



## Darwin Plus DPLUS153

Conserving tropical marine ecosystems in TCI through science-based fisheries management

## Monitoring & Evaluation Plan

## Version Control Table

### BUILD STATUS:

| Version | Date     | Author | Reason/Comments |
|---------|----------|--------|-----------------|
| 0.1     | 07/04/22 | ECB    | Initial draft   |
| 0.2     | 24/04/22 | ECB    | Final draft     |

### DISTRIBUTION:

| Copy       | Version | Issue Date | Issued To                                |
|------------|---------|------------|--|
| Electronic | 0.1     | 11/04/22   | Issued to PMG via Email and Google Drive |
| Electronic | 0.2     | 29/04/22   | PMG & Public via Project Website         |

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## 1 Introduction

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### 1.1 Purpose of this plan

This monitoring and evaluation (M&E) plan has been prepared by the DPLUS153 Project Manager (PM), is approved by the Project Management Group (PMG) and forms an integral part of the project reporting progress. Oversight of the delivery of the M&E plan will be the responsibility of the PM whilst signing off on the implementation of the M&E plan will be the responsibility of the PMG.

### 1.2 Project summary

|                                   |  |
|-----------------------------------|--|
|                                   | <b>Conserving tropical marine ecosystems in TCI through science-based fisheries management</b>   |
| <b>Start/End date</b>             | 1 <sup>st</sup> July 2021 / 31 <sup>st</sup> December 2023   |
| <b>Duration</b>                   | 2.5 years  |
| <b>Territories</b>                | Turks and Caicos Islands (TCI)   |
| <b>Lead Partner</b>               | South Atlantic Environmental Research Institute  |
| <b>Other partner institutions</b> | Turks and Caicos Islands Government, Department of Environment and Coastal Resources (DECR), Department of Fisheries and Marine Resources Management (FMRM), Fish Ageing Services (FAS) Pty Ltd, Ocean Environmental (OE), Joint Nature Conservation Committee.  |
| <b>Grant Value</b>                | £344,905   |
| <b>Project leader name</b>        | Tara Pelembe, SAERI Deputy Director – Innovation and Dr Edward Butler, SAERI Project Manager – Senior Marine and Fisheries Scientist   |
| <b>Project goal</b>               | Through partnership with local stakeholders, the project will build fishers’ capacity for participation in fisheries management, centralise fish landing sites, train local government staff in landings and biological data collection and fishery management, provide equipment for a fisheries laboratory and conduct stock assessments using data collected. |

**Project Outcome**

Improved landings and life history data, data management enshrined within TCIG processes, and its importance understood by the fishing community ultimately leading to a significant improvement in sustainable fisheries management.

| Project Summary   | Measurable Indicators  | Means of Verification   | Important Assumptions  |
|---|--|---|--|
| <p><b>Impact:</b> Tropical Marine ecosystems on TCI are improved through sustainable fisheries management, secured by working in partnership with fishermen to improve data collection critical to assessing fisheries.<br/>(Max 30 words)</p>                                  |  |   |  |
| <p><b>Outcome:</b><br/>(Max 30 words)<br/><i>Improved landings and life history data, data management enshrined within TCIG processes, and its importance understood by the fishing community leading to a significant improvement in sustainable fisheries management.</i></p> | <p>0.1 At least 80% increase in understanding of the importance of landings and life history data to rigorous fisheries management and the sustainability of livelihoods by the fishing community by Y3Q3.</p> <p>0.2 Data collection protocols and data management procedures successfully adopted within FMRM by Y3Q3.</p> <p>0.3 A purpose provisioned fisheries laboratory successfully provides ageing services and reproductive assessments to the TCI fishery and becomes central fisheries</p> | <p>0.1 Centralised landings sites for data collections opportunities agreed and organised by the fishing community, DECR, and FMRM, and questionnaire results show increased understanding of the importance of landing and life history data to fisheries management compared to that at the start of the project.</p> <p>0.2 Data collection protocols and manuals drawn up, purpose built relational database built and training given to DECR and FMRM – Environment, Fisheries and Conservation Officers.</p> <p>0.3 A modern fisheries laboratory processing otoliths (and other hard structures)</p> | <p>Increased awareness and understanding results in positive action for change. Fishing community, FAC, DECR, FMRM, &amp; TCIG supportive of the process and determined to improving data collection and ultimately fisheries management in TCI. DECR &amp; FMRM personnel open to data collection training and going forward routinely follow protocols and manuals in terms of data collection. DECR &amp; FMRM continue to utilise the database to input data. Modern fisheries laboratory meets the needs of TCI initially and then services other UKOTs in the Caribbean. Rigorous routine stock assessments housed within FMRM. Covid-19 impacts don't place</p> |

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|  | <p>laboratory for Caribbean OT fisheries by Y3Q3.</p> <p>0.4 Routine stock assessment being conducted by FMRM to support improved management by Y3Q3.</p>  | <p>for ageing and conducting histological analyses on gonads for reproductive, maturity and sex transition assessments.</p> <p>0.4 Project undertakes stock assessments and sets up routines to enable FMRM staff to conduct assessments going forward.</p>            | <p>restrictions on national and international travel.</p>  |
| <p>1. Stakeholders are meaningfully engaged in understanding the requirements for robust fisheries data and in the designation of landing sites.</p> | <p>1.1. At least 20 stakeholders attend fisheries data and designated landings sites consultation workshops by Y2Q1 .</p> <p>1.2. At least 4 landing sites on each of 5 islands identified by Y2Q1 .</p>   | <p>1.1. Stakeholder report available online.</p> <p>1.2. Landing site recommendations submitted to Minister.</p>   | <p>Stakeholders trust is built enough for them to meaningfully engage in the process.</p> <p>Covid-19 impacts do not place restrictions on national and international travel.</p>  |
| <p>2. TCIG staff and fishers trained in data collection and fisheries data is well managed.</p>  | <p>2.1. At least 1 data collection manual produced by Y1Q4 .</p> <p>2.2. At least 10 training session attendees record an increased understanding in landings data collection, length frequency/length-weight data and otolith collection at the end of the training session by Y1Q4 .</p> | <p>2.1. Data collection manual.</p> <p>2.2. Training report (including aggregated participant responses) available online.</p> <p>2.3. App download report.</p> <p>2.4. Fishery data base available from the TCIG data portal (with relevant permissions), and the</p> | <p>DECR &amp; FMRM personnel open to data collection training and going forward routinely follow protocols and manuals in terms of data collection. DECR continue to utilise the database to input data.</p> <p>Covid-19 impacts do not place restrictions on national and international travel.</p> |

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|---|---|--|---|
|   | <p>2.3. At least 20 end users download the fisheries app and at least 70% use the app regularly for recording landings by Y2Q2.</p> <p>2.4. 100% of all landings data inputted into the fisheries data base by Y3Q3.</p> <p>2.5 Landings data for at least 4 species successfully collected routinely throughout the project.</p> <p>2.6. At least 5 fisheries spatial data sets available on the TCI WebGIS by Y3Q2.</p> | <p>number of digitised records match the number of data recording sheets .</p> <p>2.5. Data recording sheets.</p> <p>2.6. Fisheries spatial data available in TCIG WebGIS.</p>   |   |
| <p>3. Fisheries Science laboratory fully equipped, and staff fully trained.</p> | <p>3.1. All Fisheries Science equipment purchased and successfully installed by Y1Q4 .</p> <p>3.2. At least 5 TCIG staff successfully trained in, and regularly use, all of the new equipment by Y1Q4 .</p> <p>3.3. Age and growth studies for 4 species successfully undertaken by Y3Q1.</p> <p>3.4. Maturity gives temporal assessments of Gonad Size</p>   | <p>3.1. Photos of Fisheries Science lab available on project website.</p> <p>3.2. Training report available online.</p> <p>3.3 Reports on each species presenting validated age estimates, assessments of precision and quality control, von Bertalanffy growth parameters and age length keys circulated to the PMG</p> <p>3.4 Reports on the reproductive biology of 10 species presented.</p> | <p>Modern fisheries laboratory meets the needs of TCI initially and then services other UKOTs in the Caribbean.</p> <p>Covid-19 impacts do not delay the purchase of equipment.</p> <p>Covid-19 impacts do not place restrictions on national and international travel.</p> <p>Sample available to process?</p> |



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|   | <p>Index and sex transition successfully understood for 4 species by Y3Q2.</p> <p>3.5. 1x business case for regional services written by Y2Q4.</p>   | <p>These include sex specific age/length and maturity assessment, length/age and sex transition for hermaphrodites. Ground truthed maturity stages using histology circulated to the PMG.</p> <p>3.5 Business case for DECR lab to provide regional services to the Caribbean presented to TCIG Cabinet.</p> |  |
| <p>4. Stock assessments of priority species undertaken.</p>   | <p>4.1. At least 5 FMRM staff undertake refresher stock assessment training successfully by Y3Q1.</p> <p>4.2. Stock assessments for at least 2 priority species successfully undertaken by Y3Q2.</p>   | <p>4.1. Training report available online</p> <p>4.2. Stock assessments delivered to Director of DECR &amp; FMRM and PS of the Ministry</p>   | <p>Rigorous routine stock assessments housed within FMRM.</p> <p>Covid-19 impacts do not place restrictions on national and international travel.</p> <p>Appropriate data available for stock assessments</p>  |
| <p>5. Project Management structure, monitoring and evaluation and communication tools established</p> | <p>5.1. PM and PO Recruited in Y1Q3.</p> <p>5.2. PMG meeting held every quarter starting Y1Q2.</p> <p>5.3. Webpage created on SAERI and partners' websites Y1Q3.</p> <p>5.4. M&amp;E Plan created by Y1Q4.</p> <p>5.5. Regular DPLUS reports (half yearly/yearly).</p> | <p>5.1 PM employment contract signed.</p> <p>5.2 PMG meeting notes available on common online platform.</p> <p>5.3 Webpages live and public facing.</p> <p>5.4 M&amp;E plan available on common online platform.</p>   | <p>Recruitment results in appropriate candidates being appointed and available on island within given timeframe. Continued resource from project partners available to engage with the project for its duration.</p> <p>Covid-19 impacts do not place restrictions on national and international travel.</p> |

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|  |  | 5.5 DPLUS Reports available to project partners. |  |
| <p>Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <ul style="list-style-type: none"> <li>1.1 Arrange and deliver fisheries data and designated landings sites consultation workshops</li> <li>1.2 Write up the workshop report (including participant feedback) and publish online</li> <li>1.3 Identify landing sites on each of the 5 main islands – Providenciales, (North Caicos, Middle Caicos &amp; East Caicos), South Caicos and Grand Turk</li> <li>1.4 Prepare and submit paper with landing site recommendations to the Minister.</li> <li>2.1. Produce a data collection manual and arrange and deliver landings data collection training sessions</li> <li>2.2. Develop, test and finalise fisheries app</li> <li>2.3 Prepare and distribute data recording sheets to all relevant staff members</li> <li>2.4 Collect landings data for at least 4 species, input all of the landings data into the fisheries database and make database available online</li> <li>2.5. Prepare and upload (at least 5) fisheries spatial data sets available on the TCI WebGIS</li> <li>3.1. Purchase and install fisheries science equipment.</li> <li>3.2. Undertake age and growth studies for 4 species</li> <li>3.3. Undertake temporal assessments of GSI and sex transition for 4 species</li> <li>3.4. Write business case for regional services</li> <li>4.1. Deliver refresher stock assessment training</li> <li>4.2. Undertake stock assessments for at least 2 priority species</li> <li>5.1. Recruit PM and PO</li> <li>5.2. Host quarterly PMG meeting</li> <li>5.3. Create and update project Webpage.</li> </ul> |  |  |  |

5.4. Write and sign off M&E Plan.

5.5. Prepare and submit DPLUS reports (half yearly/yearly).

## Monitoring and evaluation plan

| Activity  | Indicator  | Evidence/data required          | Where evidence / data is to be sourced   | Frequency<br>How often will it be measured         | Responsibility<br>Who will measure it | Resources (time, £, staff, input from others)  |
|---|--|---------------------------------|--|--|---------------------------------------|--|
| 1.1. & 1.2. Deliver fisheries and biological data workshop & workshop report            | Workshop to deliver fisheries and biological data training, held in Y1Q4.  | Workshop report                 | Report and participant feedback published on project webpage and disseminated to relevant stakeholders.<br><br>Outreach via twitter/Facebook | Once   | PMG                                   | Report drafting will be undertaken by PM – with contribution from other project partners (FAS, FMRM) and SAERI Executive Director  |
| 1.1., 1.2. & 1.3. Designated landings sites consultation                                | At least one stakeholder consultation workshop held regarding designated landings sites by Y2Q1.                         | Workshop report                 | Stakeholder report and feedback available on project webpage.<br><br>Outreach via twitter/Facebook   | Once   | PMG                                   | Facilitation of stakeholder engagements assisted by DECR and FMRM. Report drafting undertaken by PM.   |
| 1.3. & 1.4. Prepare and submit paper with landing site recommendations to the Minister. | At least 4 landing sites on each of 5 islands identified by Y2Q1   | Paper submitted to the Minister | Confirmation to PMG via email and Monday.com   | Once   | PMG                                   | With input from the PMG, letter drafting will be undertaken by the PM and delivered to the minister by the DECR & FMRM Directors.  |
| 2.1. Fishery and biological data collection manual                                      | Produce a data collection manual (Y1Q4) and arrange and deliver landings data collection training sessions starting Y1Q4 | Data collection manual          | Data collection manual available on project webpage and updated regularly.<br><br>—  | Initially at Y1Q4 and reevaluated every six months | PMG                                   | Data manual drafting will be undertaken by PM and Project Officer (PO, DECR) – with contribution from SAERI Executive Director and other project partners where relevant (FAS, OE, FMRM) |

| Activity  | Indicator   | Evidence/data required                                 | Where evidence / data is to be sourced                                     | Frequency<br><br>How often will it be measured | Responsibility<br><br>Who will measure it | Resources (time, £, staff, input from others)  |
|---|---|--|--|--|---|--|
| 2.2. Develop, test and finalise fisheries app.  | At least 20 end users download the fisheries app and at least 70% use the app regularly for recording landings by Y2Q2. | App download report                                    | Download report shared with the PMG online via Monday.com and Google Drive | Once   | PMG                                       | SAERI GIS Officer and Database Manager   |
| 2.3. Prepare and distribute data recording sheets to all relevant staff members   | Data recording sheets prepared and distributed by Y1Q4  | Data recording sheets stored in data collection manual | Data collection manual available on project webpage.                       | Once, at Y1Q4                                  | PMG                                       | Data manual drafting will be undertaken by PM and PO – with contribution from SAERI Executive Director and other project partners where relevant (FAS, OE, FMRM)   |
| 2.4. Collect landings data for at least 4 species and input all of the landings data into the fisheries database and make database available online | Landings data for at least 4 species successfully collected routinely throughout the project, beginning Y2Q1            | Online database  | Database made available online   | Quarterly, beginning Y2Q1                      | PMG                                       | The organising of routine data collection and data entry by the PO (DECR) with direct staff input (data collection) from DECR and FMRM, and overseen by the PM. Data made available online by DECR with assistance from SAERI GIS Officer and Database Manager |
| 2.5. Prepare and upload (at least 5) fisheries spatial data sets available on the TCI WebGIS  | At least 5 fisheries spatial data sets available on the TCI WebGIS by Y3Q2.   | Fisheries spatial data                                 | Fisheries spatial data available in TCIG WebGIS                            | Once   | PMG                                       | Spatial data prepared by the PM and PO and uploaded to the TCI WebGIS, with assistance from SAERI GIS Officer and Database Manager   |

| Activity   | Indicator  | Evidence/data required   | Where evidence / data is to be sourced                           | Frequency<br>How often will it be measured | Responsibility<br>Who will measure it | Resources (time, £, staff, input from others)  |
|--|--|--|--|--|---------------------------------------|--|
| 3.1. Purchase and install fisheries science equipment.                     | All fisheries science equipment purchased and successfully installed by Y1Q4   | Photos of Fisheries Science lab  | Available on project website                                     | Once                                       | PMG                                   | Purchasing and procurement of capital laboratory equipment by DECR.<br><br>Installation led by PM and PO with assistance from project partners (FAS) as required |
| 3.2. Undertake age and growth studies for 4 species                        | Age and growth studies for 4 species successfully undertaken by Y3Q1.  | Reports on each species presenting verified age estimates, assessments of precision and quality control, von Bertalanffy growth parameters and age length keys   | To be shared with the PMG online via Monday.com and Google Drive | Once                                       | PMG                                   | Drafting to be led by PM and PO, with technical input from FAS   |
| 3.3 Undertake temporal assessments of GSI and sex transition for 4 species | Maturity ogives temporal assessments of Gonadosomatic Index and sex transition successfully understood for 4 species by Y3Q2 | Reports on the reproductive biology of 10 species presented. These include sex specific age/length and maturity assessment, length/age and sex transition for hermaphrodites. Ground truthed maturity stages using histology | To be shared with the PMG online via Monday.com and Google Drive | Once                                       | PMG                                   | Drafting to be led by PM and PO  |

| Activity   | Indicator   | Evidence/data required   | Where evidence / data is to be sourced   | Frequency<br>How often will it be measured | Responsibility<br>Who will measure it | Resources (time, £, staff, input from others)   |
|--|---|--|--|--|---------------------------------------|---|
| 3.4. Write business case for regional services                   | 1x business case for regional services written by Y2Q4                                    | Business case for DECR lab to provide regional services to the Caribbean | Business case will be made available on the Project website and will be presented to TCIG Cabinet. | Once                                       | PMG                                   | Report drafting will be undertaken by PM – with contribution from other project partners where relevant.<br><br>DECR Director to present to cabinet         |
| 4.1. Deliver refresher stock assessment training                 | At least 5 FMRM staff undertake refresher stock assessment training successfully by Y3Q1. | Training report  | Training report made available online at the project webpage                                       | Once                                       | PMG                                   | Report drafting will be undertaken by PM – with contribution from other project partners where relevant (OE).<br>Workshop facilitation aided by DECR & FMRM |
| 4.2. Undertake stock assessments for at least 2 priority species | Stock assessments for at least 2 priority species successfully undertaken by Y3Q2.        | Stock assessments delivered to Director of DECR and FMRM                 | TCIG online data portal  | Once                                       | PMG                                   | Stock assessments will be led by project partner organisation (OE), in collaboration with the PM, PO and PMG (specifically FMRM)                            |
| 5.1. Recruit PM and PO   | PM and PO Recruited in Y1Q4.  | PM and PO employment contract signed.                                    | PM and PO job description to be shared with the PMG online via Monday.com and Google Drive         | Once                                       | PMG                                   | DECR to recruit local employee for PO post  |

| Activity                                | Indicator   | Evidence/data required                                 | Where evidence / data is to be sourced                             | Frequency<br>How often will it be measured   | Responsibility<br>Who will measure it | Resources (time, £, staff, input from others)  |
|---|---|--|--|--|---------------------------------------|--|
| Draft and sign Project Partners MoU     | An MoU agreed and signed by all partners by end Y1Q4. | Signed MoU document                                    | MoU available on the SAERI DPlus 153 webpage                       | Once, at May 2022 Project Management Group (PMG) meeting   | PMG                                   | Drafting to be led by PM, with technical/contractual input by SAERI Deputy Director – Business and Programmes & Deputy Director - Innovation   |
| 5.2. Host quarterly PMG meeting         | PMG meeting held every quarter starting Y1Q2.         | PMG meeting notes available on common online platform. | Approved PMG minutes are available on the SAERI DPlus 153 webpage. | PMG meeting draft minutes will be available one month after meeting.<br><br>Meetings are scheduled every three months. | PMG                                   | Meeting to be chaired by SAERI Deputy Director – Innovation. Drafting of minutes by PM, for approval by PMG.   |
| 5.3. Create and update project Webpage. | Webpage created on SAERI and partners' websites Y1Q3  | Webpages live and public facing                        | Project webpage  | Monthly  | PMG                                   | Webpage to be created and updated by SAERI PA and communications officer, with direct input and oversight from the PM.<br><br>Project partners are responsible for creating and updating their respective webpages |
| 5.4. Write and sign off M&E Plan.       | M&E Plan created by Y1Q4                              | M&E plan available on common online platform.          | M&E plan available on the SAERI DPlus 153 webpage                  | Once, at May 2022 Project Management Group (PMG) meeting   | PMG                                   | Drafting to be led by PM, with technical/contractual input by SAERI Deputy Director – Business and Programmes & Deputy Director - Innovation   |



| Activity  | Indicator   | Evidence/data required                                | Where evidence / data is to be sourced  | Frequency<br>How often will it be measured               | Responsibility<br>Who will measure it | Resources (time, £, staff, input from others)   |
|---|---|---|---|--|---------------------------------------|---|
| Ensure M&E is a rolling agenda item for PMG                       | 6-monthly updates on implementation of M&E Plan provided to PMG           | Review of M&E plan, recorded on version control table | Available from project website/PMG minutes  | Bi-annually  | PMG                                   | PM & PMG  |
| Draft and sign Project partners Terms of Reference (ToR) document | ToR document agreed and signed by all partners by end Y2Q1.               | Signed ToR document                                   | ToR available on the SAERI DPlus 153 webpage  | Once, at May 2022 Project Management Group (PMG) meeting | PMG                                   | Drafting to be led by PM, with technical/contractual input by SAERI Deputy Director – Business and Programmes & Deputy Director - Innovation                                  |
| Produce a communications plan                                     | Communications plan produced with input from all project partners by Y2Q1 | Communications plan                                   | Communications plan shared and available via Monday.com and Google Drive  | Once   | PMG                                   | Drafting to be led by PM, with input from all individual project partner groups   |
| 5.5. Prepare and submit DPLUS reports (half yearly/yearly).       | Regular DPLUS reports (half yearly/yearly).                               | DPLUS Reports available to project partners.          | Circulated to PMG and stored on PMG Google Drive folder   | Bi-annually  | PMG                                   | Report drafting will be undertaken by PM  |
| Final project report and publicity.                               | Final project report produced by January 2024.                            | Final report & related publicity                      | Report published on project webpage and disseminated to relevant stakeholders. Public outreach via twitter/Facebook and other local media | Once, at end of project                                  | PMG                                   | Report drafting will be undertaken by PM and PO – project partners (FAS/OE) leading on specific work packages will also deliver content in relation to specific work packages |

| Role                                  | Responsibilities   |
|---------------------------------------|--|
| <b>Project Manager</b>                | The project manager leads on the day to day running of the project, including coordinating the project partnership and providing secretariat for the PMG. The project manager shall be accountable for the financial management of the Darwin project budget and ensuring that the project is delivered on time and on budget.   |
| <b>Project Leader</b>                 | The project leader will be responsible for the technical direction of the project and will be the main point of contact for Darwin. In addition, they shall be the person responsible for ensuring any grant meets the relevant Terms and Conditions. Finally, the Project Leader and their organisation are responsible for the health and safety of all staff working full and part time on their project.   |
| <b>Project Management Group (PMG)</b> | Project Management Group (PMG) shall monitor and steer the project, ensuring it aligns with the project proposal document, and ensuring that the project delivers its outputs on time, and on budget. The PMG will also approve the Monitoring and Evaluation plan at the start of the project and sign off its implementation throughout the project duration. Finally, the PMG provides high level decisions regarding any changes to the Project Management Plan, and will review relevant documents associated with this, such as the project risk register and the issues log. The Project Manager will present a quarterly report on progress against deliverables, progress against the monitoring and evaluation plan and quarterly financial reports. |

## 4 Data Management

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SAERI operates a strict data management policy for Darwin Plus projects, which this project shall comply with. This includes, but is not limited to:

- The provision of Scientific Research Permits from the DECR for research undertaken in TCI.
- Submission of final datasets to TCIG (DECRA and FMRM) as required by the data management policy.
- Free availability of all data online where relevant, as per Darwin Data sharing policy.

A more detailed guide to data management provision under this project can be viewed here:

<https://www.south-atlantic-research.org/research/data-science/managing-data/>