Darwin Plus: Final Report

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

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

Submission Deadline: no later than 3 months after agreed end date.

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

Darwin Plus Project Information

Project reference	DPLUS067
Project title	Regional collaboration to achieve sustainable Caribbean fisheries management
Territory(ies)	Anguilla, the Virgin Islands (BVI), Turks and Caicos (TCI)
Lead Partner	Centre for Environment, Fisheries and Aquaculture Science (Cefas)
Project partner(s)	Department of Fisheries and Marine Resources (DFMR, in Anguilla), Department of Agriculture and Fisheries (DOAF, in the VI), and Department of Environment and Coastal Resources (DECR, in TCI)
Darwin Plus Grant value	£228,584
Start/end date of project	01/04/2017- 31/03/2023
Project Leader name	Rosana Ourens
Project website/Twitter/blog etc.	Regional collaboration to achieve sustainable fisheries in the Caribbean - Cefas (Centre for Environment, Fisheries and Aquaculture Science)
Report author(s) and date	Rosana Ourens, Kathy Lockhart, Kafi Gumbs, Tessa Smith, Abbi Christopher, Charlotte Jessop – 30 March 2023

1 Project Summary

Caribbean UK Overseas Territories (UKOTs) possess rich marine environments with significant resources. Fisheries comprise a significant component of the resources and often local economies. Consequently, Joint Ministerial Council (JMC) have recognised the need for policies to support sustainable fisheries, and the UKOT Biodiversity Strategy identified "*Conservation and Sustainable Use of the Marine Environment*" as a priority.

In the Virgin Islands (VI), Turks and Caicos (TCI) and Anguilla (Fig. 1) conch and spiny lobster are commercially among the most important fishing resources, and they support the livelihood of many families. The lack of fisheries data, science capacity, and effective legislation and effective enforcement, have all been identified as barriers to achieving sustainable exploitation. While in all three UKOTs there is Government support for sustainable exploitation, the lack of capacity and evidence to inform decision making, and broader regional cooperation between UKOTs, has hampered progress to date.

The goals of this project are to provide the three UKOTs with the skills, knowledge, data, and tools to conduct reliable evaluations of the status of their stocks in the medium to long run and to use scientific evidence to support fisheries management decisions. The project has four main

sections: 1) data collection, 2) data analysis and assessment, 3) fisheries management, and 4) capacity building and collaboration.

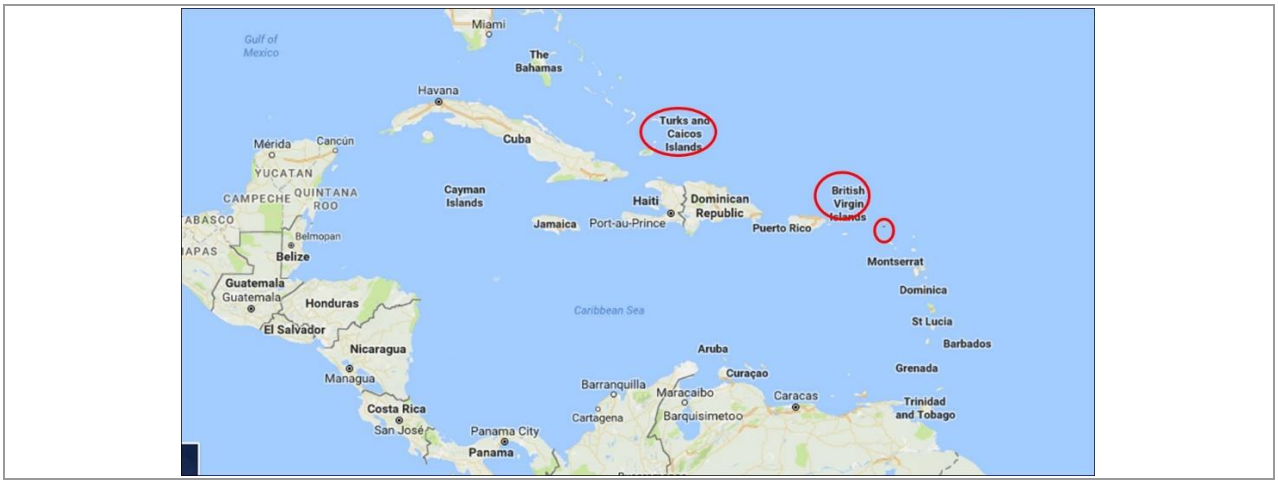

Figure 1. Map of the Caribbean. The three host countries are highlighted in red.

2 Project Partnerships

Cefas regularly communicates with the three partner institutions to discuss the progress of the project, request data, clarify information, etc. The communication channels are WhatsApp, phone calls, online meeting platforms (Microsoft Teams) or emails, depending on the subject and the individual/s being communicated with.

The main tasks of the partners in the project have been: 1) participate in the design of activities providing ideas and local knowledge; 2) collect fishing data and share it electronically with Cefas; 3) actively participate in the training activities programmed; 4) assist Cefas with the organisation of the training activities when they are hosted in their country; 5) collaborate with Cefas during the visits in-country; 6) discuss with Cefas the progress of the project and communicate any issue or potential obstacle to achieve the goals; 7) participate in the decision-making of the project; 8) collaborate in writing the annual reports and the final report for Darwin.

Communication with the partners has been crucial to adapt the activities of the project to the local needs to achieve the outcome of the project (the new activities discussed with the UKOTs were approved by Darwin in 2018). In addition, the three partner institutions have greatly assisted Cefas staff during their visits to the UKOTs each year: they have provided advice on the logistics for the trips (i.e., best dates, accommodation, rental cars, etc.); arranged interviews, meetings, and informal chats with the fishing industry; assisted with the organisation of workshops; and sent regular updates with the new data. Staff from the three partner institutions also participated in all training activities delivered as part of this project.

It must be noted that the implementation of the phone app (activity 1.11) has been challenging. It was not a part of the original project design and required the involvement of several parties (IT departments of the Governments in the UKOTs, partner institutions, Heads of Ministries, the company developing the app, and Cefas). The three partners were keen to use the app to collect fishing data, however, there was limited uptake due to UKOTs' uncertainty about maintaining the app (i.e., maintenance costs, app support etc.) in the long term (see section 3.1).

3 Project Achievements

3.1 Outputs

Output 1. Implement new or improve existing conch and spiny lobster fisheries data collection approaches in the three UKOTs.

The first output has been achieved as demonstrated by the SMART indicators included in the logframe. The fishing data collected in the BVI before the project was very poor and inadequate to assess the status of the stocks. The main data sources were the logbooks provided by fishers once a year to renew their fishing licences, and the sales receipts from the Fishing Complex, where most of the conch was sold before Hurricanes Irma and Maria in 2017. Both datasets were analysed (measurable indicator *1a)* but they could not be used to assess the stocks given the data was scarce and outdated (Appendix 1 in Annex 6). Therefore, Cefas proposed a new sampling programme for conch and lobster that ensured that comprehensive data relevant to stock assessments were consistently collected. The Department Of Agriculture & Fisheries (DOAF) welcomed the suggestion and Cefas assisted them with its implementation during a few trips to the UKOT (Annex 7). A preliminary database was also developed for the BVI to encourage and facilitate data entry. As a result, 53 sampled trips were included in the database and used in the baseline stock assessment. They included biological information on 2,415 spiny lobsters and 30 conchs (all 30 conchs from a single trip). Conch was not fully sampled due to fishers reporting very low to no catches in the aftermath of the hurricanes in the area of the proposed extension of the Horseshoe Reef Fisheries Protected Area (FPA) area (usually their main fishing ground for the species).

In Anguilla, the fishing data compiled by fisheries officers in the landing areas between 2010 and 2017 was available. The form that the Department of Fisheries and Marine Resources (DFMR) used to collect this data was improved to include crucial information to assess the lobster stock, such as the length structure of the catch. Like in the VI, Cefas travelled to Anguilla to assist with the implementation of the new data collection. During these trips fishers were also interviewed to identify the fishing grounds for spiny lobster (Annex 8 and 9, measurable indicator *1b*) and the evolution of the fishery through the years (Annex 8 and 10, measurable indicator *1c*).

The data collection programme in the TCI was more comprehensive than in the other UKOTs, although some key information, such as total landings, were still unknown. The main data sources are the fishing data provided by the processing plants and biological data (i.e., length structure of the catch for lobster, maturity stages for conch) collected by DECR in the processing plants. The data provided by the processing plants in the TCI was collated and combined in a single dataset for the analyses (measurable indicator *1d, Annex 11*). The data is currently provided in independent spreadsheets every year, and the data of each week is in a different sheet. This current format makes any type of analysis, including the construction of temporal series of data, very difficult. To solve this, a code in R was created to automatically combine all data into a single dataset, which made possible to successfully use the data for the assessment of the stocks (Annex 12). The R code was shared with DECR to make the analysis of future data easier.

A common challenge with the data collection in the three UKOTs is that the partner institutions do not have enough staff to manually enter the scientific data into an electronic database, and consequently a significant part of information has been misplaced, deteriorated, or lost during diverse hurricanes through the years. On this issue, a database in Microsoft Access was designed in collaboration with the three partners to record the sampled data (measurable indicator 1f, Annex 13). The database contains diverse linked tables including catch and effort information as well as biological data (length, sex, weight, etc.). Bluetooth callipers and rough tables designed to work on extreme weather were also provided (measurable indicator *1g*, Annex 14). These tools streamline the data collection process as the data can be directly entered in the database and no paper forms are needed. Furthermore, the length data collected with the callipers is automatically saved with the sex in the database. This saves a huge amount of time when just one person is carrying out the sampling. A webinar was held to demonstrate how to use the database and the callipers (Annex 15).

Anguilla is using the tablet not only to collect fishing data, but also beach profile data and other fieldwork. They also use the Bluetooth calliper to measure lobsters and other fish. The TCI also found the tools very useful, and they are in the process of using them in their sampling programme. In the Virgin Islands the database is currently being integrated into a spatial mapping exercise as part of another Darwin project. Once operable, the devices will be used continuously.
A phone app to collect catch data was also designed (measurable indicator *1e, Annex 16*), however it could not be implemented during the life of the project. Total landings and effort are essential information for any stock assessment method, and they are currently lacking or very inaccurate in the three UKOTs. Cefas and the three partners agreed that this data could be provided on a daily basis by fishers through a phone app, and Darwin approved this activity in 2018. The three partners actively participated in the design of the app by making decisions regarding the information to be collected, how to login, the reports that the app would automatically create, or the commercial species to be listed. The app, created by the company QuyTech, will work in Android and iOS, and the information provided by fishers in each UKOT will be available for the corresponding Government through the admin panel of the app.

The app was regularly tested by Cefas and partners to report and fix bugs (Annex 17), and it was finally ready to launch in 2020. However, despite the benefits of the app and the willingness of the three partners to use it, the app did not go ahead. The IT department in Anguilla was concerned about the infrastructure needed to host the app, whereas Heads of Ministries in the TCI and VI were hesitant to host it because of the maintenance costs associated with the app in the future. Cefas and DECR held meetings with the Heads of Ministries in the TCI to explain how the app would improve the fishing data collection. Furthermore, the app could be tested for a few years with no costs. If the app was successful and the governments obtained quality data from the fishers, they could consider if the maintenance cost to keep the app updated with the newest Android and IOS software was worthwhile. Similarly, meetings with QuyTech, Cefas, DFMR, and the IT in Anguilla were also held to discuss the infrastructure needs to host the app and to explore if the project could provide it. Despite best efforts, the app was not implemented in any of the UKOTs. The source code of the app was shared with the partners for implementation in the future, when/if required (Annex 18), but they are likely to need assistance from QuyTech or another developer company to make the app live.

Output 2. Data assessment

Data quality and availability dictated what type of stock status evaluation could be conducted in each territory. In Anguilla, the data collected by fisheries officers in the landing area was available, which consisted of a timeseries of catch and effort for the sampled vessels (2009-2017). In addition, as part of this project, fishers were interviewed to identify the fishing areas for lobster and to reconstruct the evolution of the fishery in the last 5 years based on fishers' perceptions. The status of the stock could not be assessed with the data available, but the performance of the fishery was evaluated, and the fishing areas identified (measurable indicator *2a*. See annex 10). This analysis was already an achievement considering the limited knowledge of this stock and fishery.

Conch and lobster stocks in the VI had never been assessed using quantitative methods before this project either. The fishing and biological data collected through the new data-collection programme enabled use of a length-based method to identify the status of the lobster stock (Annex 6). The assumptions of the assessment and the data needed to improve the model were explained. The status of the conch stock, however, remains unknown. The fishing data collected in the Fishing Complex and logbooks were analysed to build a short-time series of catch per unit effort for conch. The biological data collected for conch was also analysed, but a bigger sample size is needed to estimate size at maturity or biometric relationships (Annex 6). This information could be used to estimate a meaningful minimum legal size specific for the stock.

The data collected by DECR in the TCI enabled some level of quantitative stock assessments (Annex 19). Spiny lobster was assessed applying diverse length-based methods commonly used in Europe to assess data-limited stocks and the outputs were compared. The assumptions of the models were explained and the preferred method for future assessments

was highlighted. The conch data was also analysed, but challenges remain to be able to identify the stock status. This stock was evaluated in the past using a surplus production model, but the results were considered unreliable between 2008-2010 and since then the stock has not been assessed. As part of the project, the stock was assessed by fitting a stochastic surplus production model in continuous time (SPiCT). Unlike the conventional model used previously by DECR, SPiCT accounts for uncertainty and allows some model tuning. Several attempts were made to fit the model, but the lack of contrast in the data led to meaningless results. More work, including the creation of a robust biomass index and the estimation of total landings, is required to improve the assessment model. Virtual meetings were held individually with partners to explain the main outcomes of the assessments (Annex 20).

The partner institutions attended a course on data-limited stock assessments in July 2022. The methods used to assess their stocks were explained, as well as other methods that they could use in the future when more data becomes available (Annex 21). The R code created to assess their stocks was shared with the partners so they will be able to replicate the assessments, and books were provided to guide them during their learning journey (measurable indicator 2b, Annex 22).

Output 3. Sustainable management

Fisheries management recommendations have been provided to the three UKOTs in diverse occasions (measurable indicator *3c*), but most of the recommendations are summarised in the stock assessment reports (Annexes 6, 10, 19). These recommendations are based on the status of the stocks, a review of the management policies in other Caribbean countries (measurable indicator *3b*, Annex 23), and the weakness and strengths of the current governance systems identified in the three UKOTs (measurable indicator 3a, SWOT analysis in Annex 24). Additionally, the draft management plan for lobster and conch in the TCI is being developed. Cefas sent recommendations and amendments to the management plan 2005-2010, and DECR is currently reviewing and addressing the Fisheries Management Plan (FMP) for all fish resources (not only lobster and conch) before sending them to Heads of Ministry for approval (measurable indicator *3d,* Annex 25).

Unfortunately, COVID-19 caused delays in the implementation of the Fisheries Management Council and the Horseshoe Reef Fisheries Protected Area (FPA) in the VI, which is not in place yet (measurable indicator *3e*). A half-day community workshop was successfully held in Anegada (VI) in 2019/2020 to discuss the co-management of the future Horseshoe Reef FPA. The meeting was well attended with active participation and positive engagement from the fishers (Annex 26). The creation of the Fisheries Management Council was discussed as well as the implementation of new management regulations for the co-management area. In addition, a 3-day fisheries management workshop took place in Tortola in 2019 where Cefas worked together with the VI partners on an overview of a management plan for the Horseshoe Reef FPA (measurable indicator *3f*, Annex 24).

Output 4. Training and knowledge exchange initiatives and collaborative working opportunities for UKOT fisheries scientists, managers and fishers.

At the beginning of the project a questionnaire was completed by the partners to identify the weakness of the governance system (Annex 31). In this questionnaire, partners recognised that staff members were familiar with the local fisheries but many of them had limited numerical skills to conduct stock assessments and knowledge on population dynamics. Many of them are not familiar with the software R for statistical computing, Access databases, and in some cases Excel.

Three workshops have been successfully delivered to build local capacity on fisheries science (measurable indicator *4a*). The first workshop on fisheries data collection and sampling design was held in Anguilla in March 2019 (Annexes 27, 28). The workshop consisted of a combination of lectures and practical exercises aimed at providing the fisheries officers with the skills and knowledge to design an effective fisheries data-collection programme. The lectures covered important subjects on data-collection, such as the data required to conduct diverse types of stock assessments, the most common fishing data sources, and the uncertainty associated with them. Cefas also talked about the importance of identifying the strata of the

surveys (e.g. areas or fleets with different characteristics that need to be sampled), raising procedures to estimate total catch, and the most common survey designs for catch sampling programmes. During the workshop, fisheries officers and fishermen also identified the main challenges associated with their fisheries data collection and discussed tools and approaches that would help them to meet data needs.

The second workshop on fisheries management was held in the VI in October 2019 (Annexes 24, 28). The workshop agenda was structured on three key components of fisheries management planning: “Where are we? Where do we want to be? How do we get there?”. A thorough SWOT (strengths, weaknesses, opportunities, threats) analysis was conducted for all 3 UKOTs, encouraging exchange between and comparison of the respective systems in place. This was followed by discussions on the specific goals of each UKOT, covering aspects such as sustainable fishing practices, and on their respective options for the development and implementation of management plans.

The third workshop on stock assessment was held in the UK in July 2022, and two fisheries officers from each UKOT attended (Annexes 21, 28). They learnt basic concepts of fisheries science, assessment methods used in data-limited stocks (including the methods used in this project to assess their stocks), and R programming language. The course combined lectures and practical exercises, using both Excel spreadsheets and R language. Essential books on stock assessment models and R language were provided to support course participants on their learning process (Annex 22). In addition, participants were provided with an overview of the stock assessment process as a whole. They visited some of the laboratories at Cefas (Lowestoft) and scientists from different groups provided talks about their work. This ‘tour’ encompassed the main pillars on fisheries science and highlighted how they are linked: from data collection and data curation to stock assessment and fisheries advice (Annex 21). The visitors said the research exchange trip was very productive and they were taking home new skills to analyse fisheries data and conduct simple stock assessments.

The feedback provided by the participants on the quality of the training was very positive for the three workshops (Annex 29).

Although it is not included in the logframe of this project, a webinar was held in April 2021 to train the staff of the three partner organisations in using the sampling database created under this project (Annex 15).

3.2 Outcome

The main outcome of the project, ‘*Fisheries managers in the three UKOTs have the skills, knowledge, data, and tools to inform sustainable management and exploitation of their commercially important fisheries*’, was largely achieved although some time is needed to create a long time series of data that can produce reliable stock assessments.

Diverse tools have been provided in this project to improve the data available for the stock assessments in the future (measurable indicator c). The current data collection programmes were reviewed, and their limitations and strengths were discussed with the partners (workshop on fisheries management, Annex 24). With their collaboration, data needs were identified, and Cefas created a database to enter the future data (Annex 13). Cefas assisted with the implementation of the new data collection programme in Anguilla and the VI (annex 7), and in fact, the new data collected in the VI was used for the assessments. The project also provided tablets designed to be used outdoors and Bluetooth callipers, that will allow the partners to directly enter the data in the database during the sampling, without the need of using paper forms that have to be automatised later in the office (Annex 14). The phone app CariCatch was mainly aimed to record total landings and effort, essential variables in any stock assessment. This information is still missing due to the unsuccessful implementation of the app. Alternative data collection approaches have been presented to the UKOTs to obtain this data (e.g., claim sale receipts), but it is up to the government of the territories to implement them.

It is worth noting that the main obstacle in Anguilla of collecting data is that the current Fisheries Act is very broad and vague, and does not provide legal support to DFMR to collect fisheries data. In addition, the fishing industry is not engaged and most of the fishers refuse to

collaborate with DFMR. The project has provided DFMR with the tools and skills to effectively collect fisheries data and assess the stocks, as well as advice to improve fisheries management. These tools and skills will be useful for the future when the current issues are solved and DFMR is able to collect enough fisheries data. Meanwhile, DFMR is likely to fail in its goals of monitoring fisheries.

A baseline assessment of the status of the stocks was produced, using either the historical data provided by the partners, or the data collected from the onset of the project (measurable indicator b, Annexes 6, 10, 19). Fisheries officers from the three UKOTs learnt about the assessment methods during the course on stock assessments (Annex 21), and the R code used in each country for the assessment was explained and handed to the corresponding partner (Annex 22). In addition, the data needed to improve the reliability of the assessments was highlighted.

Management advice was also provided to each UKOT based on the results of the stock assessments, the SWOT analysis carried out during the workshop on fisheries management, and based on the experiences from other Caribbean countries. Additionally, Cefas sent recommendations and amendments to update the management plan for conch and lobster in the TCI (Annex 25). DECR is currently in the process of updating the management plan for all fish resources before sending it to the Ministers for approval.

Training and knowledge exchange has been on-going throughout the project, and fisheries officers from the three UKOTs had multiple opportunities to interact and exchange experiences (Annex 28). The three workshops and the visit to the UK were successfully delivered, providing staff from the three institution partners essential skills and knowledge on fisheries data collection and data analysis.

The training and tools provided under this project (i.e., tablets and Bluetooth callipers, improvements in the data-collection programmes together with the databases to enter the data, and the R code created to handle and visualise data and conduct the stock assessments) support each UKOT in building the capacity required to assess the status of their stocks and inform management decisions.

A maturity questionnaire was developed to monitor progress (Annex 30). The questionnaire was completed by partners at the beginning and end of the project, and the answers were used to create numerical variables (values from 0 to 1) that fall within one of the project outputs. The questionnaire can be used as evidence of the project achievements (Figure 2), although external factors might have contributed to the changes observed over time as well.

Figure 2. Results of the maturity questionnaire. Variables were scored (0-1) based on perceptions of staff members of the partner institutions in 2018 and 2022.

3.3 Monitoring of assumptions

Some of the assumptions have changed from the original project proposal:

Assumption 1: Fishers will support data collection programmes. The data collection programme in Anguilla has been designed and implemented already. However, only a few fishermen are collaborating, and the number of observations is limited. To improve the situation, Cefas and DFMR have discussed a set of actions to engage fishermen in data-collection (see Annex 10) but they are not in place yet. A workshop was also organised with the same goal, but only two fishers attended (Annex 27). In addition, DFMR is trying to implement new legislation that authorises DFMR to measure and weigh the landings.

Assumption 2: Available data are robust enough for assessment purposes. Available data were not robust enough for assessment purposes, even for the most data-limited methods. Only the status of the spiny lobster stocks of TCI and the VI could be assessed, but still with high uncertainties in the outcomes. All data available were analysed and reported on, for example as temporal trends indicators or through size structure analysis. The stock assessment workshop provided each UKOT with the tools to assess the status of their stocks as more data becomes available, following on from the work undertaken during this project to support best data collection practices.

Assumption 3: The VI Government is able to facilitate setting up a Fisheries Management Council for one of the FPAs. Some of the activities of the project relied on the Fisheries Management Council of the VI to be put in place. Since this is still in development in the VI, it was not possible to provide support and analyses during the lifespan of the current project.

Assumption 4: logbook database contains sufficient data to develop meaningful indicators. The logbook data was considered unreliable and insufficient to assess the stocks, and consequently other databases were explored. A new monitoring programme has also been put in place to record the data needed for future assessments.

Assumption 5: UKOTs have the capacity and infrastructures needed to host a phone app. Anguilla did not have the adequate infrastructure to host the app. In addition, the Heads of Ministries in the TCI and VI did not support the implementation of the app in any of the UKOTs given the future maintenance costs. Partners flagged this issue late in the project, when the

app was already designed and ready to use. The source code was shared with the partners in case they can implement it in the future.

4 Contribution to Darwin Plus Programme Objectives

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

Fishing is an important recreational, commercial, and cultural activity in the Caribbean, and most locals have been exposed to fishing activities at one time or another. The Caribbean spiny lobster and conch support one of the most valuable fisheries to the region, including the VI, TCI and Anguilla. The mission of the project partners is as follows:
-DFMR (Anguilla): “To manage and regulate the use of Anguilla’s fisheries and marine resources, in a **sustainable** manner, for the maximum economic and recreational benefit for the people residing in Anguilla.”
-DOAF (VI): “To ensure **sustainable** production, harvest and supply of safe, high-quality food by regulating the agricultural and fisheries sectors.”
-DECR (TCI): “Ensure **sustainable** utilisation of the natural resources of the Turks and Caicos Islands, protect and promote biodiversity and economic prosperity through a sustainable fishing industry and a protected areas system.”

The project supports the mission of the partners by providing the skills, tools and scientific knowledge to design and implement a fisheries policy that preserves the marine ecosystems and enhances the socio-economic development of the fishing communities. The design of an effective fisheries monitoring programme is the first step towards promoting responsible use of marine resources, as data is needed to identify the status of the stocks and provide scientific advice on management. The project has improved the data-collection programmes in the three UKOTs, assessed the stocks where possible, and highlighted data gaps. Cefas also contributed to updating the fisheries management plan in the TCI, and successfully delivered three workshops to build local capacity on fisheries science. Staff from the three partner institutions should be able to conduct a simple assessment for data-limited stocks and use the outputs to inform management. By building this local capacity the project is contributing to move Caribbean fisheries towards sustainable exploitation in the medium-long term.

4.2 Gender equality and social inclusion

Fishing is often a family business in the Caribbean, and whereas most of the fishers are men, women are often involved in post-catch activities, such as marketing or fish processing. In addition, both conch and lobster fisheries are part of the culture and identity of the Caribbean society. For example, the Anegada Lobster Festival (BVI) is a popular event that takes places every year to celebrate the opening of the fishing season, whereas conch salad and conch fritters are popular dishes in the Caribbean cuisine that can be easily found in the local farmers markets. The improvement of the lobster and conch stocks would benefit the wellbeing of the fishing communities in general, and the livelihood of many women and men.

The main goal of this project is to provide the partner organisations with the skills and knowledge to assess their stocks and make informed management decisions based on scientific evidence. Fisheries officers are therefore the main target group of the project. In the first workshop held in Anguilla 3 women and 8 men received training on fisheries data collection; in the second workshop held in the VI 2 women and 3 men received training on fisheries management; whereas 4 women and 2 men benefited from the workshop held in the UK in 2022 (see Annex 28). It must be also noted that the project manager and project leader are both women as are the directors of 2 out of the 3 partner organisations.

Please quantify the proportion of women on the Project Board[1].	70%
Please quantify the proportion of project partners that are led by women, or which have a senior leadership team consisting of at least 50% women[2].	70%

5. Monitoring and evaluation

The project has faced many challenges, including the impacts of a hurricane and a worldwide pandemic. Several change requests have been approved by Darwin to adapt the project activities to the local and current needs and achieve the outputs. The measurable indicators and means of verification of the logframe have been updated. The main changes from the original application are the following:

- The project will end on the 31st March 2023 instead of the original date 31st March 2021. This change was approved to consider the delays caused by the Hurricane Irma in September 2017 and the COVID-10 pandemic.
- The original camera survey in Anguilla, to characterise the preferent habitats on spiny lobster, was replaced with the introduction of new technologies in the data collection schemes in the three UKOTs aiming to streamline the process and collect more data efficiently (activities 1.11 and 1.12). This included the development of the phone app CariCatch, the design of a database to enter sampling data, and the use of Bluetooth callipers and tablets in the sampling. One of the reasons for this change was that DFMR did not have enough staff to analyse the videos of the survey. In addition, the use of new technologies was expected to contribute more than the habitat survey to achieve the outcome of the project and the partner in Anguilla fully supported the change.
- The stock assessment workshop took place in the UK when fisheries officers from the three UKOTs visited Cefas. This change allowed more fisheries scientists from Cefas, experts in some of the methodologies used in this project, to be involved in the training. In addition, the budget initially allocated to travel and subsistence costs for the workshop was used to bring an additional staff member of each partner institution to Cefas for training.
- The phone app was adapted to work independently in the three UKOTs. This change would allow the partners to update the app according to their needs in the future. This change was requested by the partners before notifying that the Heads of Ministries would not approve the use of the app.

The monitoring and evaluation system in place was appropriate to assess the success and performance of the project, as well as to identify when the project was not going as planned and some adjustments were needed. The project manager (PM) and project leader (PL) met at least once a month to track progress against milestone delivery and quality using the logical framework of the project and the timetable of the activities. Finances were also revised monthly and the expected expenses for the following months were forecast. The PM also maintained a risk register which was reviewed monthly. When a new risk was identified (e.g., Hurricane Irma, COVID-19 pandemic), the PM and PL explored options to revise the project plan to achieve the best outcome. The changes of the project were discussed with the partners in the UKOTs as

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

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

well as being discussed and internally approved by the project sponsor (principal scientist at Cefas) before submitting the formal request to Darwin.

The maturity model questionnaire was completed by the three UKOTs at the beginning and end of the project to monitor achievements from the partners' perspective (Figure 2). The quality of the training was also assessed by the attendees by completing an evaluation form (Annex 29).

It must be noted that the project was externally reviewed in 2019 by LTS International as part of the Mid Term Review (MTR). The MTR found the project adaptive to overcome unforeseen circumstances and provided creative solutions to ensure the overall objectives were met. LTS made some recommendations that have been taken forward when possible.

6. Actions taken in response to Annual Report reviews

The review was discussed with project partners and these are the answers to the reviewers' comments:

1. The poor relationship between DFMR in Anguilla and fishers risks overall project sustainability. Final reporting should clearly discuss any action (or future planned action) for project partners DFMR to act on recommendations (i.e. find funding to install an ice machine in Anguilla; raise the fishermen's concerns at higher level in the government and get funding to repair the piers and install and maintain lights in the harbours; and design of a website to internationally promote the lobster fishery in Anguilla) to improve this relationship and to improve quality of fisheries data available for future management. It is acknowledged that this is out of the direct control of lead partner Cefas so direct comment from DFMR may be needed.
DFMR explored the suggestion of installing an ice machine, but it did not go ahead because of a lack of funding and water source. In addition, several meetings were held between fishers, DFMR and the port authority to repair the piers, but no solution was found yet. One of the objectives of DFMR this year is to work on a closer relationship with fishers. Some of the activities that DFMR is exploring is to send occasionally staff on board with fishers to share experience/knowledge, to arrange sharing sessions on topics of interest for fishers, or to show them the benefits and how to apply the Baited Remote Underwater Video Systems funded by the UK to their trade. DFMR is also sharing part of their research findings and other topics of interest on social media in order to be more transparent on their activities.

2. In addition to the above, it would be interesting to hear in the final report to what extent partners in each of the UKOTs have taken on board management recommendations developed through this project to date (or any plans they have post-project).
Given the nature of the project and the fact that only two out of five stocks could be quantitatively assessed, the main recommendations of the project were focused on improving the data available for the assessments. On this regard, DFMR is trying to engage fishers on data provision (see section above) and change the legislation to support the data collection.

TCI are revamping the monitoring protocol to obtain a more complete picture of the size frequency for both conch and lobster as suggested in this project. They are expecting to use the Bluetooth callipers and tablets to facilitate the data collection. Additionally, DECR is conducting an independent survey of queen conch to create a time series of abundance for this species. The lack of a good proxy of stock abundance was identified in this project as the main obstacle to conduct an assessment for this stock. DECR has also hired a second scientific officer to work on the assessment of the stocks.

TCI is also conducting a situation analysis to determine the species/fisheries needs and priorities. This will feed directly into the review and amendment of the Fisheries Management Plan, together with the feedback received from Cefas for the section of lobster and conch fisheries.

The devastation experienced by the passage of Hurricanes Irma and Maria greatly impacted the data collection efforts in the Virgin Islands. Limited staff who were themselves recovering from two devastating storms and non-existent transportation in the aftermath of the storm were major impediments. Additionally, shortly after the inception of this project and the aftermath of the storms, the Fisheries Division underwent a major administrative change, staff shifted and the original lead in the Virgin Islands retired. There was a notable decline in the abundance of conch in Anegada and therefore the data expected based on past experience pre-Irma and

Maria could not be collected. The COVID-19 pandemic also had a significant impact. As conch and lobster fisheries comprise a significant portion of the commercial fisheries and the cultural dynamic of these islands, understanding conch and lobster stocks is of paramount importance to guide decision-making on the management of these species. Although the results of the stock assessments were disappointing (suggesting that the lobster stock is overexploited), and DOAF was unable to progress with work on the Fisheries management council and co-management of a fisheries protected area, the VI has continued to develop its data collection programme which is now being integrated into GIS.

3. If not already done, please ensure you submit a change request to formally outline and approve logframe changes.
Logframe was approved by Darwin.

4. In an ideal situation, following training, a stock assessment should be led by relevant fisheries department with oversight from Cefas to confirm whether relevant individuals have the appropriate skills and confidence to independently lead this work in future. It is not clear if this is planned within this project, but is strongly recommended.
The stock assessment course consisted of a combination of lectures and practical exercises, using both Excel spreadsheets (as participants were most familiar with) and R when possible. The R code was explained throughout, and the outputs of the models interpreted. For the exercises in Excel, participants populated a blank spreadsheet at the same time as the lecturers, who shared their calculations on a big screen. This approach allowed participants to be actively involved in the course. It was recognised that assessment models might need some tuning to adapt and fit new data, and ideally Cefas should have oversight of the assessments carried out by the partner institutions. Unfortunately, there is no time within the project for this additional activity and extra budget would be needed to cover staff cost.

7. Lessons learnt

Regular and frequent communication and engagement was essential for the success of the project, and it was necessary to ensure they could do the work assigned to them. In this case, DFMR did not have enough staff to work on the camera survey planned in Anguilla when the project was designed. For this and other reasons, the camera survey was replaced with the use of new technologies in fisheries data-collection. The new activities met the partners' needs to a greater degree and contributed to achieve the outcome of the project. The three partners fully supported the change and they were actively involved in the design of the data-collection programme, the database, and the phone app. Having said that, the Heads of Ministries and IT departments of the UKOT governments should have been consulted when the change was made to include the phone app to ensure its implementation was feasible. The use of a regional or local app developer who could liaise comfortably with the UKOT governments and provide long term support for the app may have worked better in this instance.

Having knowledge of the political, social, and cultural characteristics of the UKOTs helped to design the project as well as being familiar with the previous data that is available. In this regard, Cefas was not aware that the fishing industry was not cooperative in Anguilla and DFMR relied on a few fishers that provided some catch data. Because this issue could not be solved within the project (a third party located in the Caribbean would be needed to act as a facilitator), our strategy was to advise DFMR how to improve the relationship with the fishing industry and design a data-collection programme appropriate for future assessments. Similarly, the initial proposal relied on the logbook data for the stock assessments in the VI given DOAF believed that the quality of the data was good. When Cefas had access to the data it was realised that it could not be used in the assessments and the methodology had to be adapted. It would have been useful to have a sample with a few observations of the dataset to evaluate the usefulness of the data.

Another note here is that the study area is situated in a potential hurricane region, and the activities had to be scheduled around taking the hurricane season and the potential effects on lives and infrastructure into account (partners were able to provide good advice). In addition, a risk assessment and a safety plan were developed to mitigate the impacts of future hurricanes on the outputs of the project.

Phone calls and texts via *WhatsApp* were the best methods to communicate with some of the partners in the host countries. Slow e-mail communication has been shown to hamper progress in some cases and risk misunderstandings and frustration. However, it was still preferable to follow up a conversation with an email to have a record of what has been discussed and agreed for future reference and handover. Communication could have been improved by holding prescheduled monthly meetings with all partners for regular reminders and updates on outstanding tasks, successes, challenges and to foster knowledge exchange between the partners. This would have allowed for deficiencies to be identified early, re-iterated, addressed and remedied as they arose.

There was little publicity of this project in the local media in the Virgin Islands. Greater emphasis should be placed on this for future projects.

8. Risk Management

Several change requests have been approved by Darwin to adapt the project activities to the local and current needs and achieve the outputs (see section 5). No new risks have arisen in the last 12 months.

9. Sustainability and Legacy

The three partner institutions of the project are the fisheries departments of the governments in the three UKOTs, and their mission is to promote responsible use of the marine resources. This project has been specifically designed to assist them to fulfil their goal. The data collection programmes have been revised and improved, and tools have been provided to streamline the data collection (output 1); the stocks have been assessed when possible (output 2); and scientific advice on fisheries management has been provided (output 3). In addition to these three scientific outputs, a technical output has been incorporated to ensure a sustained legacy of the project outcome: build local capacity on fisheries science (output 4). To achieve this latter output, fisheries officers from the three UKOTs attended three workshops on data collection, stock assessment and fisheries management, and they visited Cefas for knowledge exchange. Staff from the three UKOTs should be able to collect usable data and conduct an assessment for a data-limited stock, interpret outputs, and provide advice on fisheries management.

To support outcomes implementation and legacy, Cefas met representatives of the three partner institutions individually to discuss the progress made with the project and how to continue with the data-collection and assessments when the project finished. Each partner was also provided with an external hard drive containing the documentation created within the project, including the R code for the assessments (Annex 22). Cefas and partner institutions went through the different folders in the hard drive to make clear where to find the different files.

10 Darwin Plus Identity

The goals of Darwin Plus, and more specifically the goals of this project, have been explained to the fishing communities in the three UKOTs during the initial meetings, informal conversations, and the interviews with the fishers.

The project is being publicised on the Cefas website and it links back to the Darwin Initiative website:

https://www.cefas.co.uk/impact/case-studies/regional-collaboration-to-achieve-sustainable-fisheries-in-the-caribbean/

Additionally, the Darwin logo has been included in all project presentations; in the splash screen of the phone app CariCatch and the flyers created to publicise the project within the fishing communities the first year (Annex 31).
In 2020/21 the project leader participated in the Future Oceans Conference hosted by Cefas with a short oral communication about the project. The video was shared on Twitter:

https://twitter.com/CefasGovUK/status/1405529498804637706?s=20&t=Hp_j-E16mQuw42KYWJ_kg

11 Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?		No
Have any concerns been investigated in the past 12 months		No
Does your project have a Safeguarding focal point?	Yes/No [If yes, please provide their name and email]	
Has the focal point attended any formal training in the last 12 months?	No – We don't run or attend any safeguarding as we don't normally have any need for it.	
What proportion (and number) of project staff have received formal training on Safeguarding? We haven't run any training		Past: % [and number] Planned: % [and number]
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 safeguarding challenges raised.		
Does the project have any developments or activities planned around Safeguarding in the coming 12 months? If so please specify.		

12 Finance and administration

12.1 Project expenditure

Project spend (indicative) since last Annual Report	2022/23 Grant (£)	2022/23 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs	[redacted]			
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others				
Audit costs				

Project spend (indicative) since last Annual Report	2022/23 Grant (£)	2022/23 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
TOTAL	£24,171.71	£24,171.71	**0%**	

[redacted]

[redacted]

12.3 Value for Money

The project has been great value for money. The outputs and outcome have been mostly achieved as demonstrated in section 3, the UKOTs now have the tools and knowledge to base their management decisions on scientific evidence. The UKOTs have stated that they will keep using the tools provided, and therefore the benefits of the project will continue beyond the funded years, contributing in the long term to achieve sustainable fisheries that support a healthy marine environment, food security, and livelihoods for coastal communities. Delivering these outputs was only possible by successfully securing additional funding (£85,612.21) and in-kind contributions (£161,182.21), which certainly added further value to the project.

In addition to the expected outcome, the project contributed to enhance relationships and to share knowledge among the UKOTs, thus learning from other countries' experiences. This collaboration between countries is particularly important for stocks widely distributed and stocks with a metapopulations structure (such as spiny lobster) because their management requires some coordination at international level.

It is also worth mentioning that our outputs have contributed to the development of other projects, further boosting the impact of our work. On this matter, the sampling database created in this project for the VI is being integrated into a spatial mapping exercise as part of the Darwin project DPLUS112. The TCI has also taken forwards our recommendations to improve the stock assessments, and they are testing the use of ROVs to obtain robust estimates of conch biomass under the RESEMBID funding from the EU.

13 OPTIONAL: Outstanding achievements of your project during the (300-400 words maximum). This section may be used for publicity purposes

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

Caribbean spiny lobster and queen conch support very valuable and traditional fisheries in the Caribbean. Despite their importance, the scarce of fisheries data, science capacity and effective management are some of the common obstacles that have hampered a sustainable exploitation to date.

The goal of this project was to provide the governments of Anguilla, Virgin Islands (BVI) and Turks and Caicos (TCI) with the skills, knowledge, and tools to assess the lobster and conch stocks and to make informed management decisions based on science. By building this local capacity the project will contribute to move Caribbean fisheries towards sustainable exploitation in the medium-long term. The main achievements of the project are:

Improvement of data-collection programmes. The data-collection programmes varied between countries, and whereas the data available in Anguilla and the VI was very limited and outdated, TCI had longer time series of data with better quality. Personnel resources are limited in the three UKOTs and a significant amount of fishing data on paper was misplaced or lost in the past because they were not saved electronically.

As part of this project, the data collection programmes were reviewed and adapted when needed to cover essential information for the assessments. The programmes were successfully implemented, and the data collected during the life of the project was used to assess the lobster stock in the VI. Additionally, a database was designed in collaboration with the three

partners to record the sampled data. Bluetooth callipers and tables designed to work in extreme weather were provided. These tools streamline the data collection process as the data is directly entered in the database and no paper forms are needed. Furthermore, the length data collected with the callipers is automatically saved with the sex in the database. This saves time when just one person is carrying out the sampling.

Stock assessments. Only the lobster data in the VI and TCI was robust enough to conduct quantitative stock assessments. Diverse length-based methods used on data-limited stocks were applied and outputs compared for consistency. This is the first time that the status of these stocks has been identified, although results must be considered preliminary until more data becomes available.

Capacity building. A stock assessment course was delivered to provide partners with the skills and knowledge to conduct their own assessments in the future. The R code created to assess their stocks was also explained and shared.

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

Please insert your project's logframe (if your project has a logframe), including indicators, means of verification and assumptions. N.B. if your application's logframe is presented in a different format in your application, please transpose into the below template. Please feel free to contact BCF-reports@niras.com if you have any questions regarding this.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: Conch and spiny lobster fisheries in Anguilla, the VI and TCI are well-managed and exploited sustainably, supporting a healthy marine environment, food security, national economies and livelihoods for coastal communities. (Max 30 words)			
Outcome: (Max 30 words) Fisheries managers and fishers in three Caribbean UKOTs have the skills, knowledge, data and tools to inform sustainable management and exploitation of their commercially important fisheries.	a) Fisheries managers and fishers' representatives from each of the three Caribbean UKOTs have significantly enhanced their skills and knowledge by participating in four training and knowledge exchange workshops. From a position of limited fisheries stock assessment capacity within governments, a minimum of one fisheries department staff member from each UKOT will be able to independently perform stock assessment by the end of the project. b) A baseline assessment (currently not existing) of the status of the two key commercial species (conch and spiny lobster) are produced to inform management plans in TCI and the VI. In Anguilla only	a) Signed training attendance records for all workshops recording participants. Cefas will provide a fisheries dataset, a member of fisheries department staff from each UKOT will perform stock assessment; Cefas will certify successful completion. b) Reports available for each species in each UKOT. ICES methods will be referenced within each report. c) Maturity Questionnaire for each UKOT scoring data	Fisheries remain viable and have not been impacted by external factors. Governments remain committed to securing sustainable fisheries and healthy ecosystems.

	the spiny lobster stocks will be assessed. c) Data collection and reporting procedures will be improved, drawing on best practice from existing programmes, ICES and Northwest Atlantic Fisheries Organization (NAFO) processes, to develop and inform future management. Improvements in fisheries data collection, analysis and management will be evident for all UKOTs.	collection, analysis and management status will be developed and completed by UKOTs. By the end of the project each area will show an increased score.	
Outputs: **1. Data Collection** Implement new or improve existing conch and spiny lobster fisheries data collection approaches in all three UKOTs	**<u>The VI</u>** a) Catch data available is analysed and considered to be used in the assessments **<u>Anguilla</u>** b) Identification of the fishing grounds in Anguilla c) Interviews with fishermen to collect historical fishing data **<u>TCI</u>** d) Collate fish processor statistics **<u>ALL</u>** e) Phone app developed for the fishers to provide catch data to the corresponding partner in a daily basis	a) Report showing the outcomes of the analysis b) Map of the fishing grounds c) Report with the results of the interviews d) Dataset available. e) Phone app CariCatch available in Apple and Android stores	Fishers will support data collection programmes. Permission is obtained from Government to share fisheries statistics data freely. UKOT have the capacity to host the phone app.

	f) A new and common sampling programme is designed, and a database created to enter the data g) Bluetooth callipers and tablet are provided to streamline the data-collection	f) Database is available g) Document proving transfer of the equipment	
2. Data Assessment The stock status of conch and spiny lobster fisheries in each UKOT are assessed to inform the potential nature of sustainable management measures.	**<u>All UKOTs</u>** a) Conch and spiny lobster species stock status reports are produced for each UKOT using existing or new data gathered under Output 1 (completed Year 2). In Anguilla only spiny lobster stocks will be assessed b) Produce stock assessment toolkit for these fisheries based on ICES "data limited" approaches (completed Year 2). Realising that it will not always be possible to collect extensive new datasets, different approaches will be supported based on: collection of new field survey data by fisheries departments or fishers; logbook data; landings data.	a) Reports submitted to the Governments. Evidence of data collected under Output 1 is used in stock status assessments. b) Methodology report produced.	Available data support assessment of stock status. Available data are robust enough for assessment purposes. IT equipment and facilities are available in OTs to perform assessments.

3. Sustainable Management A generic conch and spiny lobster management plan relevant to all three UKOTs is developed and customised, using best available evidence, for one UKOT. Increased desire from fishermen to adhere to the management plans and stronger regional collaboration in fisheries management between the three UKOTs is evident.	**<u>All UKOTs</u>** a) Fisheries management policies and practices reviewed to inform best practice management plan (>10) (completed Year 3) b) Ten relevant fisheries datasets have been sourced or reviewed (completed Year 1) c) Best practice recommendations for the management of conch and spiny lobster fisheries in each UKOT are made, two for each UKOT (completed Year 3) **<u>TCI</u>** d) Regionally adaptable management plans for both species. Using data collected and analysed, develop detailed draft species management plans for TCI (completed Year 3). **<u>The VI</u>** e) Fisheries Management Council (FMC) established for the Horseshoe Reef FPA with members from Government and fisheries sector f) Management plan developed and agreed with stakeholders for	a) "UKOT Fisheries Management Review" report produced. b) See a). c) Included in the stock assessment reports d) 1)Summary of the workshop on fisheries management. 2)Draft conch and spiny lobster management plans developed for TCI in collaboration with the fisheries department. e) Terms of reference of the FMC. f) Management plan produced and agreed by FMC.	Existing documentation and data can be shared with the Cefas project team. Gaps in current fisheries management policies exist allowing recommendations to be made. UKOT fisheries departments have the resource and maintain government support to develop fisheries management plans. The VI Government is able to facilitate setting up a Fisheries Management Council for one of the FPAs. UKOT Governments remain committed to the sustainable exploitation of marine resources. Fishers buy-in to the sustainable management plans.

	implementation (completed Year 3).		
4. Capacity Building & Collaboration Training and knowledge exchange initiatives and collaborative working opportunities for UKOT fisheries scientists, managers and fishers.	**<u>All UKOTs</u>** a) Three, 3-day knowledge exchange and sharing workshops (two in Year 2, one in Year 3). Two fisheries scientists or managers plus one fishing industry representative from each UKOT will participate in each workshop. Each workshop will stimulate regional cooperation, knowledge exchange and fisher/government collaboration (completion Year 3). b) One government staff member from each UKOT visits Cefas, UK, to undertake knowledge exchange activities for a minimum of 2 working weeks, working alongside Cefas fisheries managers and participating in statutory fisheries surveys (completion Year 3).	a) Workshop agendas, attendance records and minutes. b) Boarding passes and visit report.	Suitable dates can be found for all UKOT staff to attend workshops. Fishery officers and fishers actively participate in training courses.
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. Data Collection** 1.1. Cefas visits to Anguilla, the VI and TCI (one working week per UKOT) at project commencement to gather existing fisheries data, identify fisheries management policies and practices, meet with fisheries managers and fishers to thoroughly communicate expected project outcome, outputs, activities and monitoring & evaluation plan.			

1.2. Existing data (logbook, landings, observer, scientific, etc.) in all three UKOTs are collated and assessed for their suitability to assess conch or spiny lobster stock status.
1.3. Develop and issue Maturity Model questionnaire to fisheries departments (topics covered will include status of fisheries data collection, assessment and management along with capacity within government fisheries departments). Monitor project progress against questionnaire at end of year 2 and 3.
1.4. Review extensive logbook holdings in the VI and where possible develop analysis routines to inform fisheries management.
1.5. Report basic trends derived from the VI logbook reporting with fishers to demonstrate the value of the data collected.
1.6. Develop sustainability indicators based on logbook data to inform the VI fisheries management.
1.7. Revise existing protocols for data collected through logbooks and landings reporting. Collaborate with fisheries managers, fishers and the VI Fishery Advisory Committee to develop an effective data collection programme.
1.8. Assist the implementation of the new data collection programme in the VI and data reporting to fishers via Government website. Assess the effectiveness of the new data collection programme and reporting system.
1.9. Trial community led rapid species status survey in the Horseshoe Reef FPA, the VI. Use of new technologies.
1.10. Analyse trends in the VI species status based on the rapid assessment methodology.
1.11. Design and test a phone application for the fishermen to provide fishing data.
1.12. Design and test the use of Bluetooth callipers for data collection
1.13. Design and implement an effective fishing data collection programme in Anguilla using new technologies.
1.14. Set up interview surveys in Anguilla to reconstruct fishery history.
1.15. Collate and rationalise fish processor datasets from TCI.
1.16. Improve the data collection programme in TCI if needed
1.17. Improve the data management in TCI if needed

2. Data Assessment

2.1. Apply data analysis routines to existing datasets to describe historic trends in conch and spiny lobster stocks over time.
2.2. Analyse recently collected conch survey data from Anguilla and TCI to inform current fishery status.
2.3. Analyse video data collected from the Anguilla Banks areas and develop analysis routines for local officers, which can be shared with other UKOTs.
2.4. Assess sustainability of existing conch and spiny lobster exploitation levels. Implement analysis and assessment routines to inform local decision making.
2.5. Produce stock assessment toolkits for both species in all three UKOTs. This will draw on the ICES approach for Data Limited Stocks, tailored to the data streams available in the UKOTs and will comprise a report and some software examples.
2.6. Produce stock status reports for both species in all three UKOTs.

3. Sustainable Management

3.1. Assess the strengths and weaknesses of existing fisheries management approaches in each UKOT.

3.2. Using a collaborative approach, involving fisheries managers and fishers, recommended management options based on best practice identified in other UKOTs (or beyond).

3.3. Using the outcomes of the wider project, the relevant government fisheries departments will collaborate to develop a generic conch and spiny lobster fishery management plan, which can be built upon and refined to meet local management needs. A locally specific management plan will be developed for TCI.

3.4. Draft TCI species management plans and recommendations presented to Government.

3.5. Encourage fishers to adopt responsible fishing practices (Year 3) – meet with fisheries representatives through the workshops – include responsible fishing practices on the agenda, advise of responsible fishing schemes and benefits to encourage uptake.

3.6. Assist the VI with the implementation of a Fisheries Management Council to oversee co-management of an established Fisheries Protected Area.

3.7. Community workshop to agree spatial, temporal, gear or species restrictions to minimise fishing impacts within the Fisheries Protected Area.

3.8. Using data collected assess the effectiveness of the management measures implemented by the Fisheries Management Council

3.9. Share co-management experiences with other UKOTs through workshops (see Output 4).

3.10. Cefas visits to Anguilla, the VI and TCI (one working week per UKOT) towards end of project to support project outcomes implementation and legacy.

4. Capacity Building & Collaboration

4.1. Deliver three 3-day training workshops, one hosted in each UKOT, involving at least two fisheries managers and one fisher representative from each UKOT. Workshop content will be developed and delivered as follows: (1) training on data collection methods (fieldwork and logbook/landings) (hosted in Anguilla), (2) training on the analysis of any available data to assess stock status (hosted in the VI), and (3) training on using the available evidence base to inform fisheries management plans and policy (hosted in TCI). Results from Activities under Outputs 1 to 3 above will be communicated at the relevant workshop.

4.2. Gather feedback after each workshop to inform the organisation of the next workshop to maximise effectiveness of the training.

4.3. Plan UK-based knowledge exchange activities, involving one government staff member from each UKOT visiting Cefas, UK, to undertake knowledge exchange for a minimum of 2 working weeks, including participation in vessel based fisheries stock assessment surveys and subsequent data analysis. It is anticipated that the annual *Nephrops* survey will be most appropriate for this purposes, as the approach will be most similar to those applied for conch and spiny lobster. Identify with senior fisheries managers in each UKOT the most appropriate person to participate in UK-based knowledge exchange activities.

4.4. Develop regional network of fisheries managers.

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

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Impact Conch and spiny lobster fisheries in Anguilla, the VI and TCI are well-managed and exploited sustainably, supporting a healthy marine environment, food security, national economies and livelihoods for coastal communities.		Fishing data is needed to conduct reliable stock assessments and provide scientific advice on fisheries management. Consequently, the design of an effective data collection programme is the first step to address fisheries sustainability. The data collection programmes in the three UKOTs have been improved and a baseline assessment of the stocks has been conducted. Advice to improve management of these resources was also provided based on the results of the stock assessments, and the analysis of the strengths and weakness of the current governance systems. Cefas also assisted the TCI with the development of a draft management plan for conch and lobster. UKOTs have been trained in data collection methods, stock assessments, and fisheries management. By building this local capacity the project is contributing to move Caribbean fisheries towards sustainable exploitation in the medium-long term.
Outcome Fisheries managers and fishers in three Caribbean UKOTs have the skills, knowledge, data and tools to inform sustainable management and exploitation of their commercially important fisheries.	a) Fisheries managers and fishers' representatives from each of the three Caribbean UKOTs have significantly enhanced their skills and knowledge by participating in four training and knowledge exchange workshops. From a position of limited fisheries stock assessment capacity within governments, a minimum of one fisheries department staff member from each UKOT will be able to independently perform stock	a) At least two staff members of the three partner institutions have participated in three workshops and visited Cefas for knowledge exchange (Annex 28). Two staff members received training on stock assessment methods and should be able to run a basic stock assessment and interpret results (Annex 21). The feedback from participants was positive for all training activities (Annex 29). Darwin approved to carry out the workshop on stock assessment during the visit in the UK, and therefore there were three training workshops instead of 4.

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	assessment by the end of the project. b) A baseline assessment (currently not existing) of the status of the two key commercial species (conch and spiny lobster) are produced to inform management plans in TCI and the VI. In Anguilla only the spiny lobster stocks will be assessed. c) Data collection and reporting procedures will be improved, drawing on best practice from existing programmes, ICES and Northwest Atlantic Fisheries Organization (NAFO) processes, to develop and inform future management. Improvements in fisheries data collection, analysis and management will be evident for all UKOTs.	 b) All data available to assess the lobster and conch stocks in the three UKOTs was analysed, and when possible, the status of the stocks was identified (Annexes 6, 10, 19). Reports were shared with the partner institutions, and virtual meetings were held individually with each partner to explain the assessment methods, outputs, and provide advice (Annex 20). c) Data collection and data management was improved in the three UKOTs by the provision of new technologies to streamline the process (annex 14), the creation of a database that encompass all data needed for the assessments (annex 13), and by improving the data collection programmes in Anguilla and the VI (annex 7). Existing data and the data generated on the onset of the project was analysed and the R code shared with the partners (annex 22). Management advice was also provided, and the fisheries management plan in the TCI is being amended (annex 25). The maturity questionnaire completed at the beginning and at the end of the project shows overall an increase score in the UKOTs (Figure 2 in main report).
Output 1. Data Collection Implement new or improve existing conch and spiny lobster fisheries data collection approaches in all three UKOTs	**The VI** a) Catch data available is analysed and considered to be used in the assessments **Anguilla** b) Identification of the fishing grounds in Anguilla c) Interviews with fishermen to collect historical fishing data	a) A report describing the analysis and outputs of the logbook data was finalised during the period 2018/19 (Appendix 1 in Annex 6). The data was scarce and could not be used in the assessments. Consequently, a new data collection programme was implemented, and the data collected during the second year of the project was used to produce a baseline assessment. b) Map with the fishing grounds for lobster was produced in 2018/19 (annex 9 and 10) c) A report with the analysis of the data obtained from the interviews was submitted in 2022/21 (annex 10)

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	TCI d) Collate fish processor statistics **ALL** e) Phone app developed for the fishers to provide catch data to the corresponding partner in a daily basis f) A new and common sampling programme is designed, and a database created to enter the data g) Bluetooth callipers and tablet are provided to streamline the data-collection	d) Fish processors datasets were collated and combined in a single dataset to make easy the analysis (annex 11) e) The phone app was designed and developed with the collaboration of the three partners (annexes 16, 17). The app was tested and ready to be deployed in the UKOTs but unfortunately partner institutions did not get the approval to use it. f) The sampling programme was designed in collaboration with partners and the database was created (Annex 13). The new sampling programme was implemented in Anguilla and the VI (only minor modifications were needed in the TCI sampling programme) g) Equipment was provided in 2018/2019 (annex 14). Data collected with the Bluetooth callipers is directly entered in the database created in f)
Activity 1.1 Cefas visits to Anguilla, the VI and TCI (one working week per UKOT) at project commencement to gather existing fisheries data, identify fisheries management policies and practices, meet with fisheries managers and fishers to thoroughly communicate expected project outcome, outputs, activities, and monitoring & evaluation plan.		Completed at the beginning of the project
Activity 1.2. Existing data (logbook, landings, observer, scientific, etc.) in all three UKOTs are collated and assessed for their suitability to assess conch or spiny lobster stock status.		Completed during the 18/19 period. Results were included in the assessment reports (annexes 6, 10, and 19)
Activity 1.3. Develop and issue Maturity Model questionnaire to fisheries departments (topics covered will include status of fisheries data collection, assessment and management along with capacity within government fisheries departments). Monitor project progress against questionnaire at end of year 2 and 3.		The questionnaire (annex 30) was completed at the beginning and end of the project. Results are shown in Figure 2, main report

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 1.4. Review extensive logbook holdings in the VI and where possible develop analysis routines to inform fisheries management.		Completed during the 18/19 period. See appendix 1 in annex 6
Activity 1.5. Report basic trends derived from the VI logbook reporting with fishers to demonstrate the value of the data collected.		Logbook data could not be used to assess the stocks and therefore this activity did not take place.
Activity 1.6. Develop sustainability indicators based on logbook data to inform the VI fisheries management.		Logbook data could not be used to assess the stocks and therefore this activity did not take place.
Activity 1.7. Revise existing protocols for data collected through logbooks and landings reporting. Collaborate with fisheries managers, fishers and the VI Fishery Advisory Committee to develop an effective data collection programme.		Completed during the 18/19 period. In additions, see activities 1.8, 1.11 and 1.12
Activity 1.8. Assist the implementation of the new data collection programme in The VI and data reporting to fishers via Government website. Assess the effectiveness of the new data collection programme and reporting system		Completed during the 2021/22 period. Annex 7
Activity 1.9. Trial community led rapid species status survey in the Horseshoe Reef FPA, the VI. Use of new technologies.		During the 18/19 period it was decided that the stocks in the Horseshoe Reef FPA could be assessed using the new landing sampling implemented in the VI instead of conducting a survey. Very few data have been obtained from the Horseshoe reef area so far.
Activity 1.10. Analyse trends in the VI species status based on the rapid assessment methodology		See comment in 1.9
Activity 1.11. Design and test a phone application for the fishermen to provide fishing data.		The app was designed and tested, although it was not implemented. Annex 16 and 17

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 1.12. Design and test the use of Bluetooth callipers for data collection.		Completed in 2022/21. Annex 14
Activity 1.13. Design and implement an effective fishing data collection programme in Anguilla using new technologies.		Completed in 2018/19. Annex 7
Activity 1.14. Set up interview surveys in Anguilla to reconstruct fishery history.		Completed in 2018/19. Annex 8
Activity 1.15. Interviews in Anguilla to identify the fishing grounds for spiny lobster		Completed in 2018/19. Annex 8 and 9
Activity 1.16. Collate and rationalise fish processor datasets from TCI		Completed in 2018/19. Annex 11 and 12
Activity 1.17. Improve the data collection programme in TCI if needed.		See activity 1.11 and 1.12
Activity 1.18. Improve data management in TCI if needed.		Completed in 2018/19. R code provided to combine the multiple datasets received from the fishing processors. Annex 12
Output 2. The stock status of conch and spiny lobster fisheries in each UKOT are assessed to inform the potential nature of sustainable management measures.	**<u>All UKOTs</u>** a) Conch and spiny lobster species stock status reports are produced for each UKOT using existing or new data gathered under Output 1. In Anguilla only spiny lobster stocks will be assessed b) Produce stock assessment toolkit for these fisheries based on ICES "data limited" approaches. Realising that it will not always be possible to collect extensive new datasets, different approaches will be supported based on: collection of	a) Assessments reports were produced for the three UKOTs although the type of assessments and outputs depend on the data available in each case. The status of the stock was identified for both lobster stocks in the TCI and the VI, whereas the state of conch stocks remain unknown. In the TCI an assessment model was fitted to the conch data, but it produced meaningless results. In the VI there was not enough data to run a quantitative stock assessment, and an analysis of the data available was provided. In Anguilla, the performance of the fishery was evaluated based on fishers' perceptions and the data collected by DFMR. Reports for the VI and Anguilla were submitted in 2020/21 (annexes 6 and 10). The report for the TCI was submitted in 2021/22 (annex 19). Online meetings were held to explain the UKOTs the outcomes of the assessments (Annex 20). b) Material of the stock assessment course was shared with participants, as well as the R code generated to assess their own stocks (annex 22). The

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	new field survey data by fisheries departments or fishers; logbook data; landings data.	assumptions and data requirements for each assessment model were explained, and potential methods that could be used in the future when more data become available were highlighted. In addition, essential books on stock assessment models and R language were provided.
Activity 2.1. Apply data analysis routines to existing datasets to describe historic trends in conch and spiny lobster stocks over time.		Completed in 2022/21 (see stock status reports: annexes 6, 10 and 19)
Activity 2.2. Analyse recently collected survey data from Anguilla and The VI to inform current fishery status.		No additional data was collected in Anguilla. The data collected in the VI was used to assess the stocks (annex 6)
Activity 2.3. Assess sustainability of existing conch and spiny lobster exploitation levels. Implement analysis and assessment routines to inform local decision making.		Conch stocks status could not be identified but a number of methodologies were applied to the VI and TCI lobster data and stock statuses were derived (Annex 6, 19).
Activity 2.4. Produce stock assessment toolkits for both species in all three UKOTs. This will draw on the ICES approach for Data Limited Stocks, tailored to the data streams available in the UKOTs and will comprise a report and some software examples.		The methods used by ICES to assess data-limited stocks were explained during the course on stock assessment. Data requirements and assumptions were highlighted for each model, providing the information needed to select the most suitable assessment model in each case (annex 21). Books on stock assessment methods and R language were provided as part of the toolkit (annex 22).
Activity 2.5. Produce stock status reports for both species in all three UKOTs.		Reports for the three UKOTs were produced (Annex 6, 10, 19). The reports for Anguilla and the VI were shared with the partners in 2020/21. The report for the TCI was submitted in 2021/22
Output 3. Sustainable Management A generic conch and spiny lobster management plan relevant to all three UKOTs is developed and customised, using best available evidence, for one UKOT. Increased desire from fishermen to adhere to the management plans and stronger regional collaboration in fisheries	**<u>All UKOTs</u>** a) Fisheries management policies and practices reviewed to inform best practice management plan (>10) b) Ten relevant fisheries datasets have been sourced or reviewed. c) Best practice recommendations for the management of conch and	a) b) Management regulations applied to conch and lobster in other Caribbean countries were revised in 2020/21 (Annex 23) c) Management recommendations were provided individually for each UKOT. They were based on the results of the stock assessments, the strengthens and weakness of the management systems identified by each partner, knowledge and experience of the scientists providing the

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
management between the three UKOTs is evident.	spiny lobster fisheries in each UKOT are made, two for each UKOT. **TCI** d) Regionally adaptable management plans for both species. Using data collected and analysed, develop detailed draft species management plans for TCI **The VI** e) Fisheries Management Council (FMC) established for the Horseshoe Reef FPA (fisheries protected area) with members from Government and fisheries sector. Management plan developed and agreed with stakeholders for implementation.	recommendations, and management practices used in other lobster and conch fisheries. The recommendations were presented to the partners on virtual meetings and in the workshop on fisheries management held in October 2019. They are also part of the stock status reports and the summary report of the fisheries management workshop (Annex 24). d) Cefas provided feedback to update the fisheries management plan for conch and lobster in the TCI (Annex 25). This feedback, together with the situation analysis being carried out by DECR. will be used to update the management plan. e) The Fisheries Management Council has not been established yet in the VI, in part because of delays caused by COVID-19. The management plan must be designed by the Fisheries Management Council, and therefore it will not be possible to implement during the timeline of the project. However, Cefas helped to design the co-management and to create the co-management plan during the workshop on fisheries management (Annex 24) and when requested by the UKOT.
Activity 3.1. Assess the strengths and weaknesses of existing fisheries management approaches in each UKOT.		A detailed SWOT analysis was conducted during the first day of the VI fisheries management workshop run on Tortola beginning of October 2019. Summary report in Annex 24
Activity 3.2. Using a collaborative approach, involving fisheries managers and fishers, recommended management options based on best practice identified in other UKOTs (or beyond).		The fisheries management workshop run on Tortola in the VI early October 2019 enabled the 3 UKOTs to exchange experience on their respective systems and practices. Fishers were not involved in the main workshop. However, a one-day community workshop on Anegada followed where fishers and managers actively debated best practices (annex 26). Management recommendations were provided based on the results of the stock assessments, the strengthens and weakness of the management systems identified by each partner, knowledge and experience of the scientists providing the recommendations, and management practices used in other lobster and conch fisheries. These recommendations were provided through reports and meetings with the UKOTs during 2019-2021.

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 3.3. Using the outcomes of the wider project, the relevant government fisheries departments will collaborate to develop a generic conch and spiny lobster fishery management plan, which can be built upon and refined to meet local management needs. A locally specific management plan will be developed for TCI.		The differences in legal frameworks and objectives between the three UKOTs made it challenging to develop an overarching plan that suits all. However, the generic framework for fisheries management plans was discussed at the workshop in the VI in October 2019, and each UKOT identified the main bullet points to include in their management plans with assistance from Cefas (Annex 24).
Activity 3.4. Draft TCI species management plans and recommendations presented to Government.		A management plan for lobster and conch in the TCI was drafted in 2021/22 with assistance from Cefas (Annex 25)
Activity 3.5. Encourage fishers to adopt responsible fishing practices– meet with fisheries representatives through the workshops – include responsible fishing practices on the agenda, advise of responsible fishing schemes and benefits to encourage uptake.		Responsible fishing practices were discussed at the workshop in the VI in October 2019 and further debated at the one-day community workshop on Anegada the following day (annex 24, 26). As an example, fishers did not all agree on the use of traps in the protected area as they were perceived as potentially having a negative impact on reefs, especially in adverse weather conditions.
Activity 3.6. Assist The VI with the implementation of a Fisheries Management Council to oversee co-management of an established Fisheries Protected Area.		A one-day community workshop was held in Anegada following the fisheries management workshop on Tortola in October 2019. The workshop was well attended and challenges to set up a co-management structure for Anegada discussed (Annex 26).
Activity 3.7. Community workshop to agree spatial, temporal, gear or species restrictions to minimise fishing impacts within the Fisheries Protected Area		See activity 3.6. Fishers shared their opinions on the need for restrictions in the FPA during the second part of the one-day community workshop on Anageda. The management regulations will be decided by the Fisheries Management Council when implemented.
Activity 3.8. Using data collected assess the effectiveness of the management measures implemented by the Fisheries Management Council		The Fisheries Management Council was not implemented in the early phases of the project as expected and therefore this activity could not be completed in the timeline of the project.
Activity 3.9. Share co-management experiences with other UKOTs through workshops (see Output 4).		The fisheries management workshop was held in the VI with all 3 UKOTs in October 2019 where exchange on experience was the cornerstone.
Activity 3.10. Cefas visits to Anguilla, the VI and TCI (one working week per UKOT) towards end of project to support project outcomes implementation and legacy.		Due to recurrent delays of the project and price raises, the budget is too limited to travel to the Caribbean. This activity took place during the stock assessment course in July 2022.

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Output 4. Capacity Building & Collaboration Training and knowledge exchange initiatives and collaborative working opportunities for UKOT fisheries scientists, managers, and fishers	**<u>All UKOTs</u>** a) Three, 3-day knowledge exchange and sharing workshops. Two fisheries scientists or managers plus one fishing industry representative from each UKOT will participate in each workshop. Each workshop will stimulate regional cooperation, knowledge exchange and fisher/government collaboration. b) One government staff member from each UKOT visits Cefas, UK, to undertake knowledge exchange activities for a minimum of 2 working weeks, working alongside Cefas fisheries managers, and participating in statutory fisheries surveys.	a) The three workshops were successfully delivered, with the participation of at least two fisheries officers from each UKOT. In addition to provide training on fisheries matters, the workshops were a good opportunity to exchange experiences and knowledge with fisheries officers in another countries. The workshops received good feedback by the participants (Annex 29). b) Two staff members from each partner institution visited Cefas in July 2022 (Annex 28). The stock assessment course in a) took place during the visit as agreed with Darwin. In addition, fisheries scientists with different backgrounds and roles in Cefas talked about their work. The idea behind the talks was to highlight the main pillars on fisheries science and how they are linked: from data collection and data curation to stock assessment and fisheries advice. The visit was a great opportunity to exchange knowledge and experience between Cefas and partner institutions (annex 21).
Activity 4.1. Deliver three 3-day training workshops, one hosted in each UKOT, involving at least two fisheries managers and one fisher representative from each UKOT. Workshop content will be developed and delivered as follows: (1) training on data collection methods (fieldwork and logbook/landings) (hosted in Anguilla), (2) training on the analysis of any available data to assess stock status (hosted in the VI), and (3) training on using the available evidence base to inform fisheries management plans and policy (hosted in TCI). Results from Activities under Outputs 1 to 3 above will be communicated at the relevant workshop.		The three workshops were successfully delivered. The workshop in Anguilla was focused on data collection methods (2018/19), the workshop in the VI (2019/20) on fisheries management, and the course in the UK on stock assessment (2022/23) See annexes 21, 24, 27, and 28 as evidence.

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 4.2. Gather feedback after each workshop to inform the organisation of the next workshop to maximise effectiveness of the training.		The attendees completed an anonymous survey at the end of the workshops to evaluate the quality of the training, with an overall positive return (Annex 29)
Activity 4.3. Plan UK-based knowledge exchange activities, involving one government staff member from each UKOT visiting Cefas, UK, to undertake knowledge exchange for a minimum of 2 working weeks, including participation in vessel based fisheries stock assessment surveys and subsequent data analysis. It is anticipated that the annual *Nephrops* survey will be most appropriate for this purpose, as the approach will be most similar to those applied for conch and spiny lobster. Identify with senior fisheries managers in each UKOT the most appropriate person to participate in UK-based knowledge exchange activities.		As agreed with Darwin, the trip to the UK included a course on stock assessment, and introduction to R language, and a 'tour' through the different labs at Cefas delivering fisheries science. Given the limited budget, the visit lasted 1 week instead of 2 as originally planned, but it covered the costs of two staff members from each UKOT instead of just one (Annex 21).
Activity 4.4. Develop regional network of fisheries managers.		Virtual meetings, the three delivered workshops/courses, and the trip to the UK were great opportunities to exchange knowledge and experiences between partner institutions (Annex 29 as evidence).

Annex 3 Standard Measures

Code	Description	Totals (plus additional detail as required)
Training Measures		
1	Number of (i) students from the UKOTs; and (ii) other students to receive training (including PhD, masters and other training and receiving a qualification or certificate)	
2	Number of (i) people in UKOTs; and (ii) other people receiving other forms of long-term (>1yr) training not leading to formal qualification	
3a	Number of (i) people in UKOTs; and (ii) other people receiving other forms of short-term education/training (i.e. not categories 1-5 above)	i) 18
3b	Number of training weeks (i) in UKOTs; (ii) outside UKOTs not leading to formal qualification	i) 2 ii) 1
4	Number of types of training materials produced. Were these materials made available for use by UKOTs?	4 yes
5	Number of UKOT citizens who have increased capacity to manage natural resources as a result of the project	18
Research Measures		
9	Number of species/habitat management plans/ strategies (or action plans) produced for/by Governments, public authorities or other implementing agencies in the UKOTs	6
10	Number of formal documents produced to assist work in UKOTs related to species identification, classification and recording.	
11a	Number of papers published or accepted for publication in peer reviewed journals written by (i) UKOT authors; and (ii) other authors	
11b	Number of papers published or accepted for publication elsewhere written by (i) UKOT authors; and (ii) other authors	
12b	Number of computer-based databases enhanced (containing species/genetic information). Were these databases made available for use by UKOTs?	1
13a	Number of species reference collections established. Were these collections handed over to UKOTs?	

Code	Description	Totals (plus additional detail as required)
13b	Number of species reference collections enhanced. Were these collections handed over to UKOTs?	
Dissemination Measures		
14a	Number of conferences/seminars/workshops/stakeholder meetings organised to present/disseminate findings from UKOT's Darwin project work	1
14b	Number of conferences/seminars/ workshops/stakeholder meetings attended at which findings from the Darwin Plus project work will be presented/ disseminated	1
Physical Measures		
20	[redacted]	
21		
22		
23		

Glossary

UK Overseas Territories - UKOTs

the Virgin Islands - VI

Turks and Caicos - TCI

Centre for Environment, Fisheries and Aquaculture Science - Cefas

Department of Fisheries and Marine Resources - DFMR, in Anguilla

Department of Agriculture and Fisheries - DOAF, in the VI

Department of Environment and Coastal Resources - DECR, in TCI

Fisheries Management Plan - FPM

Fisheries Protected Area (FPA)

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to BCF-reports@niras.com putting the project number in the Subject line.	Yes
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.	
If you are submitting photos for publicity purposes, **do these meet the outlined requirements (see section 11)?**	Please see note above
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.	Yes
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.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	