Darwin Plus Main: Annual Report

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

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

Submission Deadline: 30th April 2024

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

• Darwin Plus Project Information

Project reference	DPLUS174 (DPR10S2_1020)
Project title	A Cross-UKOT Camera Network to Enhance Marine Predator Conservation
Territory(ies)	British Antarctic Territory, Falkland Islands, Gibraltar, Montserrat, Ascension Island, South Georgia and the South Sandwich Islands (SGSSI)
Lead Partner	Oxford Brookes University
Project partner(s)	Ascension Island Government Antarctic Research Trust, Falkland Conservation (Falklands) British Antarctic Survey (Antarctic Peninsula) Gibraltar Botanic Gardens Montserrat National Trust and Government of Montserrat Department of the Environment SGSSI Government, South Georgia Heritage Trust
Darwin Plus grant value	GBP 397,772
Start/end dates of project	01/05/2022-30/03/2025
Reporting period (e.g. Apr 2023-Mar 2024) and number (e.g. Annual Report 1, 2)	Apr 2023 – Mar 2024 Annual Report 2
Project Leader name	Tom Hart
Project website/blog/social media	https://www.zooniverse.org/projects/penguintom79/seabirdwatch https://twitter.com/seabird_watch https://www.instagram.com/seabird_watch
Report author(s) and date	Tom Hart and Laure Cugnière, 25th April 2024

1. Project summary

Seabird and other marine species are threatened globally by anthropogenic pressures like pollution, bycatch, and climate change. Seabird numbers, our primary taxa, have declined by nearly 70% over the past 50 years. While there are many local efforts to protect marine species, access to evidence is hampered by logistical constraints and a lack of reporting tools. We aim to produce tools to be applied across UKOTs to lower the barrier to entry of modern techniques to spatially map and monitor key marine species.

The ability of UKOTs to collect and analyse evidence at the scale required to inform the conservation of marine species remains significantly limited by resources and the logistical

constraints linked to remote monitoring. Current monitoring efforts are opportunistic, expensive, and inconsistent and data processing techniques, like AI or distributed citizen science require specific expertise, hence many marine colonies are data deficient and their conservation inadequate. Local conservation strategy and international treaties highlight the need to boost monitoring to better inform conservation. A previous Darwin Plus project (DPR9S2\1016) also noted that financial and logistical hurdles limited the feasibility of automation for territories, an issue that we can now address.

Recent technology applications of drones and timelapse cameras to land nesting marine species have huge potential to provide such evidence at a modest cost. We have demonstrated the feasibility of this novel approach and successfully trained numerous partners in the polar regions and the UK. If we can train OTs, help them test new methods to collect the evidence needed on their priority taxa and set up a reporting structure across a range of UKOTs, this can serve as a proof of concept to expand to all UKOTs and significantly boost UK marine conservation.

2. Project stakeholders/partners

This project spans across six UK overseas territories with Ascension Island Government with at least one local organisation as active partners. Out of those, we have a long-term relationship with the Antarctic Research Trust, Falkland Conservation, British Antarctic Survey, SGSSI Government, and the South Georgia Heritage Trust. With those partners, we have focused our effort on developing capacity locally so that the organisation partners can take ownership of the existing monitoring network (see evidence in Annex 4).

With the territories which are new partnerships developed during this project (Gibraltar Botanic Gardens, Montserrat National Trust, and Government of Montserrat Department of the Environment), our work has focused on developing strong relationships and build capacity for the monitoring network deployed as part of this DPLUS project to match the needs of the partners. We have been in regular contact with all partners and have visited all five out six territories this year. Access to Ascension Island is limited and our partner has visited us in Oxford instead. We have a field visit planned for the first two weeks of May to Ascension Island.

All partners are involved in reviewing all the reports and change requests and lead the decision linked to their own territories in terms of implementation and based on acquired knowledge during the project. Letters of support for Gibraltar, Ascension and Montserrat are found in appendix of this report.

The main challenge is typically linked to local capacity. All our partners are overstretched and passionate about their work and time available for the deployment of the project (which reinforces the need to automatise as much seabird monitoring as possible to reduce staff commitment on data collection). Another challenge for the three new territories involved in our seabird monitoring network is the availability of historical data which is limited. As such, a baseline needed to be acquired during the project and shifts to our strategy done as we

3. Project progress

We have been focusing on catching up some of the delays of Y1 during Y2. Nearly all territories now have an active camera network, with Montserrat, and Ascension needing further deployment (following field assessment by Project lead) and Gibraltar having delay in deployment due to the need to obtain landowner authorisation (i.e., The Gibraltar National Museum and a permit for the World Heritage Site). The deployment has now been authorised and we are waiting on the landowner to settle on a date for deployment. All partners have had a drone survey conducted at least once on their territories with local partners staff trained in Ascension, Montserrat, and Gibraltar. We are working with the British Antarctic Survey to split the fieldwork responsibility on the Antarctic Peninsula and SGSSI. Similarly, we are in contact with Esther Berthram from the Falklands Conservation to provide training to local staff for drone flights and cameras. A drone was provided in Jan 2024. At least one staff of each partner territory has been trained in data collection (drones and cameras) and multiple partner staff

have already been trained in data processing though not all partners have capacity for this and the option to have it processed by the Project Lead team is also available. We would like to organise a series of online training workshops in Y3 to offer data processing and analysis training (e.g., imagery stitch, R data analysis).

There have been some delays in downloading the data collected from long-range cameras on Ascension and Montserrat due to software issues. Those issues have now been identified and patched by Timelapse Systems and we are working on installing those patches on the four cameras to download the information and remove the problem for future years. This should be done by the end of May 2024 for Ascension and the end of summer 2024 for Montserrat. Additionally, the AI algorithms are now available for testing on new species and the policy-oriented beta data platform is to receive feedback from all partners by the end of Y3Q1.

Currently, the project has provided evidence for two protected area extensions, SGSSI Marine Protected Area extension to protect 449,000 km2 (from 283,000 km2) of SGSSI Maritime Zone. Additionally, the Ascension Letterbox Natural Reserve to include a newly confirmed breeding colony for masked boobies. In Y3, we will focus on legacy, continuity, and the formal setup of a marine monitoring network for UKOTs.

Note that to account for learnings and challenges during project implementation, we are working with NIRAS to submit an updated logframe each year to inform the Biodiversity Challenge Fund of the evolution of the project (adaptive strategy). The last change request was submitted in April 2024 (which also addresses previous reviewers feedback) and is awaiting approval. The report in Annex 1 was done against the new indicators and the original logframe together with the newly proposed logframe can both be found in Annex 2.

3.1 Progress in carrying out project Activities

1. Marine species health index guidelines established to support the development of partners conservation priorities and UKOTs conservation policy

1.1 Sign a memorandum of understanding with all the OTs involved.

Signed by all partners with the new Project Lead institution.

1.2 Train field staff to maintain camera network and fly drone safely and legally.

At least one field staff per territory has been trained.

1.3 Run timelapse camera over selected species and sites for at least 2 consecutive years.

Ongoing for all territories but Gibraltar due to delay with landowner.

1.4 Conduct a drone survey over each species colonies for at least 2 consecutive years.

In progress as per timeline.

1.5 Historical records collected and processed.

Historical records collected. To be processed in Y3Q1&2.

1.6 Project data processed via citizen science platforms (i.e., Penguin Watch, Seabird Watch).

Y3.

1.7 Raw and processed data (including distribution maps) uploaded on data portal and existing repositories.

Y3.

1.8 Health index guidelines agreed among UKOT partners.

To be refined in Y3 following preliminary discussions in Y1&2.

1.9 Peer reviewed publications submitted for review (minimum of two publications during the lifespan of the project).

Y3.

1.10 Research brief sent to key stakeholders for each significant project findings.

Y3.

1.11 Conduct comprehensive reviews of OT conservation strategy and legislations.

Y3.

1.12 Conduct interviews with partner organisations.

Informal interviews conducted in Y1&Y2 and formal interviews to be conducted in Y3.

2. Artificial Intelligence (AI) tool development for data processing to speed up access to evidence made accessible in the time frame of the project

2.1 Finalise the coding and testing of the AI recognition algorithm on Seabird Watch existing data for macaroni and rockhopper penguins as well as shags, cormorants, and boobies.

Coding of AI finalised. Testing to occur in Y3. Following preliminary testing, we will likely be able to also include sooty tern in the testing. We have bought a fast workstation to process images off separate funding.

2.2 Code and start testing a new recognition algorithm during the first two years of the project.

In progress.

2.3 Challenging project data processed using the algorithm to refine its training.

Y3, and possibly if no-cost data extension is obtained.

2.4 Produce progress reports to interested UKOT partners.

Y3.

2.5 Sign a data agreement with partners.

Signed as part of the memorandum of agreement signed in 2023 by all partners.

3. Online open access web portal to fill critical knowledge gaps in UKOT and improve policymakers access to marine health research evidence

3.1 Discuss UKOT gaps and evidence needed to agree on portal requirements.

Informal discussion with each territory has occurred in Y1&2 and formal feedback on portal design will be obtained in Y3Q1 for refinements.

3.2 Write and publish a R package for data access.

R package written, to be published in Y3Q2.

3.3 Design a front-end and application mapping tools back-end for data entry tools (i.e., portal).

In progress.

3.4 Publish and promote an online database for UKOT marine monitoring data to key stakeholders (i.e., governments, conservation NGOs, researchers, and relevant fishing and tourism industry stakeholders).

Y3.

3.5 Conduct user and prospective user surveys.

Y3 and possible repeat in no-cost extension year if obtained.

4. Establish a cross-UKOTs network aimed at facilitating knowledge exchange, cross-training and lowering barriers to marine predator conservation

4.1 Host a series of training workshops (yearly) to identify needs, train the trainers locally (e.g., drone use, set up and maintenance of camera network) and, for year 3, define the mechanisms for knowledge exchange between participating partners and project continuation beyond the Darwin Plus grant.

Series of training has been organised during project lead visits on each territory. We aim to host a series of online training in Y3 for data processing and analysis.

For knowledge exchange mechanisms and continuation, this will be discussed as part of an online workshop organised in Y3 with all partners present.

4.2 Make training resources freely available on the project portal.

In progress. An engagement website is to be released by the Project lead team by the end of May 2024 and this will include a portal to access training resources. Those materials have also been provided during training sessions to each territory.

4.3 Collect updates, success and failures and write a yearly report on the OTs involvement in the project. This report will inform the adaptation of the project strategy from year to year based on lessons learned.

Darwin Plus Annual Report Y2.

4.4 Host regular partner meetings and publish progress reports.

We have been regularly hosting partner meetings, however, the only progress reports are the one required by BCF due to time constraints to produce additional reports.

4.5 Draft network marine monitoring strategy with project partners and present at the UKOTCF conference.

Y3.

3.2 Progress towards project Outputs

1. Marine species health index guidelines established to support the development of partners conservation priorities and UKOTs conservation policy

Limited- we have been working on this, but need more data and co-development of the data portal.

2. Artificial Intelligence (AI) tool development for data processing to speed up access to evidence made accessible in the time frame of the project

Good- coding and preliminary testing on new species is getting positive results. We will refine with more data and this is also required to assess the false positive and false negative rates. We are also working on how to make this user-friendly as for Ascension, Montserrat and the Falklands, we may be able to train up local partners and deploy it in-country.

3. Online open access web portal to fill critical knowledge gaps in UKOT and improve policymakers access to marine health research evidence

In progress, the R package is written, there is a draft version ready but Grant Humphries is waiting for more data.

4. Establish a cross-UKOTs network aimed at facilitating knowledge exchange, cross-training and lowering barriers to marine predator conservation

Due to delays, network priorities to be established in Y3 and presented at the next UKOTCF conference.

3.3 Progress towards the project Outcome

Outcome - Produce a field-to-policymaker evidence pipeline enabling UKOT governments and stakeholders to obtain near-real time evidence (local and regional) on marine population trends and reduce monitoring cost.

- The pipeline is being refined during Y2 and 3 with some delays in camera network deployments. However, it is already showing results with two protected areas being extended in Ascension and in SGSSI in part using evidence collected during this project.
- At least one staff per territory has been trained for data collection (drone and cameras) and most of the equipment required has already been provided. This will reduce monitoring costs for territories by moving from manual counts and no phenology monitoring to a semi-automatised network functioning year-round.

- Moving forward, data collection will be standardised and consistent over years for those 6 UKOTs and the data will feed into regional study (via Penguin Watch and Seabird Watch aggregations) and local policy (via data portal being developed).

3.4 Monitoring of assumptions

Assumptions (evidence in annex 4):

1. Industry stakeholders and local management agencies are amenable to incorporating the evidence into their conservation strategies and policy.
    a. Comments: Holds true. See new letters of support.
2. Additional evidence available sufficiently improved OTs conservation management capacity to benefit marine predator populations.
    a. Comments: Still likely holds true particularly in Ascension and SGSSI where new areas have received protection this year (see logframe for Letterbox NNR on Ascension and South Georgia and South Sandwich Islands MPA.
3. There is government support for enacting new conservation regulations.
    a. Comments: Montserrat is working on joining Blue Belt, SGSSI is continuing working with us for the review of their protected areas and Ascension for their nature reserve. Gibraltar is engaged in submitting proposal to their government for knowledge gathering on new species (i.e., European shag). Tom Hart, together with partner BAS, has been invited to present evidence on the state of Antarctica's biodiversity for the UK Parliament. We are now working on lobbying the Falklands Government, with our partner, Falklands Conservation.
4. Involved policymakers will use the output 3 to inform their decision-making process.
    a. Comments: To be evaluated in Year 3.
5. Sufficient data collected for the aggregated evidence to be representative of the key project species populations health.
    a. Comments: This holds true for at least part of the species. We are attempting to speed up deployment and considering a no-cost extension to address this challenge.
6. Partners able to provide access to historical records.
    a. Comments: All have provided historical data when available.
7. Sufficient data collected to train the computer vision tool for the project species.
    a. Comments: This holds true though some of the newer species/environment may need more years of data to strengthen the algorithms.
8. Existing algorithm works on morphologically similar species with no significant training.
    a. Comments: Partially tested and holds true. More work in progress.
9. Continued support from local management agencies and industry stakeholders.
    a. Comments: See latest letters of support. In SGSSI, the Falklands and the Antarctica Peninsula, we have long-term relationships with the partners and those have shown continued support for over a decade.
10. No technical challenges delay the development of the database.
    a. Comments: We have experienced delays in the development of the database. We are reliant on a consultant with limited availability and communication issues. We are setting up regular meetings to try and address this issue.
11. Partners and key stakeholders perceive the value of using the database and agree to support the development and testing of the platform.
    a. Comments: We are in the process of testing the database and all partners have provided data for the beta test.
12. Partners and users are aligned in terms of portal requirements.
    a. Comments: To be discussed at a review meeting in Y3Q1.
13. Selection and retention of qualified staff (i.e., trainer) among member organisations.
    a. Comments: This is one of our main challenges, particularly at leadership level. So far, our partners have remained engaged and the staff trained is still in position.

14. Practitioners see value in attending and willing to connect and share experience with other territories on seabird monitoring and marine conservation.
    a. Comments: This will be discussed at a project wide meeting in Y3.
15. More UKOT governments are willing to explore the monitoring method and join the network to develop a UKOT-wide Marine Monitoring Strategy and Network (supported by successful project results).
    a. Comments: St Helena has expressed interest in deploying cameras. We aim to reach more territories when presenting our results and the UKOT MMS at the next UKOTCF International Conference.

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

As part of our Darwin Plus project, we have already contributed to UKOTs strategic long-term outcomes and the environment:

- MPA extension in South Georgia: Evidence collected as part of the project was presented by Dr Tom Hart (Project Lead) as part of his role on the South Georgia and South Sandwich Islands Marine Protected Area review committee which contributed to the agreed extension announced by the Government in February 2024. Presentation of the state of Antarctica to the UK Parliament.
- MPA extension on Ascension Island: Evidence processed as part of the project was presented by our local partner to review Ascension Natural Reserve and include the newly identified masked boobies (*Sula dactylatra*) breeding ground. This proposal was successful.
- New species breeding record for Montserrat: Montserrat historical records are patchy and low, partially due to the records lost during the last volcanic eruption which destroyed the island's capital. As such, knowledge of seabird populations on the island is very limited. However, during our last field trip in Spring 2023, the project lead, Dr Tom Hart and the local team of the Department of the Environment confirmed the presence of a least tern breeding colony on Trant site. This represents the first official record of the species successfully breeding on Montserrat Island and we aim to support our local partner in submitting a short publication on species range extension for the least tern (*Sternula antillarum*).

5. Gender Equality and Social Inclusion (GESI)

Please quantify the proportion of women on the Project Board[1].	The core project team is composed of one man and one woman while the core team inclusive of partner representatives includes three men and seven women.
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].	At least 80% of project partners are led by women in senior leadership positions.

[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.

GESI Scale	Description	Put X where you think your project is on the scale
Not yet sensitive	The GESI context may have been considered but the project isn't quite meeting the requirements of a 'sensitive' approach	
Sensitive	The GESI context has been considered and project activities take this into account in their design and implementation. The project addresses basic needs and vulnerabilities of women and marginalised groups and the project will not contribute to or create further inequalities.	
Empowering	The project has all the characteristics of a 'sensitive' approach whilst also increasing equal access to assets, resources and capabilities for women and marginalised groups	x
Transformative	The project has all the characteristics of an 'empowering' approach whilst also addressing unequal power relationships and seeking institutional and societal change	

6. Monitoring and evaluation

There have been no substantial changes from the proposal. The outputs and activities are succeeding other than we note we still need to catch-up from Y1 delays in:

1. Developing the data portal and launching it online.
2. Training and buy-in in the Falkland Islands is a work in progress.
3. Data capture following fieldwork on Ascension.
4. Camera deployment in Gibraltar due to local staff overcommitted and having to seek landowner permissions.

The M&E plan is reported in the logframe - M&E is largely the responsibility of Oxford Brookes as this is otherwise a substantial burden for the partners. We request evidence against the log frame in each of our meetings and all partners are offered to provide feedback on logframe updates and reports.

7. Lessons learnt

Being physically present on the site usually speeds up significantly the progress for the deployment of the camera and needed networking for project implementation. Due to limited resources, this is not always possible. One patch for this is meetings as regular as possible and WhatsApp groups with key stakeholders.

If we had to do this project again, we would simplify the objectives to make it easier to report. What the partners want is now very clear but it is not necessarily will suited for Darwin Plus reporting logframe and possibly split the project into two as we have a two-speed project at this point with 3 territories which have an existing monitoring network where we focus on transferring/sharing ownership and 3 new territories where we are still at the deployment stage with very limited data available.

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

In response to reviews, we have met with NIRAS staff and identified the need to submit a change request updating our logframe. As we learn more about our territories' needs,

challenges and seabird populations threats, we are adapting our focus and implementation strategy. To inform BCF, we have updated the logframe accordingly and submitted a change request in May 2024 as agreed with NIRAS staff and following reviewers feedback as well as project preliminary results. All partners have been invited to provide feedback on the updated logframe prior to submission and no concern was raised.

9. Risk Management

Avian Flu has arisen as a risk across the Falklands, South Georgia, the South Sandwich Islands and Antarctic Peninsula. We have been anticipating this risk and working with GSGSSI, the Antarctic Treaty and IAATO to mitigate risks. While Avian Flu (H5N1) has proven highly impactful for flying seabirds and penguins worldwide, so far it has not resulted in high mortality rates in Antarctic penguins. We are seeing large mortality in elephant seals in South Georgia and working on censuses to give to GSGSSI and IAATO before next season.

> Dewar, M., Wille, M., Gamble, A., Vanstreels, R. E. T., Bouliner, T., Smith, A., Varsani, A., Ratcliffe, N., Black, J., Lynnes, A., Barbosa, A. & Hart, T. (2023) The Risk of Avian Influenza in the Southern Ocean: A practical guide for operators interacting with wildlife. *Antarctic Science* https://doi.org/10.1017/S0954102023000342

This has resulted in relatively small changes to the project though we have greatly enhanced biosecurity and provided appropriate training to our field staff. We have still been able to reach the cameras in the Southern Ocean and fly the drones. The drone surveys are unaffected by restrictions as we can usually fly these from small boats without landing.

10. Sustainability and legacy

The St Helena Government, which we have met in Oxford with our Ascension Island partners, has expressed interest in joining the monitoring network. We have also been in discussion with BTO JNCC for the opportunity to add UKOT seabird phenology and counts to their Seabird Monitoring Network website. Finally, all partners have expressed interest in continuing their involvement and the development of the seabird monitoring network beyond the lifespan of this Darwin Plus project.

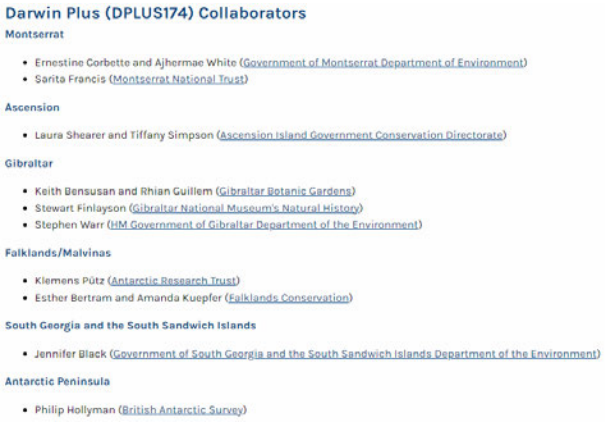
As the project implementation advanced, we have identified delays due to partner and project coordination team limited time, delays in fieldwork due to weather conditions or predations, issues with tech development (image download on long-range cameras). As such, we anticipate asking for a year extension with no financial support to give us the appropriate time to collect enough data to deliver on all outputs. This has been preliminary discussed and agreed with all involved partners.

11. Darwin Plus identity

The Darwin Plus funding forms part of a larger programme consisting of two research projects, Penguin Watch and Seabird Watch. Darwin Plus is recognised on both websites, particularly on Seabird Watch as a new funder. Darwin Plus is also a new funder for Montserrat and Gibraltar,

and we have thrived to encourage both territories to apply to further grants within the Biodiversity Challenge Funds including Darwin Plus Local.

Finally, we are working on an external facing platform to communicate our research and



impacts with citizen scientists, policymakers, and a broader audience. This platform will be fully available online in May 2024 and Darwin Plus support of our research clearly publicised. While we do have social media platforms (X and Instagram) neither are regularly updated due to time constraints of the Project Lead and Project Coordinator so little publicity has been done there.

12. Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?		No
Have any concerns been reported in the past 12 months		No
Does your project have a Safeguarding focal point?	No	
Has the focal point attended any formal training in the last 12 months?	N/A	
What proportion (and number) of project staff have received formal training on Safeguarding?		Past: 50% [and number] 1 staff member, though the other staff has received mental health training and both staff have received wilderness first aid training every other year. Planned: 100% for first air and mental health in the next twelve months.
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		

Does the project have any developments or activities planned around Safeguarding in the coming 12 months? If so please specify. No
Please describe any community sensitisation that has taken place over the past 12 months; include topics covered and number of participants. None
Have there been any concerns around Health, Safety and Security of your project over the past year? If yes, please outline how this was resolved. None. The project aims to have a safe working environment and we aim for all fieldwork planned as part of our research to be compliant with BS 8848 which sets standards to minimise the risks of adventure travel (self-assessment for which we received a trust award in 2022). Furthermore, we always work in pairs in the field to reduce risks and at least one member of each team must have first aid training.

13. Project expenditure

- **Table 1: Project expenditure <u>during the reporting period</u> (1 April 2023 – 31 March 2024)**

Project spend (indicative) in this financial year	2023/24 D+ Grant (£)	2024/25 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs	[redacted]			When transferring the grant to the Project Lead new institution, a financial change request was submitted (December 2022) which included adding a day a week for the Project Coordinator to account for new commitment for the Project Lead. It was identified in September 2023 that this extra day was not accounted for in the salary of the Project Coordinator which is why there is an underspend on this budget line.
Consultancy costs				-
Overhead Costs				No variation
Travel and subsistence				Variation in this category is due to differences between original quoted prices and actual expenses two years on.
Operating Costs				Variation in this category is due to differences between original quoted prices and actual expenses two years on.
Capital items				-
Others (Please specify)	[redacted]			Variation in this category is due to differences between original quoted prices and actual expenses two years on.
TOTAL	**129133**	**123293**	**-5%**	

Table 2: Project mobilised or matched funding during the reporting period (1 April 2023 – 31 March 2024)

	Secured to date	Expected by end of project	Sources
Matched funding leveraged by the partners to deliver the project (£)	[redacted]		Save Our Seas Foundation Quark Expeditions DPR11S2_1004
Total additional finance mobilised for new activities occurring outside of the project, building on evidence, best practices and the project (£)			Private donations, tour operator donations, other grants from foundation and government

14. Other comments on progress not covered elsewhere

As the project is advancing, we are refining the methods and focus of the project based on early learning. This is particularly valid for the three new territories for our methods (Ascension, Montserrat and Gibraltar), due to the lack of historical data and/or new discovery and challenges for our methods linked to new climate, species and terrain. For example, in Montserrat, we have identified on Y1, that rats and cats appear to be a major disruption for breeding success and have become a focus of our effort. We are working closely with both partners on the island to secure further grants (as an exit strategy/continuation project) to support seabird monitoring and conservation in Montserrat. On all three territories, it took field visits to appropriately assess challenges and solutions and develop strong relationships with local partners and local authorities. We are confident that with those strong bases, we can deliver on the project outputs.

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

I agree for the Biodiversity Challenge Funds to edit and use the following for various promotional purposes (please leave this line in to indicate your agreement to use any material you provide here).

File Type (Image / Video / Graphic)	File Name or File Location	Caption including description, country and credit	Social media accounts and websites to be tagged (leave blank if none)	Consent of subjects received (delete as necessary)
Image	DPLUS174 DPR10S2_1020_Gibraltar Botanic Gardens drone survey training_Sept 23_Laure Cugniere	x	@alameda_gardens @seabird_watch @oxford_brookes	Yes
Image	DPLUS174 DPR10S2_1020_Gorham's Cave where the first Gibraltar camera will be placed to monitor yellow-legged gulls_Sept 23_Laure Cugniere	x	@alameda_gardens @GibraltarMuseum @seabird_watch @oxford_brookes	Yes
Image	DPLUS174 DPR10S2_1020_Timelapse Systems long-range camera deployment to monitor frigate birds and tropicbirds on Montserrat_May 23_Laure Cugniere	x	@MontserratGovUK @timelapsefilms @seabird_watch @oxford_brookes	Yes
Image	DPLUS174 DPR10S2_1020_Red-billed tropicbird monitoring using Reconyx timelapse camera_Montserra	x	@MontserratGovUK @seabird_watch	Yes

	t May 23_Laure Cugniere		@oxford_brookes	
Image	DPLUS174 DPR10S2_Penguin Watch fieldwork season team meeting in Ushuaia 2023-24_Tom Hart	x	@BAS_News @FI_Conservation @GovSGSSI @seabird_watch @oxford_brookes	Yes
Image	DPLUS174 DPR10S2_Penguin Watch camera overlooking chinstrap in South Shetland Islands_Jan 24_Tom Hart	x	@BAS_News @seabird_watch @oxford_brookes	Yes
Image	DPLUS174 DPR10S2_Antarctica_Penguin Watch fieldwork season 2023-24_Tom Hart	x	@BAS_News @FI_Conservation @GovSGSSI @seabird_watch @oxford_brookes	Yes
Image	DPLUS174 DPR10S2_First recorded evidence of cat predation on Montserrat seabirds_image_2023-24_Government of Montserrat	x	@MontserratGovUK @seabird_watch @oxford_brookes	Yes
Video	DPLUS174 DPR10S2_First recorded evidence of cat predation on Montserrat seabirds_video_2023-24_Government of Montserrat	X	@MontserratGovUK @seabird_watch @oxford_brookes	Yes

- **Annex 1: Report of progress and achievements against logframe for Financial Year 2023-2024**

Project summary	Progress and Achievements April 2023 - March 2024	Actions required/planned for next period
Impact A cost-effective approach to building UKOTs capacity and support network to enhance marine species conservation	Additional marine areas have been protected in Ascension and SGSSI in part thanks to evidence collected during this project. See details and evidence below.	
Outcome Produce a field-to-policymaker evidence pipeline enabling UKOT governments and stakeholders to obtain near-real time evidence (local and regional) on marine population trends and reduce monitoring cost		
Outcome indicator 0.1. By project end, all 6 UKOTs involved have revised their marine conservation strategy to reflect the findings of the project (measured through a decision-makers survey).	**Proposed update to the outcome indicator 0.1 in change request submitted in April 2024:** 0.1 By project end, all 6 UKOTs involved have revised their marine conservation strategy to reflect the findings of the project (measured through a decision-makers survey). **Evidence in Annex 2.** Historical data, though limited, has been collected from **Montserrat, and Gibraltar**. This will be analysed to provide a baseline and discuss numbers compared to the territories' priorities to work on management strategy updates. A discussion has been started with **Montserrat's** Department of Agriculture (marine) and the Department of the Environment (terrestrial) to work on the designation of a marine protected area and for the UKOT to join the Blue Belt. **No evidence provided; this has been informal discussions including at the Blue Belt meeting in London.** We are working with our **Gibraltar** partner on submitting a monitoring proposal for the European shag of Gibraltar. We may conduct genetic tests to determine the subspecies. The pairs breeding on the island breed in small cavities on sheer cliffs so we will also need to set up a specific monitoring system with the help of rock climbers to deploy and service them. The proposal is to be sent to the Minister of the Environment for consideration. **Evidence in Annex 4.** **Ascension** has extended one of its natural reserves following a collaboration on masked booby dataset. Our	**Montserrat** • Set up a meeting with the Department of Agriculture and the Department of the Environment to discuss the designation of a small Marine Protected Area. • Discussion on continuation funding and predator control grant proposal. • Drafting of an updated seabird management strategy based on baseline and project evidence. **Gibraltar** • Submission of the European shag proposal as a legacy of this project. • Drafting of an updated seabird management strategy based on

	project came in support of the territory's effort providing supporting evidence. **Evidence in Annex 4.** **South Georgia and the South Sandwich Islands (SGSSI)** has extended its existing MPA, in part using evidence provided from this project. **Evidence in Annex 4.** The **Falkland Islands** The project lead has provided evidence to the UK Parliament en the state of the **Antarctic Peninsula** biodiversity in January 2024. **Evidence in Annex 4.**	baseline and project evidence. **Ascension** ● Train local partners on drones, cameras, determine historic data types and capture this into a data portal. **SGSSI** ● Project lead will continue to work closely with the SGSSI Government to feed the data collected during this project into the Marine Protected Area and Terrestrial Protected Area reviews (5-year cycle). **Falklands** ● Train local partners in drones and set up local resources for stitching and counting images. **Antarctic Peninsula** ● Data presented to key stakeholders including IAATO, the Commission for the Conservation of Antarctic Marine Living Resources and the Antarctic Treaty Committee.

Outcome indicator 0.2. By project end, at least 66% of involved OTs have publicly committed to maintaining the camera network.	To date, all partners have signed our Memorandum of Agreement confirming their involvement in the project and expressed interest in maintaining the network and our relationship beyond the lifespan of this grant. **Evidence in Annex 4.**	● Set up a continuation agreement for all partners interested in maintaining the network by project end.
Outcome indicator 0.3. By project end, 10% more key marine species habitat receives adequate legal protection (compared to Y1 baseline).	○ **Proposed update to the outcome indicator 0.3 in change request submitted in April 2024:** 0.3 By project end, at least one year worth of monitoring data has been analysed in partnership with the UKOTs involved. **Evidence in Annex 2.** SGSSI and Ascension have both increased the protection of their target species by expanding their marine protected areas during the Y2 of our project. **Evidence in Annex 4.** Montserrat is having high-level negotiation to designate their first marine protected areas. **Evidence in Annex 4.**	● Continue data collection to identify possible gaps in habitat protection for key species on all 6 territories. ● Formally present evidence to high-level stakeholders.
Output 1 Marine species health index guidelines established to support the development of partners conservation priorities and UKOTs conservation policy		
● Output indicator 1.1. Three to five colonies per UKOT are monitored consistently and population health determined using historical records available through partners (baseline) and project data (yearly from Y1).	**Proposed update to the outcome indicator 1.1 in change request submitted in April 2024:** 1.1. Three to five seabird colonies per UKOT are being monitored year-round (baseline) and project data (yearly from Y1)**. Evidence in Annex 2.** Historical records collected for **Gibraltar** and **Montserrat**, already available for the **Falklands, the Antarctic Peninsula and SGSSI**. For **Ascension**, part of the information has already been received and more will be discussed at our visit in May 2024. **No evidence provided at this stage.** **Existing monitoring network has been serviced in Dec 23-Jan 24:** ● 5 colonies monitored in the Falklands ● 15 colonies monitored in SGSSI	● Camera placement will be reviewed based on the first dataset. ● Historical data to be analysed with the support of Project Coordinator and Oxford Brookes students (in partnership with local partners interested in data analysis training). ● More cameras to be deployed on Ascension, Gibraltar and Montserrat.

	● 45 colonies monitored on the Antarctic Peninsula **Montserrat** ● 1 long-range camera has been deployed in Montserrat in 2023 (frigate bird, tropicbird site). ● A second long-range camera and a dozen timelapse cameras are to be deployed in spring 2024. **Ascension** ● 2 long-range cameras to be deployed in May 2024. **Gibraltar** ● The cameras and poles have been provided and discussion with the National Museum has started to position the cameras on their sites (where the gulls breed). Drone data collected for one year on all territories.	● Drone dataset to be analysed. ● Drone data collected in 2024-25. In **Ascension, Gibraltar, and Montserrat**, timelapse camera monitoring is starting to be deployed in April-June 2024. ● We will also explore the possibility of monitoring sea turtles and sooty terns during our visit in May 2024 (using timelapse cameras). ● Gibraltar has four timelapse cameras on territory to be deployed as soon as possible in partnership with Gibraltar National Museum (on heritage sites). We will also explore the possibility to monitor the cavity in which the shag breeds and attempt to obtain permission to use rock climbers for exploration and deployment. ● Montserrat is set to receive an additional timelapse camera to place one camera on each tropicbird nest (cavity) rather than one camera per nesting site. This will allow for high

		granularity of the data and to monitor predation.
Output indicator 1.2. Population trends for two to five species per territory extrapolated from data collected and historical records by Y3.	1.2. Population trends (i.e., health) for at least two species per territory extrapolated from data collected and historical records by Y3. In progress. Data is still being collected and processed.	● Dataset to be analysed with the support of Project Coordinator and Oxford Brookes students (in partnership with local partners interested in data analysis training). ● Publications for regional trends submitted. ● Data uploaded on an online data portal.
Output indicator 1.3. Participating UKOT governments and conservation organisations partners involved perceive value in species health index	**Proposed update to the outcome indicator 1.3 in change request submitted in April 2024:** 1.3. Number of local staff trained (train the trainer) to adopt data collection and data processing by Y3. **Evidence in Annex 2.** **Overall evidence presented in annex 4 with letters of support.** **Ascension** ● Laura Shearer from Ascension Government has received training in camera maintenance, data processing (drone imagery) and drone survey for seabirds. A computer has been sent to be used on the island for data processing and storage. We have also provided them with a drone. **Montserrat** ● Ajhermea White and Stephon Dixon from the Department of the Environment have received camera maintenance, and drone survey for seabirds training. We have also provided them with a drone. **Gibraltar**	We aim to host a series of online training for data processing and analysis (camera and drone imagery) by the end of Y3 with all partners. **Ascension** ● Letters of support post visit **Montserrat** ● Letters of support after data portal live **Gibraltar** ● Keith Bensusan and Rhian Guillem are to take their pilot certification exam in June 2024. With this, they will be able to conduct the drone

	● Keith Bensusan and Rhian Guillem from Gibraltar Botanic Gardens have received camera maintenance and drone survey for seabirds training. We have also provided them with a drone and following discussion with civil aviation and the government, it was decided that they would be added to the drone permit and insurance of the government for this work. **Antarctic Peninsula** ● Our original partner, Phil Hollyman has moved on from his position at BAS and was recently replaced by Ashley Bennison. We are in the process of discussing her involvement with Ashley. Due to this transition, Jasmine Lee, Research Fellow at BAS joined us during our fieldwork and has been trained in camera maintenance. **Falklands** ● We are in regular contact with our partner but we need to spend some dedicated time training in Yr 3. **SGSSI** ● This has already fed into TPA and MPA review.	survey on the island themselves. **Antarctic Peninsula** ● Ashley Bennison will be offered training in drone survey, camera maintenance and data analysis. **Falklands** ● We need to spend a week in the Falklands prior to next season training local partners and to capture data. **SGSSI** ● Letter of support towards the conclusion of the project.
Output 2. Artificial Intelligence (AI) tool development for data processing to speed up access to evidence made accessible in the time frame of the project		
Output indicator 2.1. Computer vision algorithm fully trained for shags, cormorants, and boobies by Y2 using existing Seabird Watch algorithm.	**Proposed to merge the two original outcome indicator 2.1 and 2.2 in change request submitted in April 2024:** 2.1. Computer vision algorithm fully trained for macaroni and rockhopper penguins, shags, and cormorants, as well as boobies by end of project using existing Seabird Watch algorithm. **Evidence in Annex 2.** Computer vision algorithm identifying flying seabird species fully functional and tested on kittiwakes. Computer vision algorithm for gentoo, Adelie and chinstrap penguins functional and being transferred into Python to ease data analysis.	● Flying seabird algorithm test on sooty tern, gulls, tropicbirds, and frigatebird using drone data collected in 2023-24. ● Penguin algorithm test on boobies, shags and rockhopper penguins using drone data collected in 2023-24 and existing long-term dataset for rockhopper

		penguins and Antarctic shags.
Output indicator 2.2. Computer vision algorithm for Sooty terns 50% developed by Y3.	- **(proposed to merge with 2.1)**	-
Output 3. Online open access web portal to fill critical knowledge gaps in UKOT and improve policymakers access to marine health research evidence		
Output indicator 3.1. Creation of an R package for data access within 6 months of project start.	R package drafted. **Evidence in Annex 4.**	● R package to be refined based on the first test.
Output indicator 3.2. Portal requirements defined (Y1) and portal designed (Y2).	**Proposed update to outcome indicator 3.2 in change request submitted in April 2024:** 3.2. Portal is online after going through developer testing and partners beta test feedback by Q1Y3. **Evidence in Annex 2.** In progress with some delays due to delays in data collecting for camera imagery.	● Beta test in Spring 2024 with all partners providing feedback. ● Launch and promotion before year end.
Output indicator 3.3. Database complete (i.e., web application accessible and data migrated to online location) by end of Y2 and a minimum of 6000 images per site per species uploaded plus aerial survey (complete stitched survey) each year.	**Proposed update to outcome indicator 3.3 in change request submitted in April 2024:** 3.3. Database complete (i.e., web application accessible and data migrated to online location) by end of Y2 and at least one breeding season worth of analysed data uploaded for each site (including aerial survey stitches). **Evidence in Annex 2.** In progress for **Ascension, Antarctic Peninsula, Falklands, SGSSI and partially for Montserrat**. Due to delays in deployment of the cameras on **Gibraltar and Montserrat**, this will likely not be achieved by the end of the project. We aim to ask for a no-cost extension at the end of Y3 to fulfil this output indicator.	● Upload data for SGSSI, Falklands, Antarctic Peninsula and Ascension and partially for Montserrat. ● Ask for a no-cost extension to fulfil this output indicator for Montserrat and Gibraltar.
Output 4 Establish a cross-UKOTs network aimed at facilitating knowledge exchange, cross-training and lowering barriers to marine predator conservation		
Output indicator 4.1. Network established on Y1 with at least one member from OT Government and one field staff representing each of the territory (key contact selected at workshop 1).	**Proposed update to outcome indicator 4.1 in change request submitted in April 2024:** 4.1. Establish network priorities and initiate capacity building (train the trainer for fieldwork) with partners and key stakeholders (Y1 and Y2 implementation) with at least one field staff per territory partner trained to fly drones and service cameras by Y1. No	● Network priorities to be established in Y3 and presented at the next UKOTCF conference.

	staff of any of the 6 territories had appropriate skills when starting the project. **Capacity building has been initiated and at least one field staff per territory partner has been trained to fly drones and service cameras. Evidence in Annex 4.**	
Output indicator 4.2. Yearly workshop to establish priorities and initiate capacity building (field training) conducted with partners and key stakeholders (from Y1).	**Proposed update/merge to outcome indicator 4.2 in change request submitted in April 2024:** 4.2. Network established on Y3 to ensure continuity of knowledge exchange and support with at least one member from OT Government and/or one field staff representing each of the territories (key contact selected on Y3 based on involvement). Until Y3, workshops have in fact been territory specific due to the disparity in local knowledge, challenges, and capacity available. There have been some instances of knowledge exchange among partners with Ascension providing feedback and key contacts on predator control projects for Montserrat for example. **Evidence in Annex 4.**	Set up a network to facilitate knowledge exchange and terms of references.
Output indicator 4.3. Marine monitoring included in updated UKOT Conservation Strategy by project end.	**Proposed update/merge to outcome indicator 4.3/4.5 in change request submitted in April 2024:** 4.3. Network-wide Marine Monitoring Strategy (MMS) drafted with project partners (Y3) and presented at the next UKOTCF (supported by project outcomes as evidence of cost-effective monitoring).	● Gibraltar partner Keith Bensusan to introduce the UKOTCF committee to the project team to start the discussion process for the MMS draft. ● MMS draft with all partners and publications on project partners websites and UKOTCF. ● MMS to be formally presented at UKOTCF next international conference.
Output indicator 4.4. At least one field staff per territory is trained to fly drones and service cameras by Y1	**- (proposed to merge with 1.3)**	**-**

Output indicator 4.5. UKOTs-wide Marine Monitoring Strategy drafted by project steering committee (Y3) to start a new discussion with all UKOT government about the pertinence of marine monitoring for conservation policy (supported by project outcomes).	**- (proposed to merge with 4.3)**	**-**

-

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

A change request has been submitted in April 2024 to NIRAS following reviewers feedback and discussions with NIRAS (Sally Coles and James Kinghorn) on the best-suited process for a project with adaptive strategy. We are waiting to hear the results. The new logframe can be found below and the original logframe as submitted in the application just after.

Logframe as submitted in the April 2024 change request to account for reviewers feedback and early learning from project implementation

Project summary	SMART Indicators	Means of verification	Important Assumptions
Impact: A cost-effective approach to building UKOTs capacity and support network to enhance marine species conservation			
Outcome: Produce a field-to-policymaker evidence pipeline enabling UKOT governments and stakeholders to obtain near-real time evidence (local and regional) on marine population trends and reduce monitoring cost	0.1 By project end, all 6 UKOTs involved have revised their marine conservation strategy to reflect the findings of the project (measured through a decision-makers survey). 0.2 By project end, at least 66% of involved OTs have publicly committed to maintaining the camera network. 0.3 By project end, at least one year worth of monitoring data has been analysed in partnership with the UKOTs involved.	0.1 Comprehensive review of the latest version of the Marine Conservation Strategy of each participating OT. 0.2 Interview of partners and Overseas Territories government (baseline at the beginning of the project and again by project end). 0.3 Produced evidence uploaded to output 3.	Industry stakeholders and local management agencies are amenable to incorporating the evidence into their conservation strategies and policy. Additional evidence available sufficiently improved OTs conservation management capacity to benefit marine predator populations. There is government support for enacting new conservation regulations.

Project summary	SMART Indicators	Means of verification	Important Assumptions
			Involved policymakers will use the output 3 to inform their decision-making process.
Output 1 Marine species health index guidelines established to support the development of partners conservation priorities and UKOTs conservation policy	1.1 Three to five seabird colonies per UKOT are being monitored year-round (baseline) and project data (yearly from Y1). 1.2 Population trends (i.e., health) for at least two species per territory extrapolated from data collected and historical records by Y3. 1.3 Number of local staff trained (train the trainer) to adopt data collection and data processing by Y3.	1.1 a) Baseline and at least one breeding season worth of monitoring data collected (i.e., colony distribution maps counts and raw) processed and data freely available on project evidence portal and known repositories like MAPPPD, UK Polar Data Centre, Montserrat Data Centre and IMS-GIS Data Centre. 1.1 b) Health index methodology made available online. 1.2 a) Peer reviewed publications (minimum 2) produced alongside local authors made available online. 1.2 b) Research briefs summarising the methodology and evidence send to the relevant UKOT Governments staff. 1.3 a) Guidelines on training workshops for the trained trainer made available by Y3 to all territories.	Sufficient data collected for the aggregated evidence to be representative of the key project species populations health. Partners able to provide access to historical records.

Project summary	SMART Indicators	Means of verification	Important Assumptions
		1.3 b) Training workshops report with attendance numbers by end of Y3.	
Output 2 Artificial Intelligence (AI) tool development for data processing to speed up access to evidence made accessible in the time frame of the project	2.1 Computer vision algorithm fully trained for macaroni and rockhopper penguins, shags, and cormorants, as well as boobies by end of project using existing Seabird Watch algorithm.	2.1 AI data processing tool made available to OT Governments and practitioners to speed up use of evidence from the field and challenging data processed through this tool. Progress report to steering committee.	Sufficient data collected to train the computer vision tool for the project species. Existing algorithm works on morphologically similar species with no significant training.
Output 3 Online open access web portal to fill critical knowledge gaps in UKOT and improve policymakers access to marine health research evidence	3.1 Creation of an R package for data access within 6 months of project start. 3.2 Portal is online after going through developer testing and partners beta test feedback by Q1Y3. 3.3 Database complete (i.e., web application accessible and data migrated to online location) by end of Y2 and at least one breeding season worth of analysed data uploaded for each site (including aerial survey stitches).	3.1 Open access publication of R package in The Comprehensive R Archive Network (CRAN). 3.2 a) Partner workshop feedback. 3.2 b) Link to functional open access web portal promoted to relevant stakeholders on partner websites. 3.3 a) Portal visitation statistics and number of downloads of research briefs. 3.3 b) Data collected during the lifespan of the project uploaded on the portal.	Continued support from local management agencies and industry stakeholders. No technical challenges delay the development of the database. Partners and key stakeholders perceive the value of using the database and agree to support the development and testing of the platform. Partners and users are aligned in term of portal requirements.

Project summary	SMART Indicators	Means of verification	Important Assumptions
Output 4 Establish a cross-UKOTs network aimed at facilitating knowledge exchange, cross-training and lowering barriers to marine predator conservation	4.1 Establish network priorities and initiate capacity building (train the trainer for fieldwork) with partners and key stakeholders (Y1 and Y2 implementation) with at least one field staff per territory partner is trained to fly drones and service cameras by Y1. No staff of any of the 6 territories had appropriate skills when starting the project. 4.2 Network established on Y3 to ensure continuity of knowledge exchange and support with at least one member from OT Government and/or one field staff representing each of the territory (key contact selected on Y3 based on involvement). 4.3 Network-wide Marine Monitoring Strategy drafted with project partners (Y3) and presented at the next UKOTCF (supported by project outcomes as evidence of cost-effective monitoring).	4.1 Workshop materials including partner letters and training resources. 4.2 Network terms of references and strategy, including list of members and coordinator position filled (local partner secondment). 4.3 Strategy made available online and promoted on the data portal. 4.4 End of project workshop report. 4.5 Draft strategy sent to key stakeholders at each UKOT government and abstract for a workshop at the UKOTCF international environmental conference.	Selection and retention of qualified staff (i.e., trainer) among member organisations. Practitioners see value in attending and willing to connect and share experience with other territories on seabird monitoring and marine conservation. More UKOT governments are willing to explore the monitoring method and joining the network to develop a UKOT-wide Marine Monitoring Strategy and Network (supported by successful project results).
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. Marine species health index guidelines established to support the development of partners conservation priorities and UKOTs conservation policy** 1.1 Sign a memorandum of understanding with all the OTs involved. 1.2 Train field staff to maintain camera network and fly drone safely and legally. 1.3 Run timelapse camera over selected species and sites for at least 2 consecutive years. 1.4 Conduct a drone survey over each species colonies for at least 2 consecutive years.			

Project summary	SMART Indicators	Means of verification	Important Assumptions
1.5 Historical records collected and processed. 1.6 Project data processed via citizen science platforms (i.e., Penguin Watch, Seabird Watch). 1.7 Raw and processed data (including distribution maps) uploaded on data portal and existing repositories. 1.8 Health index guidelines agreed among UKOT partners. 1.9 Peer reviewed publications submitted for review (minimum of two publications during the lifespan of the project). 1.10 Research brief sent to key stakeholders for each significant project findings. 1.11 Conduct comprehensive reviews of OT conservation strategy and legislations. 1.12 Conduct interviews with partner organisations. **2. Artificial Intelligence (AI) tool development for data processing to speed up access to evidence made accessible in the time frame of the project** 2.1 Finalise the coding and testing of the AI recognition algorithm on Seabird Watch existing data for macaroni and rockhopper penguins as well as shags, cormorants, and boobies. 2.2 Code and start testing a new recognition algorithm during the first two years of the project. 2.3 Challenging project data processed using the algorithm to refine its training. 2.4 Produce progress reports to interested UKOT partners. 2.5 Sign a data agreement with partners. **3. Online open access web portal to fill critical knowledge gaps in UKOT and improve policymakers access to marine health research evidence** 3.1 Discuss UKOT gaps and evidence needs to agree on portal requirements. 3.2 Write and publish a R package for data access. 3.3 Design a front-end and application mapping tools back-end for data entry tools (i.e., portal). 3.4 Publish and promote online database for UKOT marine monitoring data to key stakeholders (i.e., governments, conservation NGOs, researchers, and relevant fishing and tourism industry stakeholders). 3.5 Conduct user and prospective user survey. **4. Establish a cross-UKOTs network aimed at facilitating knowledge exchange, cross-training and lowering barriers to marine predator conservation**			

Project summary	SMART Indicators	Means of verification	Important Assumptions
4.1 Host a series of training workshops (yearly) to identify needs, train the trainers locally (e.g., drone use, set up and maintenance of camera network) and, for year 3, define the mechanisms for knowledge exchange between participating partners and project continuation beyond the Darwin Plus grant. 4.2 Make training resources freely available on project portal. 4.3 Collect updates, success and failures and write a yearly report on the OTs involvement in the project. This report will inform the adaptation of the project strategy from year to year based on lesson learned. 4.4 Host regular partner meetings and publish progress reports. 4.5 Draft network marine monitoring strategy with project partners and present at the UKOTCF conference.			

Original logframe as submitted in the project application:

Project summary	SMART Indicators	Means of verification	Important Assumptions
Impact: A cost-effective approach to building UKOTs capacity and support network to enhance marine species conservation (Max 30 words)			
Outcome: (Max 30 words) Produce a field-to-policymaker evidence pipeline enabling UKOT governments and stakeholders to obtain near-real time evidence (local and regional) on marine population trends and reduce monitoring cost	0.1 By project end, all 6 UKOTs involved have revised their marine conservation strategy to reflect the findings of the project (measured through a decision-makers survey). 0.2 By project end, at least 66% of involved OTs have publicly committed to maintaining the camera network. 0.3 By project end, 10% more key marine species habitat receives adequate legal protection (compared to Y1 baseline).	0.1 Comprehensive review of the latest version of the Marine Conservation Strategy of each participating OT. 0.2 Interview of partners and Overseas Territories government (baseline at the beginning of the project and again by project end). 0.3 Review of conservation legislation in UKOTs involved.	Industry stakeholders and local management agencies amenable to incorporating the evidence into their conservation strategies and policy. Additional evidence available sufficiently improved OTs conservation management capacity to benefit marine predator populations. There is government support for enacting new conservation regulations.

Outputs: **1**. Marine species health index guidelines established to support the development of partners conservation priorities and UKOTs conservation policy	1.1 Three to five colonies per UKOT are monitored consistently and population health determined using historical records available through partners (baseline) and project data (yearly from Y1). 1.2 Population trends for two to five species per territory extrapolated from data collected and historical records by Y3. 1.3 Participating UKOT governments and conservation organisations partners involved perceive value in species health index.	1.1 a) Baseline and monitoring data collected (i.e., colony distribution maps create, counts and raw) processed and data freely available on project evidence portal and known repositories like MAPPPD, UK Polar Data Centre, Montserrat Data Centre and IMS-GIS Data Centre. 1.1 b) Health index reports made available and promoted on project portal, partners, and relevant agencies websites. 1.2 a) Peer reviewed publications (minimum 2) and health index reports made available and promoted on data portal, partners, and relevant agencies websites. 1.2 b) Research briefs summarising the updated evidence send to the relevant UKOT Governments staff. 1.3 a) Guidelines on how to draw marine species health index from counts, population trends and colony distribution developed during Y1 workshop and reviewed after first use during Y2 workshop.	Sufficient data collected for the aggregated evidence to be representative of the key project species populations health. Partners able to provide access to historical records.

		1.3 b) Attendance record of steering committee members throughout the project timeline and feedback survey by end of Y3.	
2. Artificial Intelligence (AI) tool development for data processing to speed up access to evidence made accessible in the time frame of the project	2.1 Computer vision algorithm fully trained for shags, cormorants, and boobies by Y2 using existing Seabird Watch algorithm. 2.2 Computer vision algorithm for Sooty terns 50% developed by Y3.	2.1 AI data processing tool made available to OT Governments and practitioners to speed up use of evidence from the field and challenging data processed through this tool. 2.2 Progress report to steering committee.	Sufficient data collected to train the computer vision tool for the project species.
3. Online open access web portal to fill critical knowledge gaps in UKOT and improve policymakers access to marine health research evidence	3.1 Creation of an R package for data access within 6 months of project start. 3.2 Portal requirements defined (Y1) and portal designed (Y2). 3.3 Database complete (i.e., web application accessible and data migrated to online location) by end of Y2 and a minimum of 6000 images per site per species uploaded plus aerial survey (complete stitched survey) each year.	3.1 Open access publication of R package in The Comprehensive R Archive Network (CRAN). 3.2 a) Steering committee and Y1 workshop reports. 3.2 b) Link to functional open access web portal promoted to relevant stakeholders on partner websites. 3.3 a) Portal visitation statistics and number of downloads of research briefs.	Continued support from local management agencies and industry stakeholders. No technical challenges delay the development of the database. Partners and key stakeholders perceive the value of using the database and agree to support the development and testing of the platform. Partners and users are aligned in term of portal requirements.

		3.3 b) Data collected during the lifespan of the project uploaded on the portal.	
4. Establish a cross-UKOTs network aimed at facilitating knowledge exchange, cross-training and lowering barriers to marine predator conservation	4.1 Network established on Y1 with at least one member from OT Government and one field staff representing each of the territory (key contact selected at workshop 1). 4.2 Yearly workshop to establish priorities and initiate capacity building (field training) conducted with partners and key stakeholders (from Y1). 4.3 Marine monitoring included in updated UKOT Conservation Strategy by project end. 4.4 At least one field staff per territory is trained to fly drones and service cameras by Y1. 4.5 UKOTs-wide Marine Monitoring Strategy drafted by project steering committee (Y3) to start a new discussion with all UKOT government about the pertinence of marine monitoring for conservation policy (supported by project outcomes).	4.1 Network terms of references and strategy, including list of members and coordinator position filled (local partner secondment). 4.2 Workshop materials including summary report and training resources. 4.3 Updated strategy made available on the website of each partner and promoted on the data portal. 4.4 End of Y1 workshop report. 4.5 Draft strategy sent to key stakeholders at each UKOT government.	Selection and retention of qualified volunteer coordinator among member organisations. Practitioners see value in attending and willing to connect and share experience. UKOT governments are willing to start a discussion with project steering committee (supported by successful project results) on UKOT-wide Marine Monitoring Strategy.

Activities (each activity is numbered according to the Output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)

1.1 Sign a memorandum of understanding with all the OTs involved.

1.2 Train field staff to maintain camera network and fly drone safely and legally.

1.3 Run timelapse camera over selected species and sites for at least 2 consecutive years.

1.4 Conduct a drone survey over each species colonies for at least 2 consecutive years.

1.5 Historical records collected and processed.

1.6 Project data processed via citizen science platforms (i.e., Penguin Watch, Seal Watch, Seabird Watch).

1.7 Raw and processed data (including distribution maps) uploaded on data portal and existing repositories.

1.8 Health index guidelines discussed at workshop 1 and revised at workshop 2 following local partner feedback.

1.9 Peer reviewed publications submitted for review (minimum of three publications during the lifespan of the project).

1.10 Research brief sent to key stakeholders for each significant project findings.

1.11 Conduct comprehensive reviews of OT conservation strategy and legislations.

1.12 Conduct interviews with partner organisations.

2.1 Finalise the coding and testing of the AI recognition algorithm on Seabird Watch existing data for shags, cormorants, and boobies.

2.2 Code and start testing a new recognition algorithm for Sooty tern using data collected from Ascension and Montserrat during the first two years of the project.

2.3 Challenging project data processed using the algorithm to refine its training.

2.4 Produce progress reports to steering committee.

2.5 Sign a data agreement with partners.

3.1 Discuss UKOT gaps and evidence needs to agree on portal requirements.

3.2 Write and publish a R package for data access.

3.3 Design a front-end and application mapping tools back-end for data entry tools (i.e., portal).

3.4 Publish and promote online database for UKOT marine monitoring data to key stakeholders (i.e., governments, conservation NGOs, researchers, and relevant fishing and tourism industry stakeholders).

3.5 Conduct user and prospective user survey.

4.1 Host a series of workshops (yearly) to first set up and review the network's strategy and terms of reference, provide the training needed to field staff and partners (e.g., drone use, set up and maintenance of camera network) and definition of mechanism for knowledge exchange between participating partners.

4.2 Make training resources freely available on project portal.

4.3 Designate secondment for steering committee coordinator position.

4.4 Collect updates, success and failures and write a yearly report on the OTs involvement in the project. This report will inform the adaptation of the project strategy from year to year based on lesson learned.

4.5 Host regular steering committee meetings and publish progress reports.

4.6 Draft UKOT marine monitoring strategy by steering committee.

- **Annex 3: Standard Indicators**
  - **Table 1 Project Standard Indicators**

DPLUS Indicator number	Name of indicator	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
	Number of people in eligible countries who are being continuously trained	7	4 women, 3 men	7	7		7	
	Number of new or improved habitat management plans available and endorsed	2	Improved	0	2		2	

  - **Table 2 Publications**

Title	Type (e.g. journals, best practice manual, blog post, online videos, podcasts, 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)
Best practice for using drones in seabird monitoring and research.	Journals	Edney, A. J., Hart, T., Jessopp, M. J., Banks, A., Clarke, L. E., Cugniere, L., Elliot, K. H., Juarez-Martinez, I., Kilcoyne, A., Murphy, M., Nager, R. G., Ratcliffe, N., Thompson, D. L., Ward, R. M. & Wood, M. J. (2023)	Woman	UK	Marine Ornithology	http://marineornithology.org/article?rn=1544

Title	Type (e.g. journals, best practice manual, blog post, online videos, podcasts, 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)
Penguins in the anthropause: COVID-19 closures drive gentoo penguin movement among breeding colonies	Journals	Flynn, C., Hart, T., Clucas, C. & Lynch, H. (2023)	Woman	USA	Science Direct	https://doi.org/10.1016/j.biocon.2023.110318
Penguindex: a Living Planet Index for Pygoscelis species penguins identifies key eras of population change	Journals	Talis, E.J., Che-Castaldo, C., Hart, T., McRae, L. & Lynch, H. J. (2023)	Woman	USA	Polar Biology	https://doi.org/10.1007/s00300-023-03148-2

- **Checklist for submission**

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