commitments to resources, excepting for data collection capacity as discussed previously and through the delayed delivery of the stock assessment training. Project partner Ocean Environmental was unable to engage with the project for its duration and a replacement was found to assist with the delivery of the stock assessment. Although this was largely unforeseen, it did not impact project delivery, other than a slight delay to activities. The Nature Conservancy was contracted to take over as the lead stock assessment specialist in Y3 (see Change Request 4 – January 2024).

4 Contribution to Darwin Plus Programme Objectives

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

As described in the project proposal, the project contributes to the Convention on Biological Diversity (CBD) Aichi Targets 4 (Natural Resources); 6 (Sustainable fisheries); and 10 (Vulnerable Marine Ecosystems). It also contributes to fulfilling commitments under the UK Government's 2012 white paper (Chapter 13) and Defra's 25-year environmental plan. The United Nations Convention on the Law of the Sea (UNCLOS) 61(2) also requires the coastal state to 'take into account the best scientific evidence available to it' in determining conservation and management measures.'

TCI Vision 2040 outlines 5 sustainable development goals, that underpin the (draft) National Physical Sustainable Development Plan (NPSDP). Both Vision 2040 and the NPSDP require sustainable resource management. A TCI Environmental Strategy (ES) is being developed and the project will contribute to the ES vision and to the mission of the DFMRM of which a sustainable fishing industry is a core element "To ensure sustainable utilization of the natural resources of the Turks and Caicos Islands, and to protect and promote biodiversity and economic prosperity through a sustainable fishing industry and environmentally sustainable development, a protected areas system and improved maritime affairs". The TCIG Fisheries Mission Statement is "To protect and improve the fisheries through the effective management of fish stocks to promote economic prosperity".

The project made several important contributions towards improving fishery data and the effective management of TCI's fish stocks, which are key elements in all of the beforementioned national and international objectives. Despite data collection and management capacity being poorer than originally anticipated, the project directly improved data availability for decision making through the results of the fisher consultation, production of biological assessments and stock assessment process (see reports online). The final stock assessment workshop process directly reviewed the current state of fisheries data collection, management and assessment, providing informed solutions and "top-options" for improving these areas (see report online). This information is directly available to inform relevant TCI legislation including the Fisheries Limits Ordinance (December 2014) and the Fisheries Protection Ordinance (March 2018). Improved on-the ground data collection and subsequent fishery assessments have made important contributions to the assessments of fished species (the project recently produced the first two species specific finfish stock assessments for Nassau grouper and yellowtail snapper – see section 3.1 & 3.2 for more detail).

Not only do these reports inform decision-making, but the process of the project has identified critical gaps in resource to deliver a robust fisheries management strategy. By identifying this early, the project has been able to work closely with TCIG to train relevant officers and improve resource, but also offer solutions which would improve capacity in the short and medium term. In doing so, the project directly supported two cabinet papers outlining recommendations for this. **As a result, the DFMRM have proposed an additional four new staff positions within their 2024 budget**, which aims to improve capacity for fisheries science and management. **Based on the recommendations of the project, the DFMRM are also incorporating the recommendations made and gaps and issues identified into a renewed FMP**. This new piece of policy will be drafted in February 2024 following a 2-day workshop with key stakeholders and project staff and aims to translate the project outcomes into a clear vision for the medium-term. Both the FMP and the additional staffing resource have been supported directly through the project and are critical steps towards sustainable fisheries management.

The fisheries and marine laboratory, which is now fully operational, provides an invaluable tool for improving fisheries data and boosting the quality of available scientific information for management decisions, both in TCI and within the wider Caribbean.

Lastly, TCIG is a member of the CRFM, who have been consulted several times during the project, including at their annual executive meeting in 2022. Outputs from the project, including fisheries

data and any stock, fishery or life-history assessments will be shared with the CRFM by TCIG, as required.

4.2 Gender equality and social inclusion

The majority of leadership roles within the project, including both “project co-leads”, and within partner organisations are held by female project members (see table below). The project is delivered by a mixed team, although many highly involved members are female, including both DFMRM scientific officers and the DFMRM Assistant Director for Fisheries.

Within project engagements, much of the target group is male and women do not regularly partake in the fishing sector as fishers (<5% registered commercial fishers are female). However, many women play large roles as household managers for their fisher partners and the majority of lobster and conch processing plant staff are female, including the co-manager of a major plant on South Caicos.

Within project work, consultations and stakeholder engagements have been designed to be as inclusive as possible. It was recognised early in the project that formalised workshops were unlikely to be inclusive and participatory. For example, during the stakeholder consultation, it was noticed that some stakeholders would not feel comfortable sharing their opinions in group settings or formalised meetings. Therefore, stakeholders were approached in different ways, which aimed at being as inclusive and representative as possible (see consultation report, Section 4.1 Methods – available online)

Please quantify the proportion of women on the Project Board[1].	7 women / 7 men
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].	4 female led partners / 2 male led partners

5 Monitoring and evaluation

A Monitoring and Evaluation (M&E) plan was developed and agreed to by the PMG early into the project and is available from the project webpage. The M&E plan outlined the indicators and activities which were to take place throughout the project and provided a means to track their progress and completion. For each project activity, a verifiable indicator was provided, and it was outlined how the indicator was to be evidenced, where the evidence was to be stored, who was responsible for assessing it, how often it should be measured, and what resources were required to achieve it. The indicators were specifically designed to demonstrate alignment of the project to the project Outcomes.

The project was governed through an established PMG which was representative of all project partner organisations. The project partners worked well together and regularly met to discuss and steer the project. The PM provided updates to the PMG in quarterly meetings regarding logframe deliverables, progress against the M&E plan and the project budget. The PMG shared documents amongst each other via email when required. It was the PMG’s responsibility to deliver the project on time and within budget and to review the quality of the outputs. Progress tracking according to the M&E plan was facilitated during PMG meetings and was a running agenda item (see PMG meeting minutes – available online).

6 Actions taken in response to Annual Report reviews

Two minor comments were made in response to both Annual reviews. The comments in AR1 regarding the project exit strategy and stakeholder engagement were directly addressed in the HYR2 and AR2 (available online).

[1] A Project Board had overall authority for the project, was accountable for its success or failure, and supported the senior project manager to successfully deliver the project.

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

More recently, AR1 made recommendations to improve safeguarding training of key staff which was addressed via an Advanced Safeguarding Level 2 course, provided to the PO and the PM through the Falkland Islands College (course certificates available on request). The second requested more detailed tracking of matched funding in future reports, which is provided here (see section 12).

7 Lessons learnt

In country presence

What worked very well was the nesting of the PM in the TCIG DECR which allowed for direct and regular contact with project partners, including the DFMRM and higher-level TCIG staff.. This also allowed for an appreciation of local nuance with regards to processes and procedures, which are often important for the implementation of new science regionally. This included understanding the fishery and how it operates and experiencing cultural influences and local normative behaviours. These subtle nuances have bearing on the overall management of the fishery and are often ignored in many externally driven fishery recommendations.

Being on island allowed for the PM to work closely with TCIG staff to best implement and deliver project outputs in a meaningful and effective manner. For example, through working with TCIG, the laboratory's development has been specifically delivered in a manner which aims to best ensure its long-term success and sustainability. This included preparing an initial cabinet paper requesting government support, followed-up by a business case detailing an implementation plan and corresponding requirements, all on the back of a publicised opening ceremony, all specifically catered towards maximising impact in a manner that is locally effective.

In addition, territory to territory skill share (Falklands to TCI) worked well and has been improved by the consistent availability of the PM on island. The Falkland Islands have a wealth of experience and knowledge when it comes to fisheries which has successfully informed project design and implementation. The established relationship between project partners and particularly with TCIG and the DECR, initially made project start up quicker and easier, and also fostered the potential for further territory to territory work and collaboration.

Hire and absorption of local staff

The hire of a local Turks Islander as the PO was extremely beneficial for promoting sustainability of the role and skills developed through the project. This is described in more detail in Section 2 and a recommendation to future projects would be to use local staff wherever possible to promote sustainable capacity benefits.

Data issues

Areas of difficulty have largely surrounded access to data, although these have been explained extensively elsewhere (see Section 2 & 3.1), many of which have been beyond the control of the project. Despite this, gaps have been identified and addressed through the project, promoting lasting improvements locally. Through this, the project has had major impact to the future of sustainable fisheries management in the territory.

Exchange rate losses

The extreme depreciation of the GBP against the USD (from approximately $1.36 at project start to $1.07 in September 2022) placed pressure on the overall project budget at times. This was unforeseen but was managed via maintaining core project expenses and trimming areas of the budget which were not critical to project delivery. The details of this can be found as outlined in our third Change Request. The exchange rate improved and the project budget was not impacted for an extended period of time. In future, projects working in multiple currencies should build in some budgetary flexibility which can accommodate changes in the exchange rate.

8 Risk Management

Project partner loss

In 2023, project partner Ocean Environmental were no longer available to assist with the stock assessment component of the project, due to take place in Q3. This risk was not previously identified but was adequately dealt with by the project. Due to the network of scientists available to the project, a suitable replacement was found in The Nature Conservancy and FishPath Team (see https://fishpath.org/). The slight change did result in a delay to the delivery of this component, which

was outlined and approved in the most recent Change Request. Despite the delay, the delivery was to a high standard and the changes to the project design had no impact to the Output or Outcome.

9 Sustainability and Legacy

As mentioned in Sections 2 and 3, staffing for fisheries data collection, fisheries science and management is a realised issue. To address this gap, the project worked with the DFMRM to assess what options might be available in the short and longer term.

Exit strategy

SAERI worked with the DECR and DFMRM on a comprehensive exit strategy which includes a range of approaches including:

(1) Absorption of the PO into TCIG staff which has been confirmed by TCIG – the PO is contracted by the project until March 31st 2023. His position is to be absorbed as the Fisheries Laboratory Manager under the DFMRM as of April 1st 2024.

(2) Business Case for the Laboratory to be a regional centre of excellence (which includes revenue generation projections into the long-term future)

(3) Strengthening of the data collection resource through an action demonstration project (see Darwin Local below)

(4) Incorporating developed protocols and procedures for finfish data collection, data management, laboratory sample processing and fishery/stock assessments into DFMRM Standard Operating Procedures.

(5) A TCIG Business Plan to propose the strengthening of the Fisheries Science resource within the department, including four new staff positions – Senior Fishery Scientist, Laboratory Technician/Manager, two Scientific Officers for Grand Turk and North/Middle Caicos (see Figure 10).

(6) The formulation of all of these pieces into a comprehensive exit strategy which was presented to the Permanent Secretary and drafted into a cabinet paper.

(7) Input into the formation of a revised Fisheries Management Plan, which aims to action all points above.

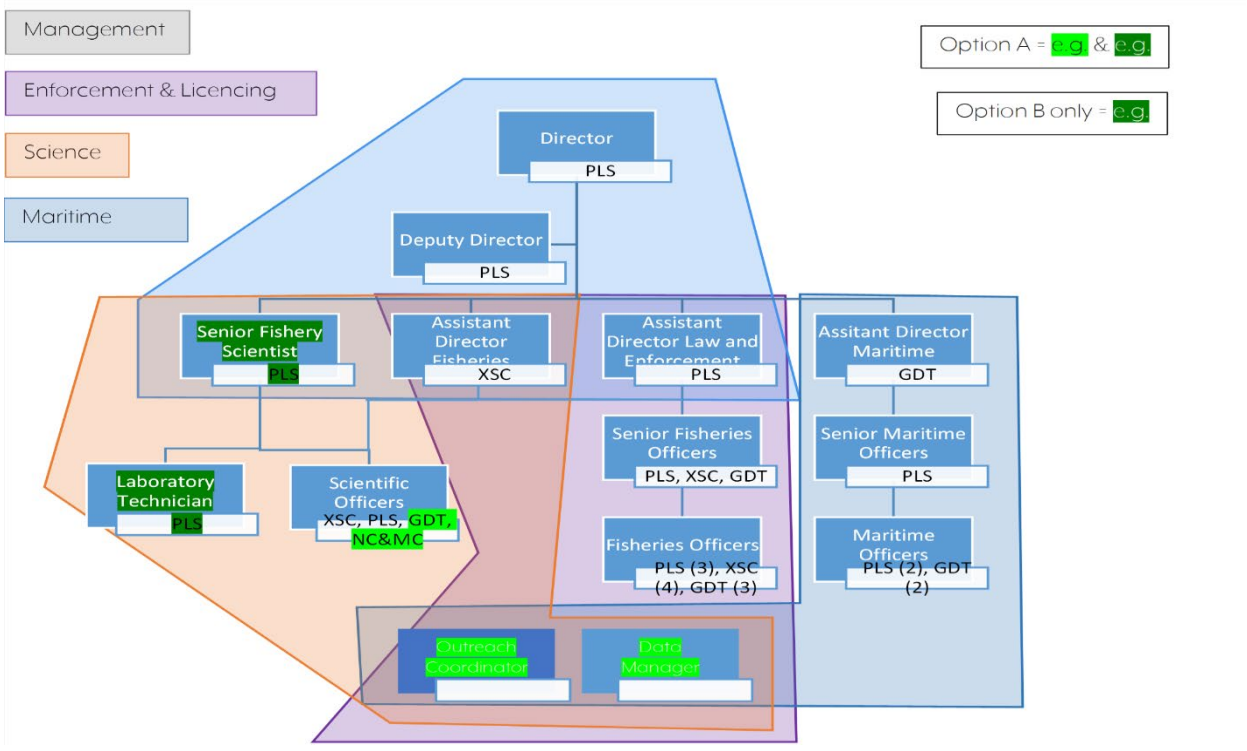

Figure 10: Proposed DFMRM restructure to improve fisheries science and fisheries management functions of the department, toward sustainable fisheries management. Proposed new roles are indicated in highlighted green text. The laboratory technician role has been approved for the 2024 budget and the senior fishery scientist role, and two new scientific officer posts have been pre-approved.

Darwin Local

A Darwin Local application was submitted by the DFMRM, with support from SAERI in 2023. This aimed to provide an action-demonstration which would assist TCIG in realising the value of data collector staff. It was hoped that this approach would create a realistic pathway for data collector staffing to be created within TCIG and the DFMRM, and simultaneously fill the short-term gap for project needs. Unfortunately, the application was unsuccessful – although feedback from Darwin Local was constructive and a resubmission will likely be made in 2024 should DFMRM wish to pursue this.

10 Darwin Plus Identity

The Darwin Initiative funding was recognised in every communication and public engagement opportunity. The logo was displayed in presentations and advertisements; the Darwin Initiative was recognised in press articles and the funding through the UK government was explained in presentations and meetings with stakeholders. Darwin Plus was recognised as a distinct project in all verbal communication and the DPLUS153 project number was advertised on all communications and outputs. Darwin Plus is widely recognised amongst TCIG due to continued support of numerous projects in the TCI. Additionally, a large number of stakeholders have also been familiar with the organisation via exposure to previous projects and their activities.

Throughout the project, the Darwin Plus logo was displayed in the following outreach:

- Presentations given at several occasions, including two guest lectures given by the PM to the SFS on South Caicos, a presentation on the laboratory given at the CRFM annual executive meeting and several internal TCIG presentations given to government departments and the Ministry. Presentation cover slides are displayed in Figure 11.
- On the poster presentation given at the Gulf and Caribbean Fisheries Institute Conference in November 2023 (Figure 11).
- On decals which were applied to the sides and rear of the dedicated project vehicle (Figure 11).
- On shirts which were designed and made for project staff and assigned data collectors.
- The fisher consultation information sheet which was given to all stakeholders (Consultation Report, Annex 1, – available online).
- The Darwin Plus logo was displayed on the provisioned fisheries laboratory and also on the banner for the opening ceremony.
- The logo was displayed on the agenda for the laboratory opening ceremony.
- The logo is present on all project reports, where mention is made about the Darwin Plus Fund and source of funding for the project (see reports online).

The Darwin Initiative was mentioned in the following outreach:

- Several Facebook posts and Twitter tweets in which the Darwin Initiative was tagged (see project webpage). SAERI currently has 2,600 followers of Facebook and 3,550 followers on Twitter.

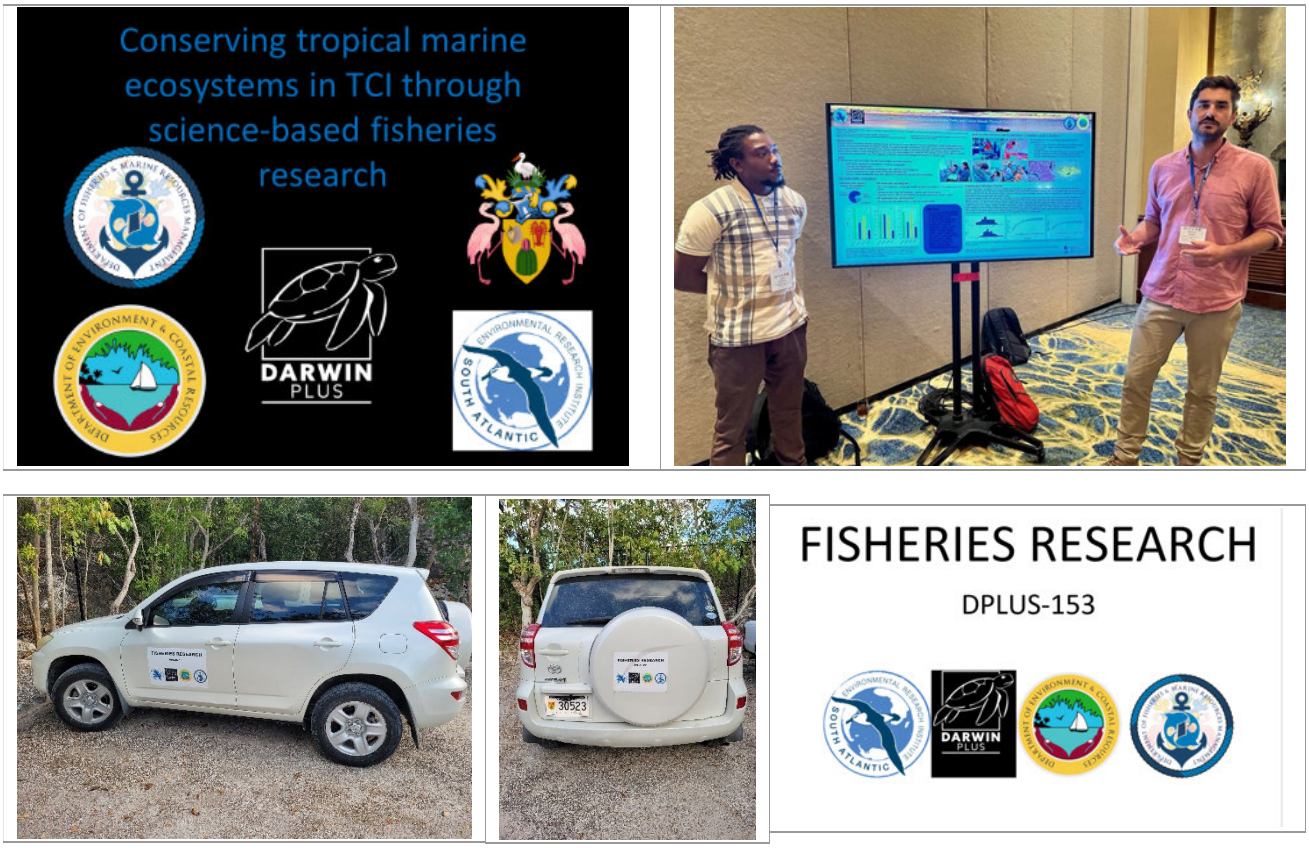

Figure 11: Examples illustrating the presentation of the Darwin logo in various project outreach.

11 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?	Yes – Arlene [redacted]
Has the focal point attended any formal training in the last 12 months?	Yes, the focal point received an Advanced safeguarding level 2 course from the Falkland College.
What proportion (and number) of project staff have received formal training on Safeguarding?	Past: 50% [2] Planned: 100% [2] All project staff received Advanced safeguarding training.
Has there been any lessons learnt or challenges on Safeguarding in the past 12 months? Please ensure no sensitive data is included within responses. **No**	

12 Finance and administration

12.1 Project expenditure

Project spend (indicative) since last Annual Report	2023/24 Grant (£)	2023/24 Total actual Darwin Plus Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs	[redacted]			
Consultancy costs				
Overhead Costs				

Project spend (indicative) since last Annual Report	2023/24 Grant (£)	2023/24 Total actual Darwin Plus Costs (£)	Variance %	Comments (please explain significant variances)
Travel and subsistence	[redacted]			
Operating Costs				
Capital items				
Others				
TOTAL	£126,640	£126,640		

Staff employed (Name and position)	Cost (£)
Dr Edward Butler (SAERI, Project Manager)	[redacted]
Jessly Robinson (DECR, Project Officer)	
Tara Pelembe (SAERI, Director International, Project Leader)	
Paul Brickle (SAERI, CEO)	
Teresa Bowers (SAERI, Director Resources)	
Jack Ingledew (SAERI, GIS Officer & Database Manager)	
Arlene Bowers (SAERI, Office Manager)	
Megan Tierney (JNCC, Senior UKOT Advisor)	
Jane Hawkridge (JNCC, International Implementation Team Leader)	
JNCC Administration	
TOTAL	**£77,522**

Consultancy – description and breakdown of costs	Other items – cost (£)
The Nature Conservancy – stock assessment specialist consultant EC Butler – PM one month extension contract as approved in most recent Change Request	[redacted]
TOTAL	£6,186

Capital items – description	Capital items – cost (£)
No Capital items were funded in this financial year	
TOTAL	£0

Other items – description	Other items – cost (£)
Audit General consumables Data Centre Fuel for Vehicle Monitoring and evaluation Purchasing and freight Reporting and printing Salary exchange rate differences Salary payment fees Shipping and freight	[redacted]
TOTAL	£18,409

12.2 Additional funds or in-kind contributions secured

Source of funding for project lifetime	Total (£)
TCI Gvt, lab space, equipment	[redacted]
TCI Gvt human resources	
TCI Gvt extra resources	
JNCC	
Additional funds raised after application phase	
DFMRM vessel use	
Additional DFMRM staffing resource	
Additional DECR contribution to project vehicle	
SFS provided accommodation on South Caicos	
Dr Jason Cope (NOAA Fisheries) staff time in kind – stock assessment	
TOTAL	**£259,409**

Source of funding for additional work after project lifetime	Total (£)
EC Butler staff time in kind (support for lab and fisheries management)	[redacted]
FAS staff time in kind (support for lab work)	
TOTAL	£2,400

12.3 Value for Money

TCIG and project partners provided a significant amount of match funding (43%) which gave the project excellent value for money.

SAERI has successfully managed a number of Darwin Plus projects and provided excellent value for money to support TCI in the delivery of this project. With our model of having core project staff based in-country for the duration of the project, we significantly reduced international travel costs while significantly increasing in-country engagement in the project. Having implemented two large projects in the TCI, and having been a partner to others, SAERI has a detailed understanding of ways of working, costs and living and operating in TCI which also meant awareness of best value options for project implementation e.g. for importation of goods, on island accommodation and transport etc. – for example, free accommodation with the SFS on South Caicos.

TCIG partners have contributed their time as in-kind, and they have allocated space specifically for the project fisheries work within the new laboratories that were developed. This sharing of laboratory resource showed not only good value for money but also a clear commitment to the project which was vital to the successful delivery.

JNCC contributed time in-kind to the project, and the links between this project and JNCC's many current and proposed initiatives in TCI were important in helping to ensure that there was good complementarity between ongoing projects and opportunities for resource sharing etc.

Although the project provided for world class specialist expertise within the original budget, the project also secured in-kind contributions from experts such as Dr Jason Cope (NOAA Fisheries). Jason's services were acquired after meeting project staff at the Gulf and Caribbean Fisheries Institute Conference, where he learnt about the project during a presentation by the PM and PO and offered to contribute his time towards helping with the development of stock assessments.

13 OPTIONAL: Outstanding achievements of your project (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 DPLUS 153 is changing the way people in the Turks and Caicos Islands (TCI) view effective fisheries management. At the heart of this is local Project Officer, Jessly Robinson. Born and raised

on one of TCI's more remote islands, Middle Caicos, to a fisherman father, Jessly has always been close to the marine environment. To further his understanding of fisheries and contribute back towards the management of marine resources, Jessly joined the Darwin Plus project in April 2022, where he has worked closely alongside project manager Dr Ed Butler.

Despite starting with little formal experience or training in fisheries science and research, Jessly has quickly grown into his role and become an essential asset to the project. As Project Officer, Jessly's responsibilities include collecting biological fisheries data – like fish otoliths (or ear bones) and reproductive tissue samples, managing the custom designed TCI government fisheries data base – entering and collating data, and processing samples and data in the newly provisional TCI government fisheries laboratory. When in the lab, Jessly is responsible to setting, sectioning and preparing both otolith samples for sclerochronology (or ageing), and gonad tissue samples for histology – both critical techniques for better understanding the life-history and stock status of TCI's most important fishes!

One of Jessly's most impressive qualities is his passion for his work. He is genuinely eager to learn more about fisheries science and management and through his passion, he has shown a remarkable talent for teaching, being highly effective at communicating complex scientific concepts in a way that is accessible to everyone. While spending time collecting data at the docks, Jessly is able to casually share his new-found knowledge and experience with interested fishermen, helping to bridge the gap between science and basic outreach.

This passion has also allowed Jessly to teach others, sharing the knowledge that he has rapidly acquired with other government officers. He now regularly provides training across all of TCIs inhabited islands, improving capacity for fisheries monitoring and research across the nation. Jessly serves as an excellent example of the importance of passion, dedication, and a willingness to learn, but also of the great power of the Darwin Plus for changing the landscape of an entire community through investing in passionate people.

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)**
Image	Image 1_DPLUS153	Jessly demonstrating how to collect and record biological fisheries information on the island of South Caicos, Turks and Caicos Islands, Dr Ed Butler	Twitter: @SAERI_FI Facebook: https://www.facebook.com/S4ERI/	Yes
Image	Image 2_DPLUS153	Excitement is always high when receiving new lab equipment!, Turks and Caicos Islands, Dr Ed Butler		Yes
Image	Image 3_DPLUS153	Project Officer Jessly Robinson and DECR Environmental Officer Rose Seymour work through another set of otoliths, now ready to be mounted and read, Turks and Caicos Islands, Dr Ed Butler		Yes
Image	Image 4_DPLUS153	A beautiful otolith section from a gray snapper (*Lutjanus griseus*), as seen		NA

		under the microscope, Dr Ed Butler		

Annex 1 Project's full current logframe as presented in the application form (unless changes have been agreed)

Please insert your project's logframe (if your project has a logframe), including indicators, means of verification and assumptions. 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 BCF-Reports@niras.com if you have any questions regarding this.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: Tropical Marine ecosystems on TCI are improved through sustainable fisheries management, secured by working in partnership with fishermen to improve data collection critical to assessing fisheries.			
Outcome: Improved landings and life history data, data management enshrined within TCIG processes, and its importance understood by the fishing community leading to a significant improvement in sustainable fisheries management.	0.1 At least 80% increase in understanding of the importance of landings and life history data to rigorous fisheries management and the sustainability of livelihoods by the fishing community by Y3Q3. 0.2 Data collection protocols and data management procedures successfully adopted within FMRM by Y3Q3. 0.3 A purpose provisioned fisheries laboratory successfully provides ageing services and reproductive assessments to the TCI fishery and becomes central fisheries laboratory for Caribbean OT fisheries by Y3Q3. 0.4 Routine stock assessment being conducted by FMRM to support improved management by Y3Q4.	0.1 Centralised landings sites for data collections opportunities agreed and organised by the fishing community, DECR, and FMRM, and questionnaire results show increased understanding of the importance of landing and life history data to fisheries management compared to that at the start of the project. 0.2 Data collection protocols and manuals drawn up, purpose built relational database built and training given to DECR and FMRM – Environment, Fisheries and Conservation Officers. 0.3 A modern fisheries laboratory processing otoliths (and other hard structures) for ageing and conducting histological analyses on gonads for reproductive, maturity and sex transition assessments. 0.4 Project undertakes stock assessments and sets up routines to enable FMRM staff to conduct assessments going forward.	Increased awareness and understanding results in positive action for change. Fishing community, FAC, DECR, FMRM, & TCIG supportive of the process and determined to improving data collection and ultimately fisheries management in TCI. DECR & FMRM personnel open to data collection training and going forward routinely follow protocols and manuals in terms of data collection. DECR & FMRM continue to utilise the database to input data. Modern fisheries laboratory meets the needs of TCI initially and then services other UKOTs in the Caribbean. Rigorous routine stock assessments housed within FMRM. Covid-19 impacts don't place restrictions on national and international travel.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Outputs: **1**. Stakeholders are meaningfully engaged in understanding the requirements for robust fisheries data and in the designation of landing sites.	1.1. At least 20 stakeholders attend fisheries data and designated landings sites consultation workshops by Y2Q1. 1.2. At least 4 landing sites on each of 5 islands identified by Y2Q1.	1.1. Stakeholder report available online. 1.2. Landing site recommendations submitted to Minister.	Stakeholders trust is built enough for them to meaningfully engage in the process. Covid-19 impacts do not place restrictions on national and international travel.
2. TCIG staff and fishers trained in data collection and fisheries data is well managed.	2.1. At least 1 data collection manual produced by Y1Q4. 2.2. At least 10 training session attendees record an increased understanding in landings data collection, length frequency/length-weight data and otolith collection at the end of the training session by Y1Q4. 2.3. At least 20 end users download the fisheries app and at least 70% use the app regularly for recording landings by Y2Q2. 2.4. 100% of all landings data inputted into the fisheries data base by Y3Q3. 2.5 Landings data for at least 4 species successfully collected routinely throughout the project. 2.6. At least 5 fisheries spatial data sets available on the TCI WebGIS by Y3Q2.	2.1. Data collection manual. 2.2. Training report (including aggregated participant responses) available online. 2.3. App download report. 2.4. Fishery data base available from the TCIG data portal (with relevant permissions), and the number of digitised records match the number of data recording sheets. 2.5. Data recording sheets. 2.6. Fisheries spatial data available in TCIG WebGIS.	DECR & FMRM personnel open to data collection training and going forward routinely follow protocols and manuals in terms of data collection. DECR continue to utilise the database to input data. The DECR and FMRM share resources and collaborate where appropriate, to ensure the effective management of fisheries resources. TCIG provide direct support for data collection through the provision of data collectors Covid-19 impacts do not place restrictions on national and international travel.
3. Fisheries Science laboratory fully equipped, and staff fully trained.	3.1. All Fisheries Science equipment purchased and successfully installed by Y1Q4 . 3.2. At least 5 TCIG staff successfully trained in, and regularly use, all of the new equipment by Y1Q4 .	3.1. Photos of Fisheries Science lab available on project website. 3.2. Training report available online. 3.3 Reports on each species presenting validated age estimates, assessments of precision and quality control, von	Modern fisheries laboratory meets the needs of TCI initially and then services other UKOTs in the Caribbean. TCIG procurement processes do not unnecessarily slow the arrival of

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	3.3. Age and growth studies for 4 species successfully undertaken by Y3Q2. 3.4. Maturity gives temporal assessments of Gonad Size Index and sex transition successfully understood for 4 species by Y3Q2. 3.5. 1x business case for regional services written by Y2Q4.	Bertalanffy growth parameters and age length keys circulated to the PMG 3.4 Reports on the reproductive biology of 10 species presented. These include sex specific age/length and maturity assessment, length/age and sex transition for hermaphrodites. Ground truthed maturity stages using histology circulated to the PMG. 3.5 Business case for DECR lab to provide regional services to the Caribbean presented to TCIG Cabinet.	equipment required for the fisheries laboratory Covid-19 impacts do not delay the purchase of equipment. Covid-19 impacts do not place restrictions on national and international travel. Samples available to process
4. Data collection SOPs updated and stock assessment protocols established for priority species.	4.1. At least 5 DFMRM staff undertake refresher stock assessment training successfully by Y3Q4. 4.2. DFMRM data collection standard operating procedures (SOPs) updated and stock assessment protocols established by Y3Q4.	4.1. Training report available online 4.2. Data collection and stock assessment protocols delivered to Director of DECR & FMRM and PS of the Ministry	Rigorous routine stock assessments housed within FMRM. The DECR and FMRM share resources and collaborate where appropriate, to ensure the effective management of fisheries resources. Covid-19 impacts do not place restrictions on national and international travel. Appropriate data available for stock assessments
5. Project Management structure, monitoring and evaluation and communication tools established	5.1. PM and PO Recruited in Y1Q3. 5.2. PMG meeting held every quarter starting Y1Q2. 5.3. Webpage created on SAERI and partners' websites Y1Q3. 5.4. M&E Plan created by Y1Q4. 5.5. Regular DPLUS reports (half yearly/yearly).	5.1 PM employment contract signed. 5.2 PMG meeting notes available on common online platform. 5.3 Webpages live and public facing. 5.4 M&E plan available on common online platform. DPLUS Reports available to project partners.	Recruitment results in appropriate candidates being appointed and available on island within given timeframe. Continued resource from project partners available to engage with the project for its duration. Covid-19 impacts do not place restrictions on national and international travel.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
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) 1.1 Arrange and deliver fisheries data and designated landings sites consultation workshops 1.2 Write up the workshop report (including participant feedback) and publish online 1.3 Identify landing sites on each of the 5 main islands – Providenciales, (North Caicos, Middle Caicos & East Caicos), South Caicos and Grand Turk 1.4 Prepare and submit paper with landing site recommendations to the Minister. 2.1. Produce a data collection manual and arrange and deliver landings data collection training sessions 2.2. Develop, test and finalise fisheries app 2.3 Prepare and distribute data recording sheets to all relevant staff members 2.4 Collect landings data for at least 4 species, input all of the landings data into the fisheries database and make database available online 2.5. Prepare and upload (at least 5) fisheries spatial data sets available on the TCI WebGIS 3.1. Purchase and install fisheries science equipment. 3.2. Undertake age and growth studies for 4 species 3.3. Undertake temporal assessments of GSI and sex transition for 4 species 3.4. Write business case for regional services 4.1. Deliver refresher stock assessment training 4.2. Update DFMRM data collection standard operating procedures (SOPs) and establish stock assessment protocols for key species. 5.1. Recruit PM and PO 5.2. Host quarterly PMG meeting 5.3. Create and update project Webpage. 5.4. Write and sign off M&E Plan. 5.5. Prepare and submit DPLUS reports (half yearly/yearly).			

Annex 2 Report of progress and achievements against final project logframe for the life of the project (if your project has a logframe)

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Impact: Tropical Marine ecosystems on TCI are improved through sustainable fisheries management, secured by working in partnership with fishermen to improve data collection critical to assessing fisheries.		
Outcome *Improved landings and life history data, data management enshrined within TCIG processes, and its importance understood by the fishing community leading to a significant improvement in sustainable fisheries management.*	0.1 At least 80% increase in understanding of the importance of landings and life history data to rigorous fisheries management and the sustainability of livelihoods by the fishing community by Y3Q3. 0.2 Data collection protocols and data management procedures successfully adopted within FMRM by Y3Q3. 0.3 A purpose provisioned fisheries laboratory successfully provides ageing services and reproductive assessments to the TCI fishery and becomes central fisheries laboratory for Caribbean OT fisheries by Y3Q3. 0.4 Routine stock assessment being conducted by FMRM to support improved management by Y3Q3.	0.1 The SSF community were actively engaged during the landing site consultation and on several other occasions, including ongoing landing site visits. This has led to an increased awareness and understanding of the importance of landings and life history data. Recommendations have been made to government on how to progress the centralisation of landing sites and improvement of data collection opportunities – see consultation report available online 0.2 A data collection manual was created and updated intermittently as protocols were adapted and refined and new data collection methods were developed (available online). Finfish data collection protocols were developed and used by relevant government staff during the project period (see Annex 5). Final protocols were handed to DFMRM Director along with the Data Manual and both documents are being considered towards a renewed Fisheries Management Plan (FMP). A purpose-built relational data base was created and actively used to log all collected data (see Section 3.1). Training was provided to several government staff including DFMRM Scientific Officers, selected Fishery Officers, DECR Environmental Officers and DFMRM Assistant Director of Fisheries (report available online). 0.3 Fisheries Laboratory is fully functional and producing important life history assessments for TCI fishery species. All staff have been trained and are competent in all laboratory procedures. The laboratory was officially opened by government in May 2023 and fully endorsed by TCIG Cabinet (see Section 3.1). Meetings with regional fisheries bodies (e.g., Caribbean Regional Fisheries Mechanism) and market research has indicated regional demand for services and the developed laboratory Business Case provides a plan to guide future growth.

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
		0.4 The first two routine stock assessments for finfish were delivered in Y3 (see report online). A series of several workshops provided training for DFMRM staff and assessed and identified critical gaps in resource for future stock assessment. All information is being incorporated into a renewed FMP to outline routine data collection and assessment.
Output 1. Stakeholders are meaningfully engaged in understanding the requirements for robust fisheries data and in the designation of landing sites.	1.1. At least 20 stakeholders attend fisheries data and designated landings sites consultation workshops by Y2Q1. 1.2. At least 4 landing sites on each of 5 islands identified by Y2Q1	1.1. Stakeholder training and consultation is complete, with participation of greater than 20 stakeholders, with reports available from the webpage. This indicator was appropriate. 1.2. Landing sites of importance have been identified and mapped (>4 on each major island). Recommendations were made in the consultation report and presented to the Minister and Permanent Secretary (PS) (report available online, see Section 3.1). This indicator was appropriate.
Activity 1.1 Arrange and deliver fisheries data and designated landings sites consultation workshops		Completed
Activity 1.2 Write up the workshop report (including participant feedback) and publish online		Completed
Activity 1.3 Identify landing sites on each of the 5 main islands – Providenciales, (North Caicos, Middle Caicos & East Caicos), South Caicos and Grand Turk		Completed
Activity 1.4 Prepare and submit paper with landing site recommendations to the Minister		Recommendations were made in the consultation report (available online), and a final presentation was made to the Minister and PS (see Section 3.1)
Output 2. TCIG staff and fishers trained in data collection and fisheries data is well managed.	2.1. At least 1 data collection manual produced by Y1Q4 2.2. At least 10 training session attendees record an increased understanding in landings data collection, length frequency/length weight data and otolith collection at the end of the training session by Y1Q4 2.3. At least 20 end users download the fisheries app and at least 70% use the app regularly for recording landings by Y2Q2.	2.1. Data manual available on the webpage. It was updated regularly as protocols and laboratory processes were amended and adapted etc. and was a valuable tool for sampling and laboratory work. Final drafts were handed to minister and placed in the laboratory. Indicator was appropriate. 2.2. Initial training was carried out and trainees demonstrated improved understanding of materials (see report online). Additional training also took place in Y2 & Y3 to improve learning and to address members of government staff who were not available for the initial training (new employees and persons unavailable at the time) (see Sections 3.1 & 3.2). Indicator was somewhat appropriate – once-off training sessions provided an understanding of the importance of sampling and the procedures involved, but consistent and long-term practical implementation of sampling techniques was needed for improved sampling capacity to be developed – i.e. officers required consistent supervision and oversight over time in order to effectively adopt new protocols (detailed in Section 7). A level of data collection

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	2.4. 100% of all landings data inputted into the fisheries data base by Y3Q3. 2.5 Landings data for at least 4 species successfully collected routinely throughout the project. 2.6. At least 5 fisheries spatial data sets available on the TCI WebGIS by Y3Q2.	enforcement and staff management was also required to ensure data collector staff adhered to protocols on islands where project staff were not based. 2.3. The fisheries consultation indicated that a fisher data log app would be highly unlikely to be used by the fishing community. Therefore, this component of the project was revaluated, and a data collector app was developed for use by government data collectors, and linked to the relational database. The app is available and active currently (Figure 5, Section 3.1). However, its usefulness was not fully realised as most staff do not have access to a device to host the app. Currently, data sheets are the preferred method for data collection, and these also allow for two rounds of collection (recording and entry). This helps to prevent data errors. This indicator was no longer specifically appropriate, due to the change in delivery strategy. 2.4. All data was entered efficiently and on time (see Section 3.1). Indicator was appropriate. 2.5. Landings data collection was successfully completed for many species throughout project period (>4). However, this was inconsistent across space and time, as a direct result of a lack of staff capacity within the DFMRM and TCIG, which was further complicated by the departmental split described in the AR1 and explained in Sections 2 & 3.1. "TCIG provide direct support for data collection through the provision of data collectors" was an assumption for this indicator in the logframe, which was added to address these concerns after Y1. However, ongoing capacity issues meant that this was not completely available throughout the project. This was directly addressed by the project in several instances which has now resulted in meaningful additions to resource and capacity within TCIG (new staff positions, FMP etc. – see section 3.1, 7 & 9). Indicator was appropriate 2.6. Spatial data are available (>5 data sets) and have been prepared for upload onto the TCIG WebGIS (see Figure 6, Section 3.1). Data upload was delayed due to issues with the WebGIS platform itself, but all data are readily available for upload by TCIG as soon as the portal is restored.
Activity 2.1. Produce a data collection manual and arrange and deliver landings data collection training sessions		Completed
Activity 2.2. Develop, test and finalise fisheries app		Completed – Figure 5, Section 3.1
Activity 2.3. Prepare and distribute data recording sheets to all relevant staff members		Completed – Data Collection Sheets available from Data Manual and Protocols in Annex 5

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 2.4 Collect landings data for at least 4 species, input all of the landings data into the fisheries database and make database available online		Completed – Landings data available for >4 species (although inconsistent), all data inputted and database available online (restricted to authorised persons) (see Section 3.1)
Activity 2.5. Prepare and upload (at least 5) fisheries spatial data sets available on the TCI WebGIS		Spatial data sets prepared and available for upload once TCIG WebGIS portal is restored.
Output 3. Fisheries Science laboratory fully equipped, and staff fully trained.	3.1. All Fisheries Science equipment purchased and successfully installed by Y1Q4 3.2. At least 5 TCIG staff successfully trained in, and regularly use, all of the new equipment by Y1Q4 3.3. Age and growth studies for 4 species successfully undertaken by Y3Q2. 3.4. Maturity gives temporal assessments of Gonad Size Index and sex transition successfully understood for 4 species by Y3Q2. 3.5. 1x business case for regional services written by Y2Q4.	3.1. Installation of all fisheries equipment complete and laboratory officially opened in May 2023 (see Section 3.1). The indicator was appropriate 3.2. Staff (>5) received training on how to use equipment via the initial training workshop – see AR1 and report available online. Practical use of all equipment was undertaken by laboratory staff throughout the latter part of Y2 and Y3. Staff are familiar with all of the equipment and regularly used it for processing otoliths and reproductive organs (see Sections 3.1 & 3.2). Indicator was appropriate. 3.3. Age and growth studies for four species were completed (see report available online). Indicator was appropriate. 3.4. Regular and consistent collection of reproductive data for was not completed for four species, which prevented the completion of reproductive assessments. This was due to a lack of access to reproductive data on islands where data were available (explained in Sections 2, 3.1, 3.2). DFMRM are addressing this through increased staffing resource and in the formulation of a renewed FMP based on the gaps identified by the project. Indicator was appropriate. 3.5. A business case and accompanied cabinet paper were produced (Annex 6) and support for the laboratory was significant from TCIG and regional bodies such as the CRFM. Indicator was appropriate.
Activity 3.1. Purchase and install fisheries science equipment		Completed – see Section 3.1
Activity 3.2. Undertake age and growth studies for 4 species		Completed
Activity 3.3. Undertake temporal assessments of GSI and sex transition for 4 species		Incomplete as explained in Section 3.1
Activity 3.4. Write business case for regional services		Completed (Annex 6)

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Output 4. Data collection SOPs updated and stock assessment protocols established for priority species.	4.1. At least 5 DFMRM staff undertake refresher stock assessment training successfully by Y3Q4. 4.2. DFMRM data collection standard operating procedures (SOPs) updated and stock assessment protocols established by Y3Q4.	4.1. More than 5 DFMRM staff attended stock assessment trainings. Four facilitated workshops were held in December 2023 and January 2024 with DFMRM staff including scientific officers, fishery officers, Assistant Director for Fisheries and DFMRM Director (report online, Section 3.1). Indicator was appropriate 4.2. Workshops critically assessed the state of TCI finfish data collection, stock assessment and management interventions. Two stock assessments were delivered for Nassau grouper and yellowtail snapper and laid the foundation for the tracking of stock status and routine stock assessments into the future (see report online). Report outputs incorporated with other project recommendations and considered in DFMRM FMP. Indicator was appropriate.
Activity 4.1. Deliver refresher stock assessment training		Completed
Activity 4.2. Update DFMRM data collection standard operating procedures (SOPs) and establish stock assessment protocols for key species.		Completed – See report and protocols available in Annex 5
Output 5. Project Management structure, monitoring and evaluation and communication tools established	5.1. PM and PO Recruited in Y1Q4. 5.2. PMG meeting held every quarter starting Y1Q2. 5.3. Webpage created on SAERI and partners' websites Y1Q3. 5.4. M&E Plan created by Y1Q4. 5.5. Regular DPLUS reports (half yearly/yearly).	5.1. Completed in Y1 – see AR1. Indicator was appropriate. 5.2. PMG meetings have taken place quarterly and all meeting minutes can be located from the project webpage. Indicator was appropriate. 5.3. Completed in Y1 – see project webpage. Indicator was appropriate. 5.4. Completed in Y1 see project webpage. Indicator was appropriate. 5.5. All Darwin reports have been completed on time – AR1, HY2, AR2 & HY3.
Activity 5.1. Recruit PM and PO		Completed
Activity 5.2. Host quarterly PMG meeting		Completed
Activity 5.3. Create and update project Webpage		Completed
Activity 5.4. Write and sign off M&E Plan		Completed

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 5.5. Prepare and submit DPLUS reports (half yearly/yearly).		Completed

Annex 3 Standard Indicators

Table 1 Project Standard Indicators

It is our understanding that DPlus 153 had already commenced when Standard Indicators were introduced and therefore this section is not required. However, we have attempted to report on some of the indicators here, even though they have not been specifically designed to adhere to the new standard indicator system for reporting.

DPLUS Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DPLUS Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
	1.1. At least 20 stakeholders attend fisheries data and designated landings sites consultation workshops by Y2Q1		People	Fishery stakeholder	6	66	0	72	20
	1.2. At least 4 landing sites on each of 5 islands identified by Y2Q1		Number	Sites		39	0	39	20
DPLUS-C01	2.1. At least 1 data collection manual produced by Y1Q4	Number of best practice guides and knowledge products published and endorsed	Number	Manuals	1	0	0	1	1
DPLUS-A01	2.2. At least 10 training session attendees record an increased understanding in landings data collection, length frequency/length-weight data and otolith collection at the end of the training session by Y1Q4	Number of people from key national and local stakeholders completing structured and relevant training	People	Government officials	11	5	2	18	10
DPLUS-B10	2.3. At least 20 end users download the fisheries app and at least 70% use the app regularly for recording landings by Y2Q2	Number of individuals / households reporting an adoption of improved practices as a result of project activities	People	Fishery stakeholder	0	5	0	5	20
DPLUS-C16	2.4. 100% of all landings data inputted into the fisheries data base by Y3Q3	Number of records added to accessible databases.	Number	Database	1	0	0	1	1
	2.5 Landings data for at least 4 species successfully collected routinely throughout the project.								

DPLUS Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DPLUS Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
DPLUS-C16	2.6. At least 5 fisheries spatial data sets available on the TCI WebGIS by Y3Q2	Number of records added to accessible databases.	Number	Fisheries special datasets	0	1	4	5	5
	3.1. All Fisheries Science equipment purchased and successfully installed by Y1Q4								
DPLUS-A01	3.2. At least 5 TCIG staff successfully trained in, and regularly use, all of the new equipment by Y1Q4	Number of people from key national and local stakeholders completing structured and relevant training* *Double counting with indicator 2.2 & 4.1 as many people were the same, although the training is different*	People	Government officials	11	1	2	14	5
DPLUS-C19	3.3. Age and growth studies for 4 species successfully undertaken by Y3Q2	Number of other publications produced	Number	Taxa (species) Age and growth studies Reproductive assessments	0 0	0 0	4 0	4 0	4 4
	3.4. Maturity gives temporal assessments of Gonad Size Index and sex transition successfully understood for 4 species by Y3Q2.								
DPLUS-C01	3.5. 1x business case for regional services written by Y2Q4.	Number of best practice guides and knowledge products published and endorsed	Number	Business Cases	0	1	0	1	1
DPLUS-A01	4.1. At least 5 FMRM staff undertake refresher stock assessment training successfully by Y3Q2.	Number of people from key national and local stakeholders completing structured and relevant training*	People	Government officials	0	0	10	10	5

DPLUS Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DPLUS Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
		Double counting with indicator 2.2 & 3.2 as many people will be the same, although the training is different							
DPLUS-C02	4.2. Stock assessments for at least 2 priority species successfully undertaken by Y3Q3.	Number of new conservation or species stock assessments published	Number	Taxa (species)	0	0	2	2	2
	5.1. PM and PO Recruited in Y1Q3.								
	5.2. PMG meeting held every quarter starting Y1Q2.								
	5.3. Webpage created on SAERI and partners' websites Y1Q3								
	5.4. M&E Plan created by Y1Q4.								
	5.5. Regular DPLUS reports (half yearly/yearly).								

Table 2 Publications

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
Fishery and biological data collection for underpinning sustainable fisheries management in The Turks and Caicos Islands*	Manual	Butler, E.C., Krusic-Golub, K., Lockhart, K., Henry, T, Dunn, A. and Brickle, P.B. 2024.	Male	South African	South Atlantic Environmental Research Institute, Stanley, Falkland Islands.	Project webpage

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
DPlus 153 – Turks and Caicos Islands Scale-Fish Stakeholder Consultation Report*	Report	Butler, E.C., Robinson, J.K., Brickle, P.D., & Pelembe, T. 2022.	Male	South African	South Atlantic Environmental Research Institute, Stanley, Falkland Islands.	Project webpage
FishPath Worlshop and Assessment Report for the Turks and Caicos Islands Finfish Fisheries	Report	2024	Female	American	The Nature Conservancy, Arlington	Project webpage