Darwin Plus:
Overseas Territories Environment and Climate Fund
Annual Report

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

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

Submission Deadline: 30th April 2023

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

Darwin Plus Project Information

Project reference	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 Resources Management (DFMRM), Fish Ageing Services Ltd Pty (FAS), Ocean Environmental, Joint Nature Conservation Committee (JNCC)
Darwin Plus grant value	£344,905
Start/end dates of project	July 2021–December 2023
Reporting period (e.g. Apr 2022-Mar 2023) and number (e.g. Annual Report 1, 2)	April 2022–March 2023, Annual Report 2 (AR2)
Project Leader name	Tara Pelembe (SAERI) and Lormeka Williams (DECR). Project Manager – Dr Edward Butler.
Project website/blog/social media	Website: https://www.south-atlantic-research.org/dplus153-conserving-tropical-marine-ecosystems-in-tci-through-science-based-fisheries-management/ Twitter: @SAERI_FI Facebook: https://www.facebook.com/S4ERI/
Report author(s) and date	Dr Edward Butler, April 30h 2023

1. Project summary

Tropical marine ecosystems provide important goods and services to a vast collective of diverse stakeholders. Chiefly among these goods and services is the provision of food and livelihoods via fishing. However, the balance between maintaining sustainable tropical marine ecosystems and Small-Scale Fisheries (SSF) is delicate and needs to be actively monitored. Additionally, overfishing and the overexploitation of marine resources can threaten the livelihoods and food security of local communities. 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 is available to conduct basic fishery assessments. Thus, local capacity for fisheries research and management presents an important gap.

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 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 fishing industry. TCI Fisheries are not only important financially, but also as an important part of local culture and a large contributor to employment, livelihood and food security. The TCI is also rich in biodiversity, and provides 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, and provide a vital disaster mitigation role.

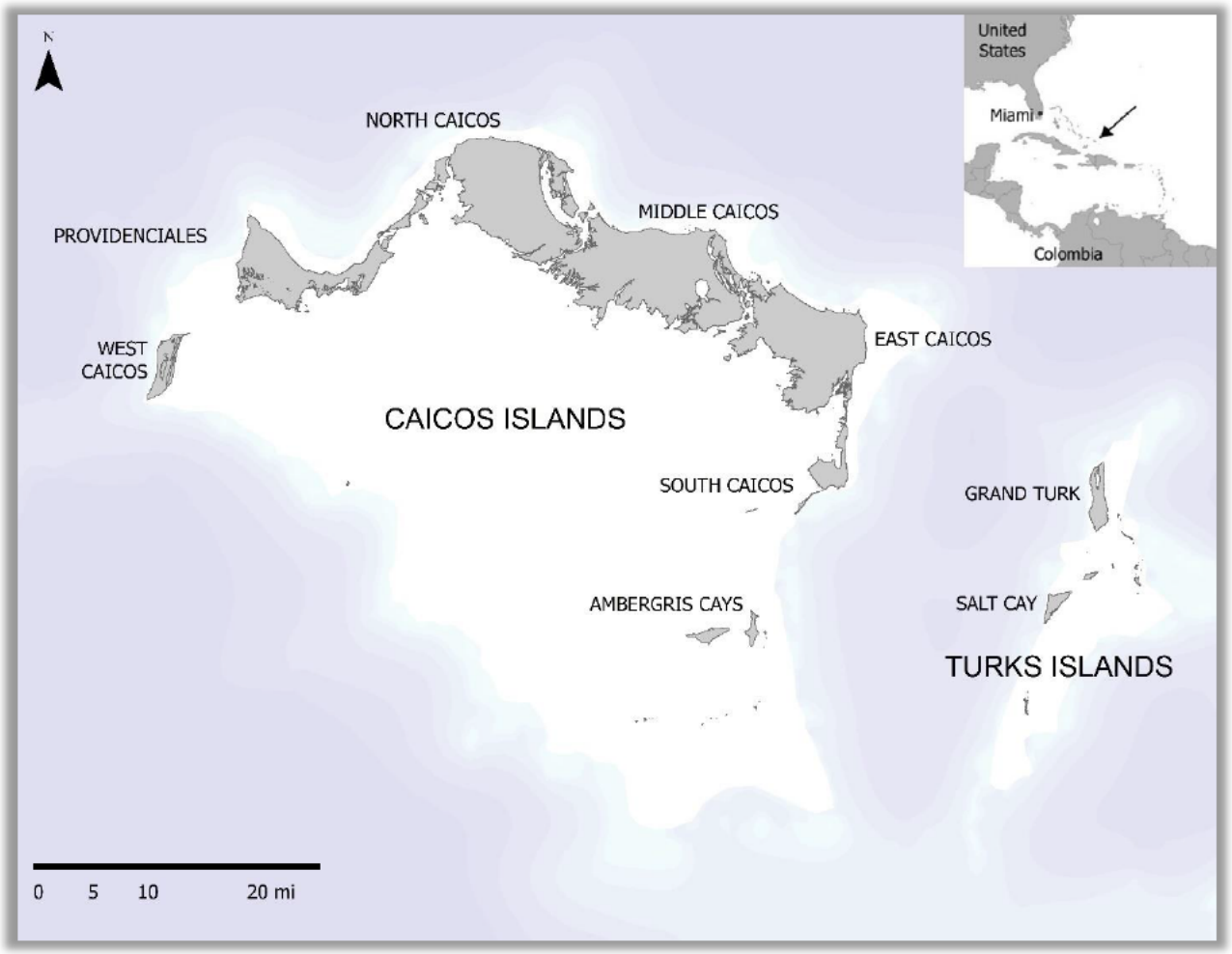

Figure 1: The Turks and Caicos Islands

Despite the importance of the marine environment, TCI currently do not have sufficient data available to inform fishery management. Through direct collaboration with local stakeholders and fishers, the project aims to address this via the improvement of local fisheries-related catch, effort and biological data in the TCI. The project also aims to develop local capacity to facilitate long-term science-driven fishery assessments regionally, through the provision of a state-of-the-art fisheries laboratory. Lastly, the project will work closely with local government to ensure that the fisheries research tools which are provided can be appropriately translated into management directives.

2. Project stakeholders/partners

Project Partners

All 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. As

mentioned in AR1, there was an (unforeseen) internal restructure within TCIG which resulted in the formation of a separate government department – DFMRM[1]. This department took over the mandate for fisheries monitoring, management and enforcement from the DECR. As such, the DFMRM have become integral project partners in addition to the DECR, 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 has formally been amended to include the DFMRM.

The project is still aligned with the DECR through the location of the fisheries laboratory, the office of the Project Manager (PM) and Project Officer (PO), pre-existing contractual agreements, and the office of the project co-leader – Lormeka Williams, DECR Director. Thus, the DECR has remained as the principal TCIG partner. The core project group meets once every two weeks and is made up 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 are invited to group meetings as and when appropriate.

Other project partners (FAS, JNCC and Ocean Environmental) are involved as members of the Project Management Group (PMG). The PMG is tasked with steering the project and contributing towards high-level decision-making. The PMG is also responsible for Monitoring and Evaluation (M&E), as outlined in the M&E plan. Four quarterly PMG meetings have been held this reporting period. The project PMG meeting minutes and M&E plan are available from the project webpage.

In this reporting period, project partner FAS have been involved in providing ongoing support for the development of the marine and fisheries laboratory. This has included a large role in the business case which has been developed for the laboratory's operation (Annex 4)).

The project has had a number of strengths as well as some challenges within this reporting period. A major strength of the project has been the allocation of the PM in country, and nested within local TCIG. This has allowed for more meaningful and effective 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 has meant that they can 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 it is planned that the PO position will be absorbed by the TCIG into a Scientific Officer role post project, with a mandate similar to the current PO job description.

The main challenges which have been met through the project have surrounded access to data. The data collection capacity which was originally anticipated has not been available to the project, due to the TCIG departmental split. When the change occurred, a number of positions were reappointed, and the original staff capacity was lost. The newly formed department originally lacked capacity for research and monitoring – with only two scientific positions available on one of the islands (South Caicos) – and most other available officers did not have scope within their existing job contracts for data collection activities or *scientific work*. Thus, personnel who were traditionally involved with fisheries *enforcement*, were not formally required to switch roles.

As time has progressed, the DFMRM have built capacity and appointed additional staff including a Scientific Officer and additional Fisheries Officers with data collection duties. Some of these new positions have been assigned to assist with project data collection, which has helped – the Scientific staff capacity within DFMRM has been increased to a cohort of four across two of the five islands (South Caicos & Providenciales). Initial challenges have had

[1]Moving forward, he Department of Fisheries and Marine Resources Management will be referred to as the "DFMRM", rather than the "FMRM" as stated in previous reports. This has also been emended in tracked changes in the logframe (Annex 2).

several impacts to project delivery and have delayed the achievement of consistent routine data collections. Although improved, the DFMRM still require additional staffing and support for staff management before monitoring can be effective across all islands.

The challenge of accessing data was partly overcome in the short term through increased independent sampling using DFMRM and DECR vessels. These have been performed 1-2 times a month depending on boat availability and weather. However, another solution has been through an informal partnership with the local grocery chain store "IGA Gourmet". The vast majority of fish is landed on the islands of South Caicos and Grand Turk, where challenges with government staffing capacity have delayed consistent data collection. However, IGA Gourmet purchases fish from South Caicos weekly and therefore IGA provided an opportunity for the project to access South Caicos catch from Providenciales. This partnership has been extremely beneficial and routine biological sampling of fish lengths, weights and otoliths is undertaken by the PO and a DFMRM Scientific Officer weekly.

Project Stakeholders

Stakeholders lie at the core of this project. Within this reporting period, major stakeholder engagements have taken place primarily 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 have also taken place through routine data collection and data collector staff have developed trusted relationships with several fishery stakeholders. These relationships are integral as they often allow for more successful access to data, by having fishermen land fish whole, or contacting data collectors when approaching landing sites. The relationships also provide invaluable opportunities for education and knowledge exchange. When collecting biological data at landing sites, data collectors and project staff have an opportunity to engage with fishermen about what they are doing, how they are doing it, and what the purpose of it is. These are all critical for developing an understanding, within the fishing community, of the importance of science-led fisheries management.

3. Project progress

3.1 Progress in carrying out project Activities

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

Following on from stakeholder engagements in Y1, a nationwide fishery stakeholder consultation was successfully held in July (**Activity 1.1**). This process involved identifying and confirming important locations for fisheries landings, obtaining viewpoints from members of the fishing community about the most effective ways to facilitate the collection and management of fisheries data and obtaining traditional ecological knowledge from experienced fishers. The data and outputs are available via the published stakeholder report (**Activity 1.2**), which is available online.

A major output of the report was the identification and description of 39 important landing sites for fisheries research and management consideration (**Activity 1.3**). In terms of translating this information into policy, formal provisional recommendations were made in the consultation report, which was made available to the minister (**Activity 1.4**). Landing site recommendations were not formally submitted to the Minister in writing however – it was felt that this may be premature and that additional time and experience within the fishery would promote the best-informed final recommendations toward the project end..

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

Building on from the fisheries data collection workshop held in March 2022, project staff continue to work closely with government officers to develop officer's skills and build up their experience in measuring catch and effort data, and collecting biological samples (Figure 2a & 2b; **Activity 2.1, 2.3 & 2.4**). Several further training and re-training sessions have taken place

since the initial workshop in March 2022, as new DFMRM staff have come onboard with the project (Figure 2b & 2c). Currently, the PO travels to South Caicos and Grand Turk once every six weeks to provide continued support and assistance with data collection.

Figure 2: 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).

The data collection manual was completed in Y1, yet is regularly updated with new information and is a useful resource for laboratory and field work (available online – **Activity 2.1**). Data collection sheets and comprehensive data collection protocols have been shared with all relevant officers and departments and are being incorporated into the DFMRM standard operating procedures (SOPs) (**Activity 2.3**; data collection protocols are available on request). On Providenciales, routine biological sampling at IGA Gourmet takes place weekly, landing site data collections take place weekly and independent sampling takes place monthly.

On South Caicos and Grand Turk, allocated fishery and scientific officers collect data according to set targets which are outlined in the data collection protocols (available on request). There are still some issues with data collections on these islands, and targets are not met every month. This is primarily related with DFMRM staff capacity and whether relevant officers have sufficient time, given their other work responsibilities – see Section 2.

A fisheries data collection smartphone application (app) has successfully been developed (**Activity 2.2**). The app was initially targeted at fishers for voluntary self-reporting. However, fishers largely suggested that they would be unlikely to use such an app (see the consultation report – available online). Additionally, it was found that there is already a similar app which had been developed as part of a project driven by the Centre for Environment, Fisheries and Aquaculture Science (CEFAS). Hence, it did not make sense to replicate a fisher app and it was decided to rather invest in creating a fisheries data collector app which could be used by government staff at landing sites to record catch, effort and biological data. The app was designed using QField freeware and is directly linked to the relational fisheries database which has been developed through the project and is housed online (Figure 3). The app also provides

digital access to useful resources, such as fish ID guides and data collection protocols. Although operational, the app is seldomly used for data entry at present, as data collectors would rather use data forms than personal smartphones, and DFMRM lacks appropriate field tablets.

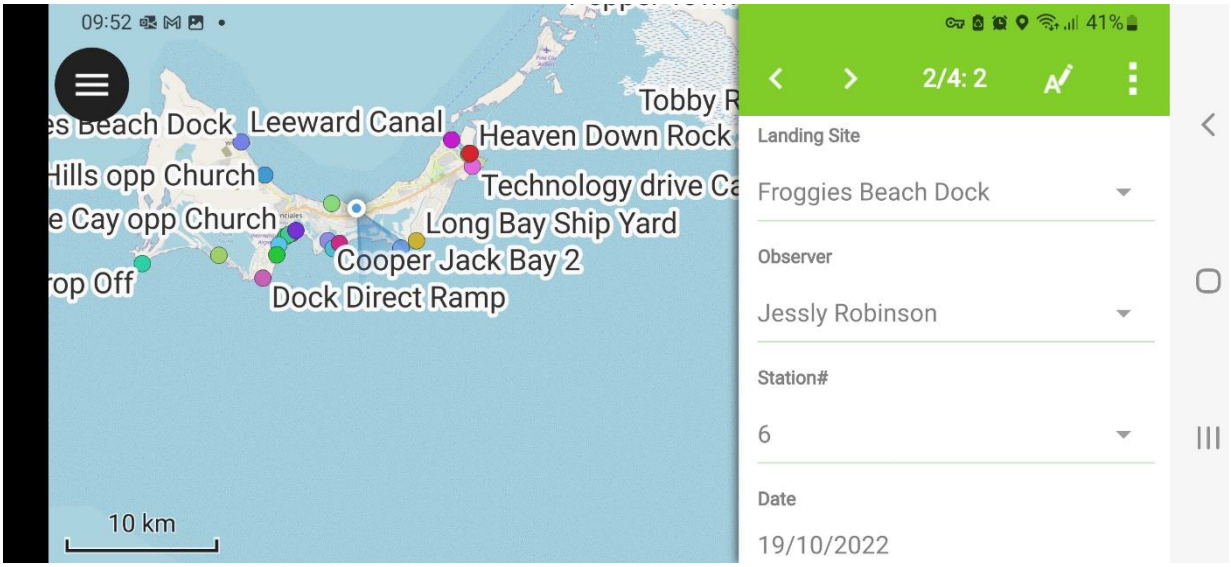

Figure 3: Screenshot of the Qfield data collection app which can be used by fisheries data collectors to record catch, effort and biological data in the field.

Landings data collection has been ongoing which will support activities towards the end of the project (**Activity 2.4**). Additionally, the relational fisheries database has been successfully developed and houses all fisheries data (Figure 4). Fisheries spatial data sets will be uploaded to the TCI WebGIS in Y3 (**Activity 2.5**).

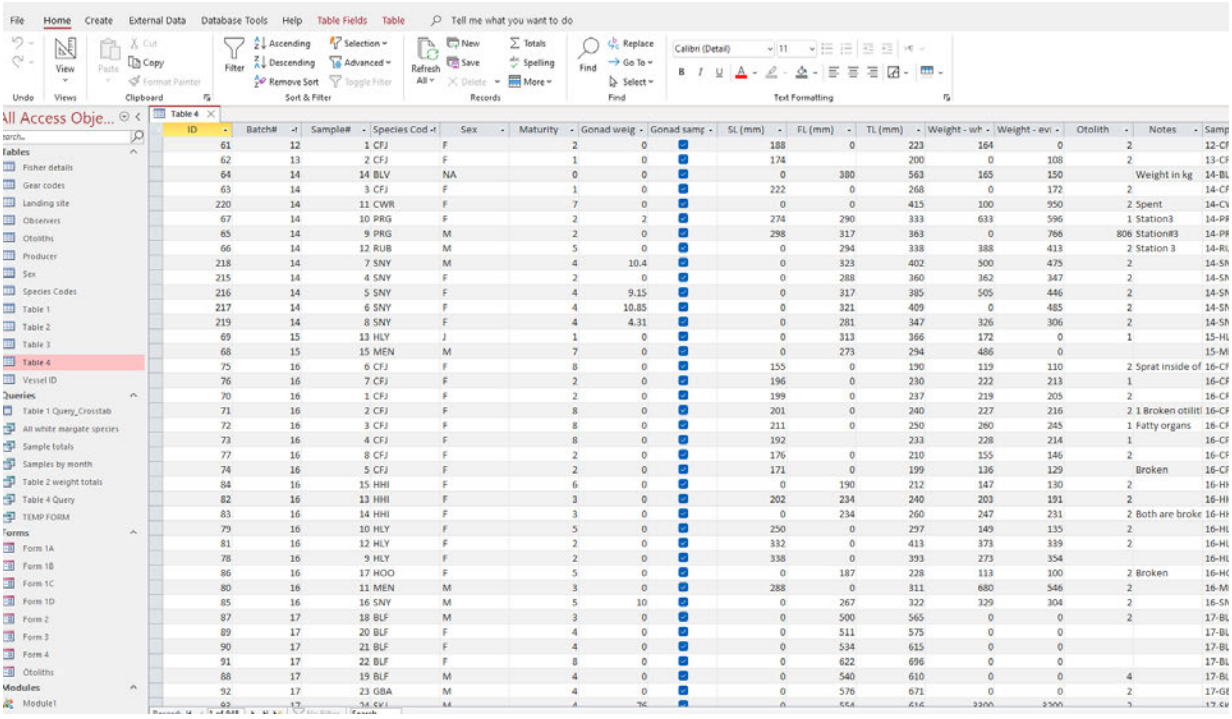

Figure 4: Screenshot of the relational database which has been developed using Microsoft Access and is housed online.

Output 3: Fisheries Science laboratory fully equipped, and staff fully trained, and age and growth studies for 4 species completed.

Despite delays with the ordering and purchase of the laboratory equipment, all equipment has arrived on island and has been installed (Figure 5; **Activity 3.1**), and staff have been trained in its use. A final laboratory opening ceremony was scheduled for 14 March 2023. However, this

was postponed at the last minute due to the unavailability of several members of TCIG cabinet. The agenda which was approved for the day is presented in Annex 5 and the opening has been rescheduled for mid-May.

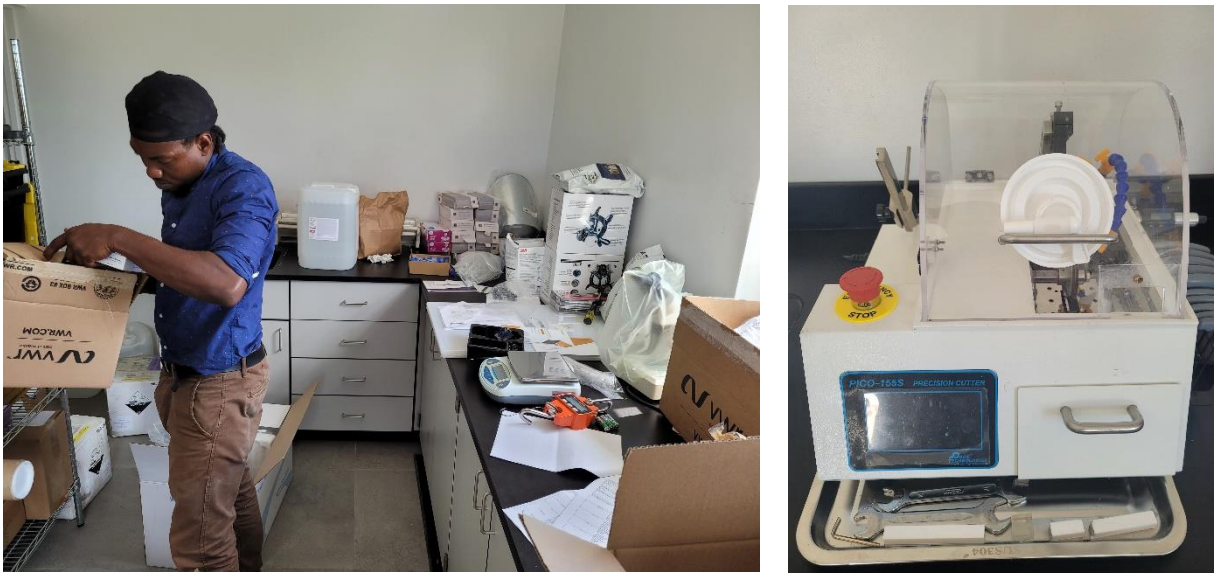

Figure 5: Project Officer Jessly Robinson unpacking the new equipment which has arrived in TCI (left), including the new state-of-the-art otolith saw (right).

A business case was completed for the laboratory and outlined the suggested requirements for its successful operation (**Activity 3.3**). Specifically, the business case presents a three-phased plan which aims to develop a regional center of excellence for fisheries science (see Annex 4).

Other activities related with this outcome will be delivered in the future. Namely, age-and-growth and reproductive assessments will be completed in Y3 (**Activity 3.2 & 3.3**).

Output 4: Stock assessments of priority species undertaken.

There were no activities undertaken relating with this output within this reporting period – **Activity 4.1 & 4.2** are set to take place in Y3.

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

Most management tools were established in Y1 and are up to date. Ongoing project management has taken place and there have been regular quarterly meetings between members of the PMG (**Activity 5.2**). Minutes from all of the PMG meetings can be found online.

3.2 Progress towards project Outputs

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

The project has made meaningful progress towards Output 1, and continues to do so. 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**). As mentioned in Section 3.1, provisional recommendations were made in the consultation report (available online), and will be followed by final recommendations towards the project end.

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. Therefore, both indicators are relevant and appropriate. However, although not specifically captured in the logframe, meaningful engagements of fishers have also taken place at landing sites, where active learning opportunities are often greatest – thus contributing directly to the achievement of Output 1. As mentioned in Section 2, exchange of knowledge and demonstrations about the

processes of fisheries monitoring and management have allowed for increased trust to be developed with the fishing community. The informal nature of these conversations often allows for more meaningful engagements (when compared with formal presentations or meetings, for example), and the regularity of these interactions has allowed for a level of trust and rapport to be built. This has been particularly successful between the PO and fishers, as the PO is a known and trusted member of the community.

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

As mentioned in Section 2 & 3.1, the main challenges which the project have met have been related to data collection. The initial formal training period 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 DFMRM staff which are now involved with data collection, were not present at that initial training. This challenge was foreseen (as a result of the departmental split) and it was mentioned (in AR1) that additional trainings would likely be required to better achieve this output. This has taken place and several additional trainings, retraining's and routine trips to other islands have been initiated and completed to support and address this (Figure 2).

Similarly, landings and biological data collections were not initially achieved to the anticipated standard, due to reduced staffing capacity and barriers to accessing data. However, through the implementation of regular routine fishery independent sampling, sampling at IGA Gourmet, and the initiation of improved DFMRM-led sampling on South Caicos and Grand Turk, routine collections have been significantly improved from August 2022 (**Indicator 2.5**). All fishery related data is regularly inputted into the developed relational data base (**Indicator 2.4**; Figure 4), and this has been a successful and invaluable resource. To date, the project has collected biological data, including otoliths and reproductive organs, from over 1,000 fishes belonging to 46 different species.

The data collection manual (**Indicator 2.1**) remains an important tool for fisheries data collection, and also for work in the fisheries laboratory. It is frequently used and referred to by the project staff and assisting officers and has been updated periodically. This document is available online.

Another potential tool to support fisheries data collection was the fisheries app. As explained in Section 3.1, 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 are no longer specifically relevant (**Indicator 2.3**) – this has been updated in tracked changes in this report (Annex 2). 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, data collectors and the DFMRM require water-proof tablets or smart devices which can host the app in the field.

Fisheries datasets are being built through regular data collection. These will be uploaded to the TCIG WebGIS at project end, in Y3 (**Indicator 2.6**).

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

As mentioned in previous reports (AR1 & HYR2) and in section 3.1, there were several delays with the arrival of laboratory equipment. This resulted in direct delays to the achievement of **Indicators 3.1 & 3.2**. However, all laboratory equipment has been received and is installed and in use. Relevant TCIG staff received theoretical training in March 2022 (Y1 – see report online) and have now had practical experience using most of the equipment, having processed and mounted more than 200 otoliths (**Indicator 3.2**; Figure 6).

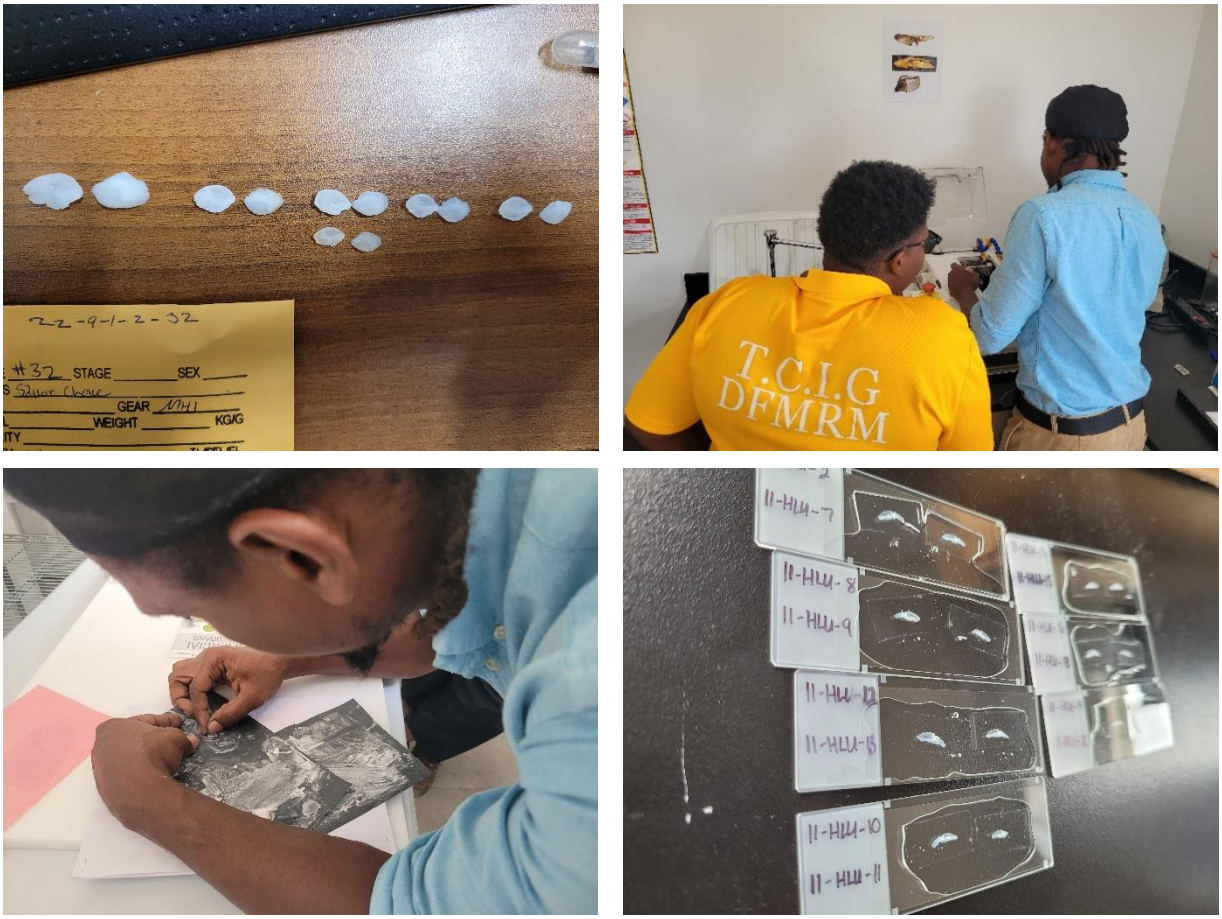

Figure 6: The PO and DFMRM scientific officer sectioning and processing otoliths in the laboratory

As mentioned in Section 3.1, a formal opening for the laboratory was scheduled for March 2023, but has been postponed to May. In preparation for the opening of the laboratory, a Cabinet Paper was drafted and submitted to TCIG cabinet in February 2023. The cabinet paper requested cabinet members to endorse the newly developed TCIG marine and fisheries laboratory; name the laboratory in honour of the late Clifford Leroy Brooks of South Caicos, commit to sustaining the laboratory process and function and support the establishment of the laboratory as a centre of excellence for marine and fisheries research in the Caribbean. The paper also made the recommendation for a business case to outline the operational strategy and requirements for the laboratory to achieve its goal, as a center of excellence for fisheries and marine science. The cabinet paper was well received at a meeting of cabinet on 5 April, to which they released the following statement.

"*Cabinet approved the vision for a state-of-the-art TCIG marine and fisheries laboratory to support the critical management of the TCI marine environment and provide first class laboratory services within the Caribbean Community (CARICOM). It is named in honour of the late Clifford Leroy Brooks of South Caicos. Cabinet requested further financial information from the Ministry of Tourism and will consider at another Cabinet meeting*".

A business case was drafted and completed on time (**Indicator 3.5**; Annex 4) and will be presented to cabinet directly after the official opening in May.

Indicators 3.3 & 3.4 and their respective means of verification are both appropriate and will be dealt with in Y3. However, it is worth noting that otolith and corresponding length data are available for several species since August 2022 and the completion of age and growth studies for a minimum of four target species is on track and should be easily achievable within the dedicated time frame (**Indicator 3.3**; Y3Q2). However, consistent reproductive data will likely be available for one species only (**Indicator 3.4**; Y3Q2) within the timeframe. Reproductive assessments require a minimum of twelve months of consistent data. 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

regularly landed whole – fish sampled at IGA on Providenciales are gutted and cleaned) may prevent *full* reproductive assessments for all four of the targeted species, within the project time frame. *Preliminary assessments* will likely be achievable by the deadline, while *full* assessments will be possible in early 2024, should reproductive sampling on South Caicos and Grand Turk remain consistent in Y3.

Output 4 – Stock assessments of priority species undertaken.

Stock assessment of priority species are due to take place in Y3. **Indicator 4.1** is still appropriate and refresher stock assessment training will be given virtually by project partner Ocean Environmental. However, as mentioned previously, data collection capacity issues have resulted in delays and inconsistent collection of landings data across the main islands. Thus, this may impact the statistical power of completed stock assessments (**Indicator 4.2**), although basic models will be achievable. Full stock assessment models will also be built to accommodate future data and training will be given to TCIG staff regarding how to use these. This will create a "plug and play" system so that once extensive data are available, this can be simply inserted directly into the developed models.

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

Management tools were established in Y1 and are up to date (**Indicators 5.1, 5.3 and 5.4**). PMG meetings have been held quarterly, with meeting minutes available online (**Indicator 5.2**), and all previous Darwin Reports (AR1 & HYR2) have been completed on time (**Indicator 5.5**).

3.3 Progress towards the project 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 good progress towards the overall outcome, albeit behind schedule in some areas. The fishing community has been actively engaged during the landing site consultation and on several other occasions, including ongoing landing site visits. This is leading to an increased awareness and understanding of landings and life history data within the fishing community. 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 (**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.

A data collection manual was created and is updated intermittently as protocols are adapted and refined and new data collection methods are developed (available online). A separate scale-fish data collection protocol for use by government staff has been developed and is being incorporated into the DFMRM SOPs (available on request). The purpose-built relational data base has been developed and is actively used to log all data, consistently (see Figure 4). Furthermore, the project is working to adapt and develop the data base to include conch and lobster data and refine data collection protocols for those species as well, alongside the Assistant Director for Fisheries. Training has been 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 & 3.2) (**Indicator 0.2**).

There have been several delays regarding the laboratory although it is fully functional at present. Currently, most work is focused on age and growth, with reproductive work to follow. As mentioned in section 3.1 & 3.2, the laboratory will formally open in May, following an initial postponement, and its vision as a regional center of excellence for fisheries science has been put before and endorsed by TCIG cabinet and captured in the Business Case (Annex 4). Meetings with regional fisheries bodies such as the CRFM have taken place and they have provided their full support for the successful development of the laboratory (**Indicator 0.3**).

Stock assessment training is due to take place in Y3Q2. As mentioned in Section 3.2, data availability may limit the extent to which stock assessments can be performed from collected data. However, basic assessments will be possible, and training on how to perform and use the assessments will be given, while “plug and play” models and stock assessment protocols will be established (**Indicator 0.4**).

3.4 Monitoring of assumptions

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*’

Assumption 0.1: 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.

This assumption is still relevant and important towards project success.

Although TCIG departments are supportive of the process and onboard with improving data collection and fisheries management, the split of the departments and reduction in effective staffing capacity has had impacts to project delivery. TCIG are committed to providing support where they can, however they are limited by their available budget and capacity and many of the impacts of the departmental divide have been beyond the control of partner departments and the project. Both “new’ departments have been finding their feet and the progression of both the DECR and DFMRM out of the aftermath of the divide has been slow, which has had marked impacts to delivery.

Assumption 0.2: 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.

This assumption is still relevant and important towards project success.

This has been partially upheld in practice. In certain cases, TCIG staff which have been tasked with assisting with data collection have been open to the process and have been effective in following data collection protocols. However, in certain cases, some staff have been reluctant to increasing their workload, particularly where ‘data collection’ is not specifically outlined in their job description. This has been an ongoing issue which TCIG and DFMRM are attempting to address. This has resulted in delays with data collection and is beyond the control of the project – see Section 2.

Assumption 0.3: Modern fisheries laboratory meets the needs of TCI initially and then services other UKOTs in the Caribbean.

This assumption holds true and is still relevant.

Assumption 0.4: Rigorous routine stock assessments housed within FMRM.

This assumption holds true and is still relevant.

Assumption 0.5: Covid-19 impacts don’t place restrictions on national and international travel.

From an international standpoint, this assumption has become less important now that the PM and PO have been recruited and are on island in TCI. However, national restrictions on travel would still maintain large implications for project outcomes and would prevent project staff from engaging with communities and stakeholders, particularly on other islands. This has yet to be an issue and Covid impacts have been minimal to date.

Assumption 1.1: Stakeholders trust is built enough for them to meaningfully engage in the process.

This assumption holds true and is still relevant.

Stakeholder trust has been sufficiently built and stakeholders have meaningfully engaged with the project in several instances.

Assumption 1.2: Covid-19 impacts do not place restrictions on national and international travel.

Same as 0.5

Assumption 2.1: 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.

Same as Assumption 0.2

Assumption 2.2: The DECR and FMRM share resources and collaborate where appropriate, to ensure the effective management of fisheries resources.

This assumption is still relevant and important towards project success.

The two departments have largely collaborated successfully on several aspects of the project, including the laboratory development.

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

This assumption is still highly relevant and important towards project success.

TCIG and the DFMRM have provided some assistance with data collectors. However, this could still be improved, particularly on the islands of South Caicos and Grand Turk.

Assumption 2.4: Covid-19 impacts do not place restrictions on national and international travel.

Same as Assumption 0.5

Assumption 3.1: Modern fisheries laboratory meets the needs of TCI initially and then services other UKOTs in the Caribbean.

Same as Assumption 0.3

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

The assumption was particularly relevant and was not upheld in certain cases. Particularly, TCIG processes delayed the arrival of equipment for the laboratory, which had several impacts to project delivery, as described in Sections 3.1 & 3.2.

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

All equipment has now arrived and this Assumption is no longer relevant.

Assumption 3.4: Covid-19 impacts do not place restrictions on national and international travel.

Same as Assumption 0.5.

Assumption 3.5: Samples available to process.

The availability of samples has been an issue, as described in previous sections. Otoliths have been collected frequently, however reproductive samples have not been consistently available on the island of Providenciales, where fish is landed less frequently, and conch and lobster are the primary target species. Data collection on other islands has often been poor due to reduced data collector capacity.

Assumption 4.1: Rigorous routine stock assessments housed within FMRM.

Same as Assumption 0.4

Assumption 4.2: The DECR and FMRM share resources and collaborate where appropriate, to ensure the effective management of fisheries resources.

Same as Assumption 2.2

Assumption 4.3: Covid-19 impacts do not place restrictions on national and international travel.

Same as Assumption 0.5.

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

This assumption is still highly relevant and important towards the achievement of this indicator.

Data availability has been poor, as mentioned previously. Some landings data are available for Providenciales, which has been collected by project and DFMRM staff there. However, a lack of fish specific landings data prevents meaningful potential for stock assessment. On Grand Turk and South Caicos where fish specific data availability is greater, staff and data collector capacity has prevented regular landings data collections.

Assumption 5.1: Recruitment results in appropriate candidates being appointed and available on island within given timeframe.

Candidates have been appointed in both roles, therefore this assumption is no longer relevant.

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

There have been minimal issues with project partner commitments to resources thus far. The only shortfall has been with regards to vessel use. Agreed commitments state vessel usage twice per month. However, vessels have occasionally been unavailable due to mechanical issues or commitments to other projects or departments. This risk remains relevant going forward.

Assumption 5.3: Covid-19 impacts do not place restrictions on national and international travel.

Same as Assumption 0.5.

4. 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 environment plan. The United Nations Convention on the Law of the Sea (UNCLOS) 61(2) 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 Environment Strategy (ES) is being developed and this project will contribute to the ES vision and to the mission of the DECR 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".

To date, the project has made several important contributions towards improving fishery data and the effective management of TCI's fish stocks, which is a key element in all the before mentioned national and international objectives. Despite data collection capacity building being slower than originally anticipated, ongoing improvements to landings data collection have already improved data availability for decision making. Similarly, outputs and recommendations of the fisher consultation report (available online) have provided critical information for improving data and data collection. The laboratory, which is now operational and formally set to open in May, 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 Caribbean.

Related TCI legislation includes the Fisheries Limits Ordinance (December 2014) and the Fisheries Protection Ordinance (March 2018). Improved on-the ground data collection and subsequent fishery assessments to be undertaken by this project towards its end will make an important contribution to the assessments of fished species (currently the only stock assessment that has been reliable is that undertaken for the spiny lobster). Similarly, where stocks are deemed to be overexploited, laboratory work and associated fish life-history data can inform amendments to legislation, such as the implementation or adjustment of size restrictions and/or closed seasons.

Lastly, TCIG is a member of the CRFM, who have been consulted several times during the project, including at their annual executive meeting. Outputs from the project, including fisheries data and any stock, fishery or life-history assessments will be shared, as required.

5. 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 partake in the fishing sector as fishers. However, the majority of lobster and conch processing plant staff are female, including the manager of a major plant on South Caicos, who is an outspoken and well-respected fishery stakeholder.

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[2].	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[3].	4 female led partners / 2 male led partners

6. Monitoring and evaluation

A Monitoring and Evaluation (M&E) plan has been developed and agreed to by the PMG and is available on the project webpage. The M&E plan outlines the indicators and activities which will be taking place throughout the project and provides a means to track their progress and completion. For each project activity, a verifiable indicator is provided, and it is outlined how the indicator will be evidence, where the evidence is to be stored, who is responsible for assessing it, how often it will be measured, and what resources are required to achieve it. The indicators have been specifically designed to demonstrate alignment of the project to the project Outcomes.

The project is governed through an established PMG which is representative of all project partner organisations. The project partners work well together and regularly meet to discuss and steer the project. The PM provides updates to the PMG in quarterly meetings regarding logframe deliverables, progress against the M&E plan and the project budget. The PMG share documents amongst each other via email when required. It is 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 is facilitated during PMG meetings and is a running agenda item (see PMG meeting minutes – available online).

7. Lessons learnt

In country presence

As mentioned in AR1 and Section 2, what has worked very well is the nesting of the PM in the TCIG DECR which has allowed for direct and regular contact with project partners, including

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

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

the DFMRM. This has 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 has 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 has 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 delivering 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) has 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.

Data issues

Areas of difficulty have largely surrounded access to data, although these have been explained extensively elsewhere (see Section 2, 3.1 & 3.2), many of which have been beyond the control of the project.

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. 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 most recent Change Request. Thankfully, the exchange rate has improved since and the project budget is largely back on track.

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

Two comments were made in response to AR1. The first of these deals with the engagement of the fishing community and the extent to which stakeholders have been engaged on all islands. Although this may have been unclear in AR1, this comment has largely been addressed through the stakeholder consultation report (available online). Initial engagements which were reported in Y1 were only preliminary and widespread engagement of the fishing community was planned for, and delivered, in Y2. This is reported in greater detail in Section 3.

The second comment regards the clarity of the project exit strategy and the need for its review. This specifically refers to the absorption of project staff post project. To date, there has been commitment for the absorption of the PO role by TCIG. This will provide a critical resource for the continuation of laboratory work and the sustainability of project outcomes. The PO has spent a lot of time learning from the PM and has developed specific skills which are relevant to promoting fisheries science in the TCI. These will be successfully absorbed, and the PO will remain in a similar role post project.

The absorption of the PM role, or an equivalent level position, has been recommended in the business case, particularly to drive the development of the laboratory as a regional center of excellence. There is no capacity for this role to be filled locally and this will require an external candidate. TCIG are able to request internal funding for new positions in December 2023, which means they will be budgeted from April 2024, which provides an appropriate timeline for sustainability (as the PM position expires in February 2024 and the PO in March 2024). TCIG feel as though the PO role can easily be absorbed but the salary level of the PM role may require external funding. Currently, the project and TCIG are exploring funding solutions which may help provide an avenue for this.

Further detail regarding the exit strategy are available in Section 10.

9. Risk Management

Increased Violence on TCI

Increased gun violence has resulted in injuries and some fatalities in the TCI community at large. This risk has been added to both the project issues log and field Risk Assessments and mitigation measures have included stalling field sampling on Providenciales in areas where most of the violence has taken place and shortening the stakeholder consultation process on Providenciales due to the increasing violence at the time. A SAERI internal memo was prepared to describe the risk and mitigation measures, and was presented to the SAERI Board. Landing site visits on Providenciales were also temporarily postponed from October 2022 to January 2023 to mitigate against any risks of encountering shootings. Recently, the rate of violence has improved and field activities have continued. Both TCIG and SAERI are keeping a close eye on the situation and have adopted a precautionary approach to manage the ongoing risk, which is assessed weekly on a Monday.

10. Other comments on progress not covered elsewhere

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

Exit strategy

SAERI is working with DECR and DFMRM on an exit strategy which includes a range of approaches including:

(1) Absorption of the PO into TCIG staff

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

(4) A TCIG Business Plan to propose the strengthening of the Fisheries Science resource within the department.

(5) Opportunities for a senior scientific position at the level of the PM.

(6) The formulation of all of these pieces into a comprehensive exit strategy to be presented to the Permanent Secretary for consideration and for sharing

<u>Darwin Local</u>

Already, a Darwin Local application was submitted by the DFMRM, with support from SAERI. 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 June 2023.

11. Sustainability and legacy

The project has gained much attention through the stakeholder consultation and ongoing landing site visits and data collection. As mentioned in Sections 2 & 3, these have provided good opportunities for stakeholder exchanges and have promoted buy-in from the fishing community, which has developed a good level of trust between the project and fishers and improved data collection opportunities. The project has also received high-level government exposure through the cabinet paper and through the preparations for the laboratory opening. The opening itself, due to take place in May, will also provide good public exposure for the project, demonstrating the work which has been achieved to date and in garnering support for the sustainability of the laboratory and its operation post-project. The laboratory will be a major legacy of the project, not only in the TCI, but regionally within the Caribbean.

The absorption of the PO role is a distinct success in the interests of supporting sustainability of project outcomes. It is hoped that a senior scientific role will also be created within TCIG to sustain higher level work and to promote and develop the laboratory into a regional center of excellence. This has been motivated for and recommended in the business case. However, available funding to support the role will determine whether it is feasible or not.

The development and implementation of the exit strategy that is being designed (described in Section 10) is an important contribution to ensuring the sustainability and legacy of the project.

12. 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.

In this reporting year, the Darwin Plus logo was displayed in the following outreach:

- Presentations given at several occasions, including a guest lecture given by the PM to the school for field studies on South Caicos, and a presentation on the laboratory given at the CRFM annual executive meeting. Presentation cover slides are displayed in Figure 7.
- On decals which were applied to the sides and rear of the dedicated project vehicle (Figure 7).
- On shirts which were designed and made for project staff and assigned data collectors (Figure 7). Note that we are aware that the logo is for the Darwin Initiative and not DarwinPlus – the shirts were designed before the project became aware of the new logo (from AR1 feedback).
- The fisher consultation information sheet which was given to all stakeholders (Consultation Report, Annex 1, – available online).
- The Darwin Plus logo is displayed on the provisioned fisheries laboratory and also on the banner for the opening ceremony.
- The logo is displayed on the agenda for the original laboratory opening ceremony, scheduled on 14 March. It will also be on the finalised schedule for the postponed opening in May.

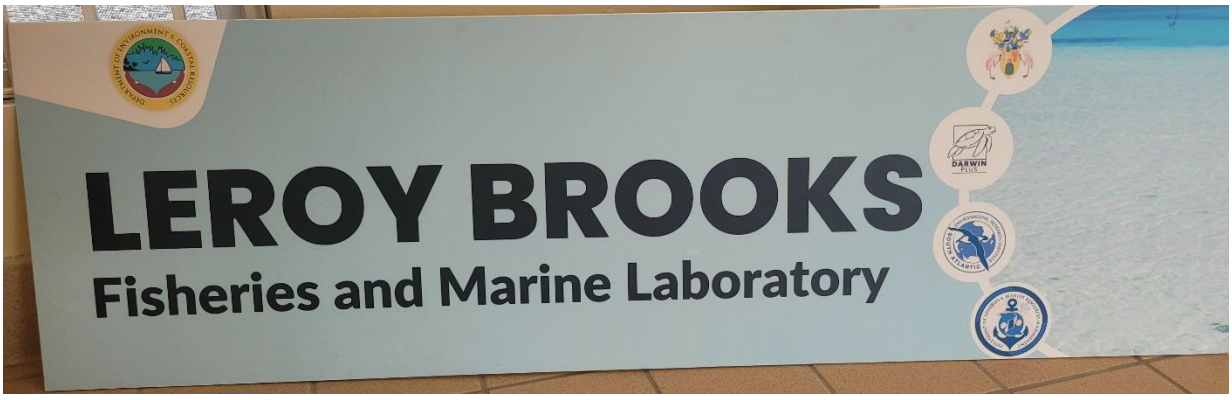

Figure 7: Examples illustrating the presentation of the Darwin logo in various project outreach.

The Darwin Initiative was mentioned in the following outreach:

- Several Facebook posts and Twitter tweets in which the Darwin Initiative was tagged. SAERI currently has 2,500 followers of Facebook and 3,422 followers on Twitter.

13. Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?		Yes/No
Have any concerns been investigated in the past 12 months		Yes/No
Does your project have a Safeguarding focal point?	Yes/No *[If yes, please provide their name and email]*	
Has the focal point attended any formal training in the last 12 months?	Yes/No *[If yes, please provide date and details of training]*	
What proportion (and number) of project staff have received formal training on Safeguarding?		Past (pre project): 50% [1 – PM]

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, we have been fortunate to have had no need for changes or adaptations to our safeguarding methods in the past 12 months.**
Does the project have any developments or activities planned around Safeguarding in the coming 12 months? If so please specify. **No**

14. Project expenditure

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

Project spend (indicative) in this financial year	2022/23 D+ Grant (£)	2022/23 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs	[redacted]			
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others (Please specify)				
TOTAL	**126,025.42**	**126,044.46**		

Table 2: Project mobilising of matched funding during the reporting period (1 April 2022 – 31 March 2023)

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

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

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

The 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 now 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.

Regenerate response

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		Yes /

		lab equipment!, Turks and Caicos Islands, Dr Ed Butler		
Image	Image 3_DPLUS153	The first otoliths being set, collected from white margate (*Haemulon album*), Turks and Caicos Islands, Dr Ed Butler		Yes /

Annex 1: Report of progress and achievements against logframe for Financial Year 2022-2023 – if applicable

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
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.		Recent activities including the stakeholder consultation and ongoing data collections (particularly at landing sites) have promoted meaningful engagement with fishers, which has developed trust and rapport. Ongoing data collection training and on-island supervision on South Caicos and Grand Turk, routine collection of multiple data types on Providenciales and the recent development of the laboratory are making significant contributions towards the protection of the marine environment through improved fisheries management.	
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 has been actively engaged during the landing site consultation and on several other occasions, including ongoing landing site visits. This is leading to an increased awareness and understanding 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. – Deliverable not due until Y3Q3 0.2 A data collection manual was created and is updated intermittently as protocols are adapted and refined and new data collection methods are developed (available online). A	- Continued engagement with the fishing community through routine landing site visits. - Final recommendations on the improvement of data collection opportunities and centralisation of landing sites formally submitted to minister. - Improve data collection and effective implementation of data collection protocols through ongoing supervision and support on South Caicos and Grand Turk. - Continued routine IGA, landing site and fishery independent sampling on Providenciales. Continued updating of the data collection manual.

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
		separate scale-fish data collection protocol for use by government staff has been developed and can be provided on request. The purpose-built relational data base has been built and is actively used to log all data. Training has been provided to several government staff including FMRM scientific officers and deputy director of fisheries, Ms Kathy Lockhart. The project is working to adapt and develop the data base further to include conch and lobster data and refine data collection protocols for those species as well, alongside Ms Lockhart. Deliverable not due until Y3Q3 0.3 There have been several delays regarding the laboratory although it is partly functional at present and due to formally open on the 14th March. Meetings with regional fisheries bodies (e.g., Caribbean Regional Fisheries Mechanism) are ongoing presently, along with market research, and a business case is being developed for the laboratory, due in March. Deliverable not due until Y3Q3 0.4 N/A in this reporting period - due to take place in Y3Q2	- Regular data entry and updating of the fishery database. - Official opening of the laboratory in May. - Laboratory processing of otolith collections for four priority species. - Laboratory processing of available gonad samples for four priority species. - Completion of age-and-growth and reproductive studies. - Arrange a virtual stock assessment training for TCIG staff, led by project partner Ocean Environmental. - Continue data collection, develop stock assessment protocols and models.
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). Provisional recommendations were made in the consultation report, which is available to the minister. This indicator was appropriate.	

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
Activity 1.1 Arrange and deliver fisheries data and designated landings sites consultation workshops		Completed	(Outline what will be carried out in the next period)
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		Provisional recommendations were made in the consultation report (available online), which was made available to the minister	Final recommendations will be formally handed to the minister towards the project end
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. 2.4. 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 manual available on the webpage. It is updated regularly as protocols are amended etc. and is a valuable tool for sampling and laboratory work. Indicator is appropriate. 2.2. Initial training was carried out and trainees did demonstrate improved understanding of materials (see report online). Additional training has since taken place in Y2 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) (evidence provided in Section 3.1 & 3.2). Indicator is somewhat appropriate – once off training sessions provided an understanding of importance of sampling and the procedures, but consistent and long-term practical implementation of sampling techniques has been needed for improved sampling capacity to be developed – i.e. officers require supervision and oversight over time in order to effectively adopt new protocols (detailed in Section 7). 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. However, its usefulness has not been 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.	

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
		This indicator is no longer specifically appropriate, due to the change in delivery strategy. 2.4. All data has been entered on time to date and this is on track. Deliverable not due until Y3Q3 and is appropriate. 2.5. Landings data collection has been inconsistent. This has been 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. "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 has meant that this has not been completely available to date. 2.6. Some spatial data are available and will be uploaded via the TCIG WebGIS. Deliverable not due until Y3Q2 and is appropriate.	
Activity 2.1. Produce a data collection manual and arrange and deliver landings data collection training sessions		Completed	Ongoing data collection supervision/support on South Caicos and Grand Turk & updating of the data collection manual as appropriate
Activity 2.2. Develop, test and finalise fisheries app		Completed – Figure 2, Section 3.1	n/a
Activity 2.3. Prepare and distribute data recording sheets to all relevant staff members		Completed – Data Collection Protocols available on request	n/a
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		In progress (delayed)	Continued landings data collection, data entry. Data to be made available online in Y3
Activity 2.5. Prepare and upload (at least 5) fisheries spatial data sets available on the TCI WebGIS		Planned for Y3	With support from the SAERI data center manager, collate spatial fisheries data from data base, prepare and upload to the TCI WebGIS
Output 3. Fisheries Science laboratory fully equipped, and staff fully trained.	3.1. All Fisheries Science equipment purchased and successfully installed by Y1Q4	3.1. The fisheries laboratory was delayed significantly by the TCIG procurement process and all equipment only became available in December 2022. Installation is now complete and the laboratory is functional. This is evidenced and explained in Sections 3.1 and 3.2. The indicator is appropriate	

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
	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. t	3.2. Staff received training on how to use equipment via the initial training workshop – see AR1 and report available on website. Practical use of all equipment has only begun recently due to the delays explained in Section 3.1 and 3.2. However, staff have become familiar with most of the equipment and regularly use it for processing otoliths and reproductive organs (Section 3.1 & 3.2). Indicator is appropriate. 3.3. Age and growth studies for at least four species are on track and will be delivered by Y3Q2. Indicator appropriate. 3.4. Reproductive data for complete assessment of a single species is on track and will be delivered by Y3Q2. Regular collection of reproductive data for remaining species has been delayed by TCIG staffing issues and a lack of access to reproductive data on some islands (explained in Section 3.1, 3.2 & 3.4). Indicator appropriate. 3.5. A business case and accompanied cabinet paper have been produced (Annex 4) and support for the laboratory has been significant. Indicator is appropriate.	
Activity 3.1. Purchase and install fisheries science equipment		Completed	n/a
Activity 3.2. Undertake age and growth studies for 4 species		Data collection in progress – analysis planned for Y3	Continue data collection, complete laboratory work (sectioning and reading otoliths), perform data analysis and produce a report
Activity 3.3. Undertake temporal assessments of GSI and sex transition for 4 species		Data collection in progress (delayed) – analysis planned for Y3	Continue data collection, complete laboratory work (histological analysis), perform data analysis and produce a report
Activity 3.4. Write business case for regional services		Completed (Annex 4)	n/a
Output 4. Stock assessments of priority species undertaken.	4.1. At least 5 FMRM staff undertake refresher stock assessment training successfully by Y3Q1.	4.1. Stock assessment training due to take place in Y3. Indicator appropriate. 4.2. Stock assessment due to take place in Y3. Indicator somewhat appropriate – data availability may limit the extent of stock assessments. Protocols,	

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
	4.2. Stock assessments for at least 2 priority species successfully undertaken by Y3Q2.	procedures and models will be developed for future data, in partnership with TCIG.	
Activity 4.1. Deliver refresher stock assessment training		Planned for Y3	Arrange a virtual stock assessment training for TCIG staff, led by project partner Ocean Environmental
Activity 4.2. Undertake stock assessments for at least 2 priority species		Planned for Y3	Continue data collection, develop stock assessment protocols and models
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 is appropriate. 5.2. PMG meetings have taken place quarterly and all meeting minutes can be located from the project webpage. Indicator is appropriate. 5.3. Completed in Y1 – see AR1. Indicator is appropriate. 5.4. Completed in Y1 – see AR1. Indicator is appropriate. 5.5. All Darwin reports have been completed on time – AR1, HY2 & AR2.	
Activity 5.1. Recruit PM and PO		Completed	n/a
Activity 5.2. Host quarterly PMG meeting		Completed	PMG meetings scheduled each quarter
Activity 5.3. Create and update project Webpage		Completed	Continue to update project webpage with new content monthly
Activity 5.4. Write and sign off M&E Plan		Completed	Review and update quarterly
Activity 5.5. Prepare and submit DPLUS reports (half yearly/yearly).		Completed	Prepare regular DPLUS reports

Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed)

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. (Max 30 words)			
Outcome: (Max 30 words) *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 DFMRM by Y3Q3.	0.1 Centralised landings sites for data collections opportunities agreed and organised by the fishing community, DECR, and DFMRM, 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 DFMRM – Environment,	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. 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.

	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 DFMRM to support improved management by Y3Q3.	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 DFMRM staff to conduct assessments going forward.	Modern fisheries laboratory meets the needs of TCI initially and then services other UKOTs in the Caribbean. Rigorous routine stock assessments housed within DFMRM. Covid-19 impacts don't place restrictions on national and international travel.
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	1.1. 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.

	1.2. At least 4 landing sites on each of 5 islands identified by Y2Q1.		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. A data collector app is developed for digitally recording landings data by Y2Q2. 2.4. 100% of all landings data inputted into the fisheries data base by Y3Q3.	2.1. Data collection manual. 2.2. Training report (including aggregated participant responses) available online. 2.3. Data collector app. 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.	DECR & DFMRM 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 DFMRM 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.

	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.	2.6. Fisheries spatial data available in TCIG WebGIS.	
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	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 Bertalanffy growth	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 equipment required for the fisheries laboratory

	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.	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 TCIG lab to provide regional services to the Caribbean presented to TCIG Cabinet.	Covid-19 impacts do not delay the purchase of equipment. Covid-19 impacts do not place restrictions on national and international travel. Sample available to process?
4. Stock assessments of priority species undertaken.	4.1. At least 5 DFMRM staff undertake refresher stock assessment training successfully by Y3Q2. 4.2. Stock assessments for at least 2 priority species successfully undertaken by Y3Q3.	4.1. Training report available online 4.2. Stock assessments delivered to Director of DECR & DFMRM and PS of the Ministry	Rigorous routine stock assessments housed within DFMRM. The DECR and DFMRM 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. 5.5 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.
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. Undertake stock assessments for at least 2 priority 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 3: Standard Indicators

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

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Table 1 Project Standard Indicators

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		72	72
	1.2. At least 4 landing sites on each of 5 islands identified by Y2Q1								
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		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		16	16
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		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		1	1
	2.5 Landings data for at least 4 species successfully collected routinely throughout 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	0		0	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
	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					
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	0	0		0	4
	3.4. Maturity gives temporal assessments of Gonad Size Index and sex transition successfully understood for 4 species by Y3Q2.			Reproductive assessments	0	0		0	4
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		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* *Double counting with indicator 2.2 & 3.2 as many people will be the same, although the training is different*	People	Government officials	0	0		0	5
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		0	2

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
	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. 2022.	Male	South African	South Atlantic Environmental Research Institute, Stanley, Falkland Islands.	Project webpage
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

Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the **correct template** (checking fund, type of report (i.e. Annual or Final), and year) and **deleted the blue guidance text** before submission?	X
Is the report less than 10MB? If so, please email to BCF-Reports@niras.com putting the project number in the Subject line.	X
Is your report more than 10MB? If so, please discuss with BCF-Reports@niras.com about the best way to deliver the report, putting the project number in the Subject line.	
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	X
Do you have hard copies of material you need to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 15)?	X
Have you involved your partners in preparation of the report and named the main contributors	X
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	