Darwin Initiative Main Project Annual Report

To be completed with reference to the "Writing a Darwin Report" guidance:
(http://www.darwininitiative.org.uk/resources-for-projects/reporting-forms). It is expected that this report
will be a **maximum** of 20 pages in length, excluding annexes)

Submission Deadline: 30th April 2018

Darwin Project Information

Project reference	DPLUS067
Project title	Regional collaboration to achieve sustainable Caribbean fisheries management
Host country/ies	Anguilla, British Virgin Islands, Turks and Caicos
Contract holder institution	Cefas
Partner institution(s)	Department of Fisheries and Marine Resources (Anguilla), Conservation and Fisheries Department (BVI), and Department of Environment and Coastal Resources (TCI)
Darwin grant value	£228,584
Start/end dates of project	01/04/17 – 30/11/20
Reporting period (e.g., Apr 2017 – Mar 2018) and number (e.g., Annual Report 1, 2, 3)	April 2017-Mar 2018, Annual Report1
Project Leader name	Rosana Ourens
Project website/blog/Twitter	
Report author(s) and date	Rosana Ourens, Nicki Hawkes, Kafi Gumbs, Abbi Christopher, Luc Clerveaux, 20/04/2018

1.   Project rationale

Caribbean UKOTs possess rich marine environments with significant resources. Fisheries comprise a significant component of the resources and often local economies, and consequently recent Joint Ministerial Council (JMC) communiqués 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 Anguilla, British Virgin Islands (BVI) and Turks and Caicos (TCI) conch and spiny lobster are commercially the most important fishing resources and they support the livelihood of many families. The lack of fisheries data and science capacity, and effective legislation and enforcement, have been identified as barriers to achieve 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 each UKOT addressing the challenge in isolation, has hampered progress to date.

This project will address the fisheries towards sustainable trajectories by providing scientific advice on fisheries management in TCI, BVI and Anguilla (Fig 1). To fulfil this goal, we will improve the monitoring programme in each country, assess the status of the stocks, and we will

discuss with the fisheries managers and fishing communities how to improve the fisheries governance. We will also build local capacity to ensure the good fishing practices continue when the project is ended; and we will strengthen the collaboration between Caribbean countries, with the aim of promoting a coherent management at regional scale.
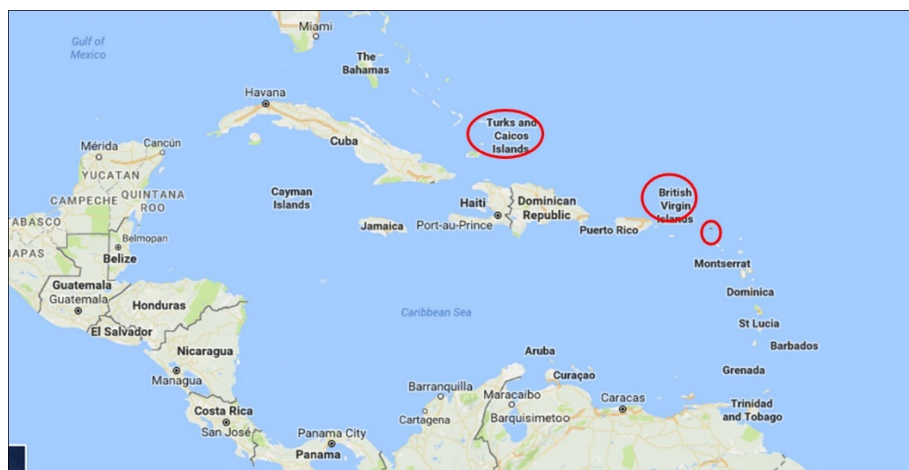

Figure 1. Map of the Caribbean. The three host countries are highlighted in red

2.   Project partnerships

The purpose of this project is to assist the host countries to achieve sustainable fisheries. The goals and activities have been adapted to the needs and interests of each UKOT, and therefore the participation of the host countries in the design of the project has been essential. The activities described in the proposal have been discussed in more detail during the first meetings in the host countries, and finally adapted to the new needs of the countries after the hurricane Irma (see section 3).

Although the communication between Cefas and the host countries has not been great during 2017/2018, mainly due to the damages caused by the hurricane, the host countries have had an active participation in the project so far:

- The three host countries have sent to Cefas reports and documents relevant for the project.
- The interviews to be conducted in Anguilla has been designed by Cefas and reviewed by the director of the Fisheries Department in Anguilla.
- Cefas has designed a form that will be completed during the catch sampling trips that Anguilla and BVI will conduct next year. The form has been reviewed by both partners.
- The flyers of the project have been designed by Cefas and reviewed by the partners.
- The partners have assisted Cefas with the trip to Anguilla and BVI. They recommended accommodation, a rental car company, etc.
- During Cefas' trip in Anguilla and BVI, the host countries have organized meetings with the staff of the fisheries Department, informal meetings with fishers, and a visit to the fishing complex in BVI.

3.   Project progress

The study area has been devastated by the Hurricane Irma (category 5 storm) on 6th September 2017. Government officials reported extensive damage to airports, houses, hospitals, shelters, schools, and ports, and most of the roads were impassable. Consequently, the project has been on hold from September 2017 to March 2018. It has been formally agreed with Darwin the project will end on the 30th November of 2020 instead of 31th March 2020. The budget is the same, but it has been differently spread between years.

The expected outcome and outputs are the same, as well as the activities to be conducted.

3.1 Progress in carrying out project Activities

Because of the delay of the project, the activities conducted in 2018/2019 are those expected to be completed in the first 6 months of the project. The timetable of the activities agreed at the beginning of the project and the new timetable designed after the Hurricane have been included in Annex 4 (Table1, Table 2). The activities conducted so far are under the first output: 'Data collection', and they are the following:

1) Rosana Ourens, Koen Vanstaen and Ewen Bell visited Anguilla and BVI in June to start up the project (pictures included as evidence in the Annex 4). The data requirement and data sources were identified, as well as the main obstacles to achieve a successful fisheries management. The work plan was discussed and agreed.

2) Rosana Ourens, Koen Vanstaen and Ewen Bell had a videoconference with the Fisheries Division of Turks and Caicos in June 2017 to start up the project, due to the difficulty to find a suitable date to visit the country. The data requirement and data sources were identified, as well as the main obstacles to achieve a successful fisheries management. The work plan was discussed and agreed.

3) Existing fishing data were collated in Anguilla. BVI provided old data from the logbooks, as the data for the most recent years was only stored in paper. BVI committed to digitalize the information and send it to Cefas. Unfortunately, most of these papers were lost during the Hurricane, and currently BVI is trying to recover as much data as they can and send it to Cefas. TCI will provide the data in May 2018, when Cefas visits the country.

4) A maturity model questionnaire has been developed to monitor project progress, and it will be conducted in May 2018 (Doc A4-2. Attached).

5) A flyer has been designed to disseminate the goals of the project and engage the fishing industry of the host countries in the project (Doc A4-1. Attached).

6) A survey has been designed to identify the species status in the Horseshoe reef in BVI. It will be conducted in 2018/19.

7) The Department of Fisheries and Marine Resources in Anguilla has conducted some interviews with fishers in order to identify the most important fishing areas for spiny lobster in the North of the island. The interviews will be ended next year, and a TV camera survey will be conducted then in the identified areas. Vessel and required equipment for the survey have been identified, and the methodology defined.

8) A questionnaire to reconstruct the fishery history in Anguilla has been developed, and it will be conducted in 2018/19 (Doc A4-3).

3.2 Progress towards project Outputs

The financial years 2017/18 and 2018/19 are mainly focused on making progress in the first output of the project: improve the fisheries data collection in the host countries. Many activities have been initiated in this regard, but unfortunately they are not finished and therefore there are no evidences of progress towards the output yet. However, we are confident they will be achieved on time following the new timetable designed for the activities (Table A4-2).

We also believe the indicators listed in the proposal are still appropriate to document progress towards the outputs. Nevertheless, Anguilla wants to focus the project on spiny lobster fishery as they have a shortage of human resources and they cannot commit to successfully deliver for both species. The indicators to monitor progress in this country will change accordingly.

3.3 Progress towards the project Outcome

Because of the delay of the project, no progress has been made towards the Outcome yet. However, we believe it will be achieved by the end of the project with the new approved timeline.

The baseline condition of the indicators proposed to quantify progress towards the outcome is the following:

Data collection and reporting procedure is improved. Fisheries officers in Anguilla visit regularly the landing sites to collect fisheries data. However, fishers are not willing to share information, and for 2017 our partner only got 4 observations from 4 vessels detailing the fishing activity for 1 fishing day (i.e. landings, fishing effort).
BVI conducts some catch sampling for lobster to estimate the size composition of the landings, sex, and maturity stage. They also have information about the fishing activity (landings, fishing effort, etc.) from the logbooks completed by most of the fishers. However, most of the recent data are only in paper, and therefore it is not being analysed.
TCI also performs catch sampling to estimate the size composition by sex of the landings for lobster. They also have conducted two fishery-independent surveys (in 2000 and 2014) to estimate the conch abundance. The total landings and fishing effort are estimated from the data provided by the processing plants. The landings sold directly to the restaurants are not recorded.

The status of the stocks is assessed. Only TCI has conducted in the past stock assessments for conch. However, the model is not working properly, and therefore it has not been used in the last years to advise in management. The other stocks are not assessed, although Anguilla reports fisheries performance indicators in an annual basis (i.e. landings, fishing effort, mean price) and BVI uses the catch sampling to advise on the closed season.

Fisheries managers enhance their skills and knowledge to perform stock assessment. Only staff from the fisheries department in TCI has conducted stock assessments in the past. In average, the fisheries managers/officers are proficient handling spreadsheets, but their experience using R is null or elementary.

3.4   Monitoring of assumptions

The assumptions of the project have not changed since the proposal. However, the risks of experiencing new hurricanes in the host countries have increased, since the forecast for 2018 is 'an above average hurricane season'. The activities will be scheduled taking into account this information.

3.5   Impact: achievement of positive impact on biodiversity and poverty alleviation

The main goal of this project is to promote fishing activities that preserve the marine ecosystems and enhance the socio-economic development of the fishing communities. To fulfil this goal, we are providing scientific advice on fisheries management considering the stock status estimated in the project as well as the concerns and interests stated by the fishers. Therefore, a high impact on biodiversity conservation and a medium impact on social wellbeing is expected by the end of the project. Because the project has been only active during 6 months, we have not achieved any positive impact yet.

4.   Contribution to the Global Goals for Sustainable Development (SDGs)

The project has not made any contribution to the SDGs since it has just started. However, we expect to contribute to the following SDGs by the end of the project:
- No hunger: Fisheries provide nutritious food. Sustainable fisheries guarantee this nutritious food source will be available for future generations.
- Gender equality: The project will provide training in data-collection, stock assessment and fisheries management for two staff of the fisheries departments in the host countries. Some of the attendees will be women, who will be in charge of performing stock assessments in the future. In addition, 4 women are involved in this project, all of them with important roles (see section 7).

- Good jobs and economic growth: Sustainable fisheries create jobs and support healthy and prosperous communities.
- Life below the water: the project promotes the sustainable exploitation of the marine resources.

5.   Project support to the Conventions, Treaties or Agreements

This project will help the host countries to meet some objectives of the Convention on Biological Diversity (CBD), specifically the conservation of biological diversity and the sustainable use of its components.

By promoting sustainable fishing actions that preserve the health status of the ecosystems and marine resources, we will have contributed to the following Aichi Biodiversity targets by the end of the project:

Target 4:
By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

Target 6:
By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.
Target 10:

By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

6.   Project support to poverty alleviation

Poverty alleviation is not a goal of the project and direct impacts are not expected, at least at short term. However, sustainable fisheries create jobs as stocks support higher fishing pressures in terms of number of vessels when the fishing activities are responsible and sustainable.

In addition, seafood is the main animal protein for many riparian families, including the Caribbean. Lobster and conch are not only the most important commercial fisheries in the host countries, but also contribute to subsistence fisheries, and a proportion of the landings is meant to the fishers' households meal. By promoting sustainable fishing practices, the project contributes to this important animal protein is available for future generations.

7.   Project support to gender equality issues

12 people have been involved in this project in 2017/18, and only 4 are women. Nevertheless, all of them have important roles: Rosana Ourens is the PI of the project; Kafi Gumbs is the Director of the Department of Fisheries and Marine Resources in Anguilla; Nicole Caesar is the new director of the Department of Environment and Coastal Resources (DECR) in TCI; and Abbi Christopher is the policy officer of the Ministry of Natural Resource and Labour in BVI.

The project will try to address gender equality by involving more women in the project in the following years.

8.   Monitoring and evaluation

We have followed the monitoring and evaluation plan detailed in the proposal. The project manager and the principal investigator met once a month when the project was active to

monitor finances and forecast the time required for each person involved in the project in the following months. Project manager also assisted the principal investigator with the risk assessments before performing any activity.

Regular meetings have been also held between the principal investigator and the senior fisheries advisor to assess the progress of the project, design appropriate methodologies to conduct the activities, and discuss alternative strategies when the previous ones fail. The logical framework and the timetable of the activities have been used to assess the progress of the project.

After the hurricane Irma, project manager, principal investigator and senior fisheries advisor met to explore options to achieve the best outcome for the project. The group agreed the most safe and sensible action would be to delay the project for 6 months and start again in the next financial year. This option was consulted with the partners in the host countries before making the final decision.

A Maturity Model Questionnaire issued to UKOTs has been designed and it will be completed in May 2018, and at the end of Year 2 and 3 to monitor progress through the project.

9.   Lessons learnt

- The study area is situated in a potential hurricane region, and the activities (e.g. surveys, trips) must be scheduled taking the hurricane season into account. The partners can provide good advice in this regard.
- Phone calls and texts via *whatsapp* are the best methods to communicate with the partners in the host countries. Their replies to the emails are sometimes belated.

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

Not applicable

11.   Other comments on progress not covered elsewhere

The Hurricane Irma last September has severely affected the progress of the project. The partners in the host countries have been asked if they wanted to modify slightly the project in order to satisfy their new needs, but all of them preferred to continue with the activities agreed. Nevertheless, an additional questionnaire targeted at fishers has been designed in order to quantify the impact of the Hurricane on their livelihoods.

We have also requested additional funding to assess the impact of the hurricane on the habitats for conch and lobster and quantify the required time for their recuperation. The additional funding has been unfortunately rejected.

12.   Sustainability and legacy

Flyers of the project have been distributed in the main fishing communities of the host countries in order to promote the project and get their collaboration. This is essential for the project as it is not mandatory for them to share data with the government. On this regard, several meetings will be planned with them in the next years.

The project will collect new data and the methodology used will be embedded with the local partners ensuring they will have the capacity to repeat these surveys in future. New community-led data collection will be initiated using methods and tools available to UKOT stakeholders beyond the project lifetime. Fisheries stock assessment training will be provided to inform future management. All training will be delivered through hands-on workshops and collaborative activities, using locally sourced data. This project will leave a legacy of well-trained and informed staff and fishers, along with data collection and assessment systems, new datasets and a regional support network for fisheries managers as they tackle future challenges.

13.   Darwin identity

The Darwin Initiative logo has been included in all presentations given in the three countries, and its contribution and the UK Government's contribution has been recognised during the kick-off meetings.

The Darwin Initiative logo has been included in the flyers distributed in the fishing communities to promote the project (a flyer attached as an example).

14.   Project expenditure

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

Project spend (indicative) since last annual report	2017/18 Grant (£)	2017/18 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Monitoring & Evaluation (M&E)				
Others (see below)				
TOTAL				

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

Project summary	Measurable Indicators	Progress and Achievements April 2017 - March 2018	Actions required/planned for next period
Impact Conch and spiny lobster fisheries in Anguilla, BVI and TCI are well-managed and exploited sustainably, supporting a healthy marine environment, food security, national economies and livelihoods for coastal communities.		Weakness and strangeness of the governance have identified in the three countries with both fisheries managers and fishers. Goals and activities to be conducted under the project have been agreed.	■■■■■■■■■■
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 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 each UKOT. c) Data collection and reporting procedures will be improved, drawing on best practice from existing programmes, ICES and Northwest Atlantic	The current skills and knowledge of the staff that will conduct stock assessments have been identified. The weakness of the data collection and data management have been identified.	Data collection and management will be improved next financial year. Their current fisheries data will be analysed to inform on the status of the stocks and fisheries performance.

	Fisheries Organization (NAFO) processes, to develop and inform future management. Improvements in fisheries data collection, analysis and management will be evident for all UKOTs.	
Output 1. **Data Collection** Implement new or improve existing conch and spiny lobster fisheries data collection approaches in all three UKOTs	**BVI** a) Two fisheries stock status indicators (one for conch, one for spiny lobster) are developed using existing logbook records b) Revisions to existing logbook reporting systems following the outputs of a) c) Logbook data are currently submitted by fishers but they do not receive feedback. A feedback mechanism will be developed to enable fishers to be kept informed about status and trends in commercial fish stocks d) Horseshoe Reef Fisheries Protected Areas collaborative species monitoring survey will be designed and undertaken at least twice. **Anguilla** e) Deliver a three-week field survey in Anguilla to collect baseline spiny lobster data to inform assessment for the Anguilla Bank area f) All video data reviewed and reported. **TCI** Collate fish processor statistics	The strangeness and weakness of the data collection has been discussed, and some of the data have been sent to Cefas. One of the weakness of the system in BVI, and in general in the three host countries, is the shortage of scientific staff to conduct sampling and analyse the data. Consequently, the logbook data in BVI has been also stored in paper for the last 7 years as nobody had time to enter the information in a database. During the Cefas' visit, BVI committed to digitalize the information and send it to Cefas for the analyses. However, most of these data have been lost during the Hurricane Irma. BVI is trying to recover as much data as possible and send it to Cefas. The methodology to assess the Horseshoe Reef Protected Areas has been designed. The survey in Anguilla will be conducted in 2018/2019, and the data in TCI compiled in May 2018, during the next Cefas' trip.

Activities

1.1. Cefas visits to Anguilla, BVI 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 BVI and where possible develop analysis routines to inform fisheries management.

1.5. Report basic trends derived from BVI logbook reporting with fishers to demonstrate the value of the data collected.

1.6. Develop sustainability indicators based on logbook data to inform BVI fisheries management.

1.7. Revise existing protocols for data collected through logbooks and landings reporting. Collaborate with fisheries managers, fishers and BVI Fishery Advisory Committee to develop an effective data collection programme.

1.8. Assist the implementation of the new data collection programme in BVI 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, BVI.

1.10. Analyse trends in BVI species status based on the rapid assessment methodology.

1.11. Cefas / Anguilla fisheries department staff jointly plan and undertake 3-week video survey to inform a lobster stock status assessment in the Anguilla Banks area. Implement methodology which can be repeated by local staff over time, and shared with other UKOTs.

1.12. Set up interview surveys in Anguilla to reconstruct fishery history.

1.13. Collate and rationalise fish processor datasets from TCI.

1.1 Completed. Cefas visited Anguilla and BVI at the beginning of the project. Because staff from the fisheries department in TCI was not available for those weeks that Cefas was traveling, Cefas and TCI had a videoconference to discuss the project (see evidences in Annex 4)

1.2 In progress. All data from Anguilla and some from BVI was collected in 2017/2018. However, most of the information will be collected at the beginning of 2018/2019, during a second trip to the host countries in May 2018.

1.3 In progress. The questionnaire was designed in 2017/2018 (Doc A4-2), however there was not chance to conduct the questionnaire after the Hurricane Irma. The questionnaires will be completed in the three host countries in May 2018.

1.4 To be completed in 2018/2019. The data will be collected in May 2018 and analysed in the second quarter of 2018/2019. However, BVI informed us the data for the last 7 years had not been digitalized yet, and it was stored in paper in the Fisheries Department, which has been highly damaged by the Hurricane. There is a high probability the data has been lost.

1.5 To be completed in 2018/2019

1.6 To be completed in 2018/2019

1.7 To be completed in 2018/2019

1.8 To be completed in 2019/2020

1.9 To be completed in 2018/2019. The methodology has been designed

1.10 To be completed in 2018/2019

1.11 To be completed in 2018/2019. The methodology has been designed, and the Department of Fisheries and Marine Resources in Anguilla has conducted some interviews with fishers in order to identify the most important fishing areas for spiny lobster in the North of the island.

1.12 To be completed in 2018/2019. Questionnaire has been designed

1.13 To be completed in May 2018, during a visit to the country

Output 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 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 new field survey data by fisheries departments or fishers; logbook data; landings data.	*This output will be addressed in 2018/2019 and 2019/2020*
Activities 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. Analyses 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.		2.1. To be completed in 2018/2019 2.2. To be completed in 2018/2019 2.3. To be completed in 2018/2019 2.4. To be completed in 2019/2020 2.5. To be completed in 2019/2020 2.6. To be completed in 2019/2020
Output 3. **Sustainable Management** A generic conch and spiny lobster	<u>**All UKOTs**</u> a) Fisheries management policies and practices reviewed to inform best practice	The weakness and strangeness of the fisheries governance have been discussed with fisheries managers and fishing communities. This output will be addressed in 2018/2019, 2019/2020 and 2020/2021

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.	management plan (>10) b) Ten relevant fisheries datasets have been sourced or reviewed **c)** **Best practice recommendations for the management of conch and spiny lobster fisheries in each UKOT are made, two for each UKOT** <u>TCI</u> d) Regionally adaptable management plans for both species. Using data collected and analysed, develop detailed draft species management plans for TCI <u>BVI</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 implementation	

Activities

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– meet with fisheries representatives through the workshops – include responsible fishing practices on the agenda, advise of responsible fishing schemes and benefits to encourage uptake.

3.1. To be completed in 2018/2019

3.2. To be completed in 2018/2019

3.3. To be completed in 2020/2021

3.4. To be completed in 2020/201

3.5. To be completed in 2020/2021

3.6. Assist BVI with the implementation of a Fisheries Management Council to oversee co-management of an established Fisheries Protected Area.		3.6. To be completed in 2018/2019
3.7. Community workshop to agree spatial, temporal, gear or species restrictions to minimise fishing impacts within the Fisheries Protected Area.		3.7. To be completed in 2019/2020
3.8. Using data collected assess the effectiveness of the management measures implemented by the Fisheries Management Council		3.8. To be completed in 2020/2021
3.9. Share co-management experiences with other UKOTs through workshops (see Output 4).		3.9. To be completed in 2019/2020
3.10. Cefas visits to Anguilla, BVI and TCI (one working week per UKOT) towards end of project to support project outcomes implementation and legacy.		3.10. To be completed in 2020/2021

| **Output 4** **Capacity Building & Collaboration** Training and knowledge exchange initiatives and collaborative working opportunities for UKOT fisheries scientists, managers and fishers. | **All UKOTs** 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 | This output will be addressed in 2019/2020 and 2020/2021 |

Activities		
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 BVI), and (3) training on using the available evidence base		4.1. To be completed in 2019/2020

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.	4.2. To be completed in 2019/2020 4.3. To be completed in 2020/2021 4.4. To be completed in 2020/2021

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

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: Conch and spiny lobster fisheries in Anguilla, BVI 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.	d) 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. e) 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 each UKOT. f) 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.	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 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.	Fisheries remain viable and have not been impacted by external factors. Governments remain committed to securing sustainable fisheries and healthy ecosystems.

Outputs: **1. Data Collection** Implement new or improve existing conch and spiny lobster fisheries data collection approaches in all three UKOTs	**BVI** g) Two fisheries stock status indicators (one for conch, one for spiny lobster) are developed using existing logbook records (completed Year 1). h) Revisions to existing logbook reporting systems following the outputs of a) (completed Year 1). i) Logbook data are currently submitted by fishers but they do not receive feedback. A feedback mechanism will be developed to enable fishers to be kept informed about status and trends in commercial fish stocks (completed Year 1). j) Horseshoe Reef Fisheries Protected Areas collaborative species monitoring survey will be designed (completed Year 1) and undertaken at least twice. **Anguilla** k) Deliver a three-week field survey in Anguilla to collect baseline spiny lobster data to inform assessment for the Anguilla Bank area (completed Year 1). l) All video data reviewed and reported. **TCI** m) Collate fish processor statistics (completed Year 1).	a) Documentation showing developed indicators is available. b) New logbook reporting protocol is available. c) Annual fisheries statistics reported at Fisheries Advisory Council d) Methodology document available. Survey reports available e) Field survey report available. f) Data spreadsheet g) Dataset available.	Fishers will support data collection programmes. Field surveys can be undertaken and are not hampered by equipment failure or natural disasters. Permission is obtained from Government to share fisheries statistics data freely. Fisheries Advisory Council set up completed. Logbook database contains sufficient data to develop meaningful indicators.
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.	**All UKOTs** c) Conch and spiny lobster species stock status reports are produced for each UKOT using existing or new data gathered under Output 1 (completed Year	a) Reports submitted to the Governments. Evidence of data collected under Output 1 is used in stock status assessments.	Available data support assessment of stock status. Available data are robust enough for assessment purposes. IT equipment and facilities are available

	2). d) 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.	b) Methodology reports produced.	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> g) Fisheries management policies and practices reviewed to inform best practice management plan (>10) (completed Year 3) h) Ten relevant fisheries datasets have been sourced or reviewed (completed Year 1) i) 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> j) Regionally adaptable management plans for both species. Using data collected and analysed, develop detailed draft species management plans for TCI (completed Year 3). <u>BVI</u> k) Fisheries Management Council (FMC) established for the Horseshoe Reef FPA with members from Government and fisheries sector (completed Year 1). l) Management plan developed and agreed with stakeholders for	a) "UKOT Fisheries Management Review" report produced. b) See a). c) See a). d) 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. BVI 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> c) 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). d) 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 reports.	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)

5.   Data Collection

5.4. Cefas visits to Anguilla, BVI 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.

5.5. 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.

5.6. 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.

5.7. Review extensive logbook holdings in the BVI and where possible develop analysis routines to inform fisheries management.

5.8. Report basic trends derived from BVI logbook reporting with fishers to demonstrate the value of the data collected.

5.9. Develop sustainability indicators based on logbook data to inform BVI fisheries management.

5.10. Revise existing protocols for data collected through logbooks and landings reporting. Collaborate with fisheries managers, fishers and BVI Fishery Advisory Committee to develop an effective data collection programme.

5.11. Assist the implementation of the new data collection programme in BVI and data reporting to fishers via Government website. Assess the effectiveness of the new data collection programme and reporting system.

5.12. Trial community led rapid species status survey in the Horseshoe Reef FPA, BVI.

5.13. Analyse trends in BVI species status based on the rapid assessment methodology.

5.14. Cefas / Anguilla fisheries department staff jointly plan and undertake 3-week video survey to inform a lobster stock status assessment in the Anguilla Banks area. Implement methodology which can be repeated by local staff over time, and shared with other UKOTs.

5.15. Set up interview surveys in Anguilla to reconstruct fishery history.

5.16. Collate and rationalise fish processor datasets from TCI.

6.   Data Assessment

6.4.   Apply data analysis routines to existing datasets to describe historic trends in conch and spiny lobster stocks over time.

6.5.   Analyse recently collected conch survey data from Anguilla and TCI to inform current fishery status.

6.6.   Analyse video data collected from the Anguilla Banks areas and develop analysis routines for local officers, which can be shared with other UKOTs.

6.7.   Assess sustainability of existing conch and spiny lobster exploitation levels. Implement analysis and assessment routines to inform local decision making.

6.8.   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.

6.9.   Produce stock status reports for both species in all three UKOTs.

7.   Sustainable Management

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

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

7.6.   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.

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

7.8.   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.

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

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

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

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

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

8.   Capacity Building & Collaboration

8.4.   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 BVI), 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.

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

8.6.   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.

8.7.   Develop regional network of fisheries managers.

Annex 3: Standard Measures

Table 1   Project Standard Output Measures

Code No.	Description	Gender of people (if relevant)	Nationality of people (if relevant)	Year 2017/18	Year 1 2018/2019	Year 2019/20	Year 2020/21	Total to date	Total planned during the project
Established codes									
6A	No. people receiving training		3 Anguilla, 3 BVI, 3TCI	0	9	9	3	0	9
6B	No. training weeks			0	1	2	2	0	5
7	No. training materials to be produced			0	1	2	1	0	4
9	No. management plans produced			0	0	0	4	0	4
12A	The project will create new fisheries databases			0	3	0	0	0	3
12B	The project will enhance existing databases			0	5	0	0	0	5
23	Value of resources raised from other sources, in addition to Darwin*								
	No. toolkits produced to analyse the data			0	2	5	0	0	7

*estimated before the Hurricane

Table 2   Publications

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	X
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	X
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	X
Do you have hard copies of material you want 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.	X
Have you involved your partners in preparation of the report and named the main contributors	X
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	