

Darwin Plus: Overseas Territories Environment and Climate Fund Annual Report

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

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

Submission Deadline: 30th April 2022

Darwin Plus Project Information

Project reference	DPLUS143
Project title	What goes thump at night: managing bird-strike in South Georgia
Territory(ies)	South Georgia and South Sandwich Islands (SGSSI)
Lead partner	Joint Nature Conservation Committee (JNCC)
Project partner(s)	Government of South Georgia and South Sandwich Islands (GSGSSI) International Association of Antarctica Tour Operators (IAATO) Argos Froyanes Ltd (AFL)
Darwin Plus grant value	
Start/end dates of project	July 2021 / March 2024
Reporting period (e.g. Apr 2021-Mar 2022) and number (e.g. Annual Report 1, 2)	April 2021 – March 2022, Annual Report 1
Project Leader name	Dr Megan Tierney
Project website/blog/social media	N/A – these will be developed as the project progresses.
Report author(s) and date	Dr Megan Tierney, May 2022

1. Project summary

The UK Overseas Territory (UKOT) of South Georgia and the South Sandwich Islands (SGSSI), and which lies in the remote and wild South Atlantic Ocean (Figure 1), has a rich environment which sustains globally important populations of seabirds. Despite conservation efforts, some of these populations are showing continuous, declining trends.

Population declines may be attributed to a range of factors from both within and outside SGSSI national boundaries, including bird-strike: the collision of birds in flight with vessels resulting in physical injury or death. For example, published reports document 900 birds striking a vessel in a single night (Black, 2005¹; Gregory, 2021²). It is thought that vessel lighting attracts birds towards a ship and poor visibility conditions, e.g. fog or snow, can exacerbate incidents of bird-strike.

¹ Black, A. (2005). Light induced seabird mortality on vessels operating in the South Ocean: incidents and mitigation measures. *Antarctic Science*, **17(1)**: 67-68.

² Gregory, S. (2021; pers. comms). Report submitted to GSGSSI in 2020 recorded 80 bird-strikes from one licenced vessel operating in the SGSSI MZ.

Basic bird-strike reporting protocols for SGSSI do exist, but data collection is not standardised, making robust analysis challenging. Consequently, factors leading to bird-strike events and the magnitude of the problem in SGSSI waters are poorly understood.

The Government of South Georgia & South Sandwich Islands (GSGSSI) is committed to protecting its globally important seabird populations, as evidenced through their MPA Management Plan, Biodiversity Action Plan, Wildlife and Protected Area Ordinance, and signatory status to international conventions, including the Agreement on the Conservation of Albatrosses and Petrels (ACAP). GSGSSI and its operational partners are also committed to working together to ensure measures are based on robust evidence, and are practical and fit-for-purpose.

Through a partnership between the Joint Nature Conservation Committee ([JNCC](#)), [GSGSSI](#), the International Association of Antarctica Tour Operators ([IAATO](#)), and the fishing company Argos Froyanes Limited ([AFL](#)), this 2.75-y DPLUS-funded project will develop bird-strike reporting systems for use by all vessels (research, patrol, fishing, tourism) operating in the SGSSI Maritime Zone (MZ), with the overall aim to ensure practical, standardised data collection and robust analysis to inform management practices. In parallel, handling and care guidelines will be revised to improve the identification and survival of landed birds. Reviewing factors that lead to bird-strikes, plus existing mitigation techniques to reduce strike rates, will provide a foundation for further research, allowing GSGSSI and its partners to implement best-practice, and share these techniques across other UKOTs and/or international regulators.

This will be achieved through activities under the following five integrated Work Packages:

- **Work Package 1 (WP1): Literature review** – this will entail a critical review and assessment of bird-strike incidence and mitigation measures, not only from SGSSI but also other regions. This will: i) aid development of reporting forms (Work Package 2) and bird-handling guidelines (Work Package 4); ii) identify potential factors leading to bird-strikes for consideration in future analyses of magnitude and cause; and iii) provide an indication of the effectiveness of existing mitigation techniques and aid future development and trials of mitigation measures in SGSSI (Work Package 5).
- **Work Package 2 (WP2): Development of bird-strike reporting forms** - building upon forms used by project partners (GSGSSI, 2020; IAATO, 2020), standardised reporting forms will be developed in consultation with stakeholders that capture information required to assess the magnitude and causes of bird-strike across the fleets that operate in SGSSI waters (patrol, research, fishing, tourism). Forms will be tested for practicality and capability via field-trials conducted/coordinated by project partners aboard the breadth of vessels operating in SGSSI MZ. Final reporting forms will be translated into the common languages used by crew/staff on vessels operating in SGSSI MZ.
- **Work Package 3 (WP3): Data Management System** – a standardised data management system for collating and storing information from bird-strike reporting forms will be developed. It will be compatible with the system currently used by GSGSSI. Documented guidelines for input and extraction of data will be produced.
- **Work Package 4 (WP4): Development of bird-handling guidelines** – straightforward instructions for non-bird specialists on handling and caring for birds found on vessels will be developed through review and adaptation of existing guidelines (e.g. ACAP, 2019; IAATO, 2020), utilising technical expertise from within the project team and other key stakeholders. Guidelines will be tested for a variety of aspects including clarity of understanding and use, and whether they capture sufficient examples of expected situations/conditions in which birds could be found. Testing will be undertaken via field trials and translated as in Work Package 2.
- **Work Package 5 (WP5): Future programme of work** – using information generated in WP1, and drawing upon data collected and analysed from WP2, a future programme of work to test/develop bird-strike mitigation measures will be formulated, including identifying possible funding streams. A programme for development of additional resources (e.g. presentations, videos) to raise awareness of the collaborative work between project partner sectors will also be devised.

DPLUS143 will address priority actions in the GSGSSI ACAP Implementation Plan and enable GSGSSI and partners to collect standardised data on bird-strike which can be fed into wider studies of seabird population changes, assess effectiveness of mitigation techniques, and enhance conservation management decisions. The partnership is highly experienced in seabird conservation, incidences of bird-strike, and knowledge of GSGSSI's strategic direction and so a successful outcome is strongly anticipated. The team's links into relevant UKOT and international networks will augment sharing of best practice regionally and globally.

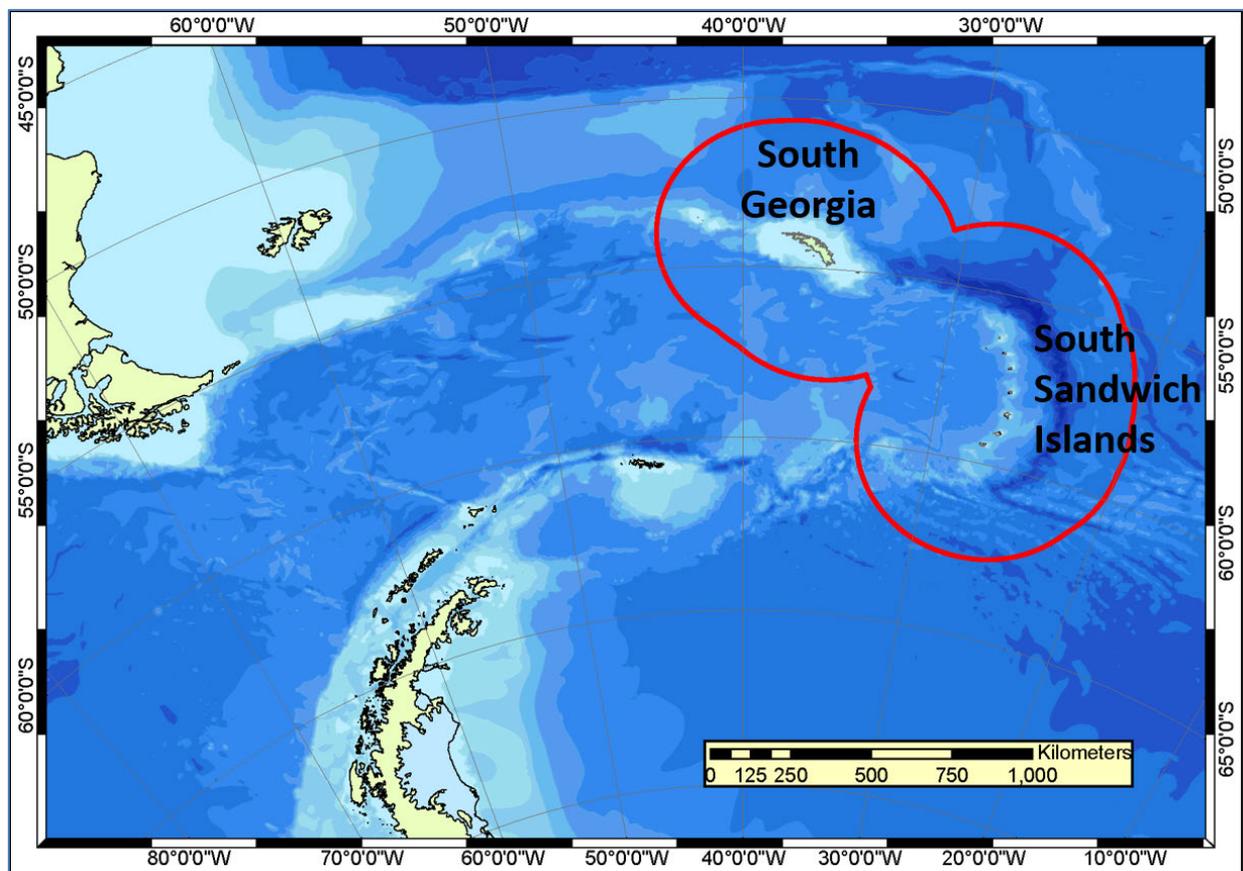


Figure 1. South Georgia and South Sandwich Islands.

2. Project stakeholders/partners

Background to development of project partnerships and project conception

JNCC is the public body that advises UK Government, the devolved administrations and UKOTs on nature conservation. JNCC has worked with GSGSSI for many years on a range of environmental conservation and management projects and has a formal MoU in place defining this partnership. One area that JNCC and GSGSSI work particularly closely on together is implementation of the ACAP. Taking into consideration the continued decline of a number of SGSSI ACAP-listed species, and following the successful reindeer and rodent eradications on South Georgia, which may lead to a step-change in the Island's population trajectories of other ACAP species, JNCC and GSGSSI felt it was timely to act upon one of the priority actions in the GSGSSI ACAP Implementation plan: review information on incidents of bird-strike on vessels operating in SGSSI MZ and improve and standardise information collected. Recognising that success would require input and buy-in from across different sectors, the project was conceived in partnership with the primary stakeholder sectors – government, tourism, fishing and research.

As such, DPLUS143 is led by JNCC (research representative) in partnership with GSGSSI (government representative), IAATO (tourism representative) and AFL (fishing representative). JNCC are responsible for project management and technical development of products; GSGSSI will be ultimately responsible for overseeing distribution and regulated use of primary project products (bird-strike reporting forms and bird-handling guidelines) to key stakeholders – i.e. all research, patrol, fishing and tourism vessels operating in SGSSI MZ. The networks of AFL and IAATO will be one of the dominant users of the products

(crew and expedition staff). These partners will help facilitate uptake of project products. All partners will facilitate the engagement of vessels from the different fleets operating in SGSSI MZ to trial bird-strike reporting forms and bird-handling guidelines. Partners will promote opportunities for participation in the project, as well as its outcomes, through their networks using a range of communication tools – e.g. meetings, email circulation lists, newsletters, social media and websites.

The project partners were involved with all aspects of project design, and together with relevant stakeholders have engaged and/or been kept informed of project progress during the reporting period as follows:

Project Partners

A Project Management Group (PMG), which is comprised of representatives from each of the project partners (JNCC, GSGSSI, IAATO, AFL) was established. The PMG will monitor and steer the project, ensuring it aligns with the project proposal, and that the project is delivered on time and within budget. The PMG will also consider and advise on the overall project management plan, including supporting documents such as the Monitoring and Evaluation Plan, Risk Register and Issues Log, and will review and approve all primary project outputs prior to external release. The PMG will also highlight synergies between this project and other, related projects which they may be involved with to align and maximise outputs of each.

Online (Microsoft TEAMS) start-up and progress meetings were held with the PMG in August 2021 and March 2022 (**Annex 5**). Online meetings and/or email correspondence between PMG members were also used to discuss and prepare a Change Request which was submitted in December 2021, and subsequently approved by LTS/Defra, in March 2022. Minutes of the meetings were distributed to all PMG members.

Project Stakeholders

The primary role of other stakeholders in this project will be to: i) provide input to the design of the bird-strike reporting forms and bird-handling guidelines, ii) provide feedback on the suitability/ease of use of the forms through field-trials; and iii) help raise awareness and encourage uptake of the forms in other regulated maritime zones/operations. Direct interaction with other project stakeholders has been limited in this reporting period, primarily because the project is not yet at a stage where extensive input has been required. However, collectively, the PMG did compile a list of relevant stakeholders to be invited to the first consultation session on design of the reporting forms and handling guidelines which is planned for May 2022 (see further details in Section 3.1, Output 2 and 4).

3. Project progress

3.1 Progress in carrying out project Activities

Output 1. GSGSSI and key stakeholders have informed overview of the incidence and causes of bird-strike, and the effectiveness of existing mitigation measures to reduce strike rates used in regions/areas outside of SGSSI.

Summary: With the exception of Activity 1.2, all planned activities for this year have been completed.

Activity 1.1: The literature review of the incidence of bird-strike in regions/areas outside of SGSSI MZ has been completed. This involved undertaking an online search (primarily using Google Scholar, as well as the Scopus online database) for publications (including 'grey' literature) by applying appropriate search terms. Example search terms included: "seabird" "bird" "bird strike" "bird-strike" "birdstrike" "ship" "vessel" "boat" "light" "attraction". The first 15 pages of results were mined, with storage and classification of search results into a Zotero reference database. This enabled categorisation of references according to type of factors identified as influencing incidence (e.g. lights used, weather conditions), whether mitigation was investigated, etc. Any cross-over with related but distinct themes which are out of scope for this project, including fisheries bycatch, attraction to and collision with terrestrial structures (buildings, oil/gas platforms, etc), was noted. Results of the literature review have been compiled into a draft summary document which has been shared with the PMG (**Annex 3a**). This will be added to the larger report which will also include results from the SWOT analysis (see Activity 2.2), to be finalised by

the end of Y2Q1 (first deliverable of Activity 1.3), and eventually form part of Information Documents prepared for project partner network and stakeholder meetings (second deliverable of Activity 1.3, due by project end).

Activity 1.2: Towards the end of Y1Q4, the literature search which commenced under Activity 1.1 and focused on using search terms to return results on the incidence or occurrence of bird-strike, was being widened to include search terms to inform the SWOT analysis of mitigation methods. This search and the analysis are still to be completed, but is anticipated to be done so in time to finalise the initial summary report due for completion by Y2Q1 (first deliverable of Activity 1.3).

Activity 1.3: Compilation of the first deliverable for this activity – summary report incorporating the results of Activity 1.1 and is on schedule for completion in Y2. Preparation of the Information Documents (second deliverable of Activity 1.3) is not due to commence until Y3.

Output 2. Standardised bird-strike reporting forms that capture all essential information to enable monitoring and assessment of bird-strike in SGSSI MZ developed and presented to GSGSSI for implementation across fleets operating in SGSSI MZ; and

Output 4. Easy-to-follow guidelines for non-bird specialists showing how to handle and care for birds that may be injured after striking and landing on vessels developed and presented to GSGSSI for circulation across fleets operating in SGSSI MZ.

Summary: All planned activities for this year have commenced as scheduled.

Activity 2.1, 2.2, 4.1 and 4.2: All of these activities commenced in this reporting round, with collation of: i) existing bird-strike reporting forms which are used by vessels in the SGSSI MZ (Activity 2.2; **Annex 4a**), and ii) collation of existing bird-handling and identification guidelines (Activity 4.2; **Annex 4b**). These will form the basis for ongoing discussions around format, usability and/or enhancement of the reporting forms and handling guidelines to be developed by this project. The objectives, desired outcomes and agenda for the first consultation session to be held with stakeholders regarding development of the bird-strike reporting forms and bird-handling guidelines was drafted (Activity 2.1 and 4.1; **Annex 4c**), a date selected for the consultation (5 & 6 May 2022), and stakeholders to be invited identified. A generic invitation, but which will be personalised for each invitee, to the consultation was drafted (**Annex 4d**) and is due to be issued in the first week of April 2022. Identified stakeholders include representatives with expertise or experience in seabird ecology, seabird/fisheries observers and operators, ships' crew and expedition leaders.

Activities 2.3 – 2.6, and 4.3 – 4.6: There was no planned work against these activities in this reporting period.

Output 3. Standardised data input and storage facilities and guidelines for data returned in bird-strike reporting forms, and which integrates with the existing national information management system of GSGSSI, is developed.

Summary: All planned activities for this year have commenced as scheduled.

Activity 3.1: The [UK Polar Data Centre](#), based at the British Antarctic Survey ([BAS](#)), manages GSGSSI data (collation, storage, ensuring national and international data legislation and policy are complied with), including any bird-strike reported data. In this reporting round, contact was made, and a meeting arranged for early April 2022 between the JNCC technical leads and the Head of the Polar Data Centre (Helen Peat) to: i) discuss the data management aspects of DPLUS143; and ii) to plan the steps to be taken during Y2 and Y3 of the project. Helen Peat has also agreed to help facilitate the session on 'Data Flows' to be held during the stakeholder consultation session planned for May 2022 (see Output 2).

Activities 3.2 and 3.3: There was no planned work against these activities in this reporting period.

Output 5. Strategic programme of prioritised research to advance use and/or development of mitigation measures to reduce bird-strike in SGSSI MZ, including identification of resourcing options, is formulated.

Summary: There was no planned work against this Output or its Activities (5.1 – 5.2) in this reporting period.

3.2 Progress towards project Outputs

Output 1. GSGSSI and key stakeholders have informed overview of the incidence and causes of bird-strike, and the effectiveness of existing mitigation measures to reduce strike rates used in regions/areas outside of SGSSI.

Good progress has been made against Output 1 – see full details of progress against the Indicator outlined in the **Annex 1** logframe. Even though it has become evident that there is not a large body of work which specifically addresses or reports on bird-strike which has occurred in either the SGSSI or other regions, the literature review conducted in this reporting period has provided an important foundation in terms of information on where and how bird-strike can occur. This will help to inform subsequent activities under Output 2 (development of bird-strike reporting forms), Output 4 (development of bird-handling guidelines) and Output 5 (development of a future programme to trial bird-strike mitigation measures). Further work for Output 1 is planned for Y2 and Y3, specifically identifying and assessing existing mitigation measures and then producing a summary document to detail key findings for partner networks. **Evidence for Output 1 is provided in Section 3.1 and Annex 3.** It is expected that Output 1 will be achieved within the project timeframe, and the current Indicator is still considered appropriate.

Output 2. Standardised bird-strike reporting forms that capture all essential information to enable monitoring and assessment of bird-strike in SGSSI MZ developed and presented to GSGSSI for implementation across fleets operating in SGSSI MZ.

Output 2 is progressing according to schedule and progress against the individual Indicators is outlined fully in the **Annex 1** logframe. As outlined in Section 1, basic bird-strike reporting forms do exist (**Annex 4a**), but data collection is not standardised, making robust analysis challenging. Consequently, factors leading to bird-strike events and the magnitude of the problem in SGSSI waters are poorly understood. Formulating the objectives and agenda, and identifying relevant invitees for a stakeholder consultation to be held in Y2Q1, represent the first steps to be taken towards the redesign of the reporting forms and making them fit-for-purpose (Indicator 2.1). Work against the remaining Indicators (2.2 – 2.4) was not planned for this reporting period. **Evidence for Output 2 is provided in Section 3.1 and Annex 4.** It is expected that Output 2 will be achieved within the project timeframe, and the current Indicators are still considered appropriate.

Output 3. Standardised data input and storage facilities and guidelines for data returned in bird-strike reporting forms, and which integrates with the existing national information management system of GSGSSI, is developed.

Minor work was planned in this reporting round for this Output, but some foundational steps were undertaken which place the project in a good position for progressing this Output in Y2 – progress against individual indicators is outlined in the **Annex 1** logframe. The system which is currently used by GSGSSI to collate, store and manage their environmental data, including any bird-strike data, has been identified (the [UK Polar Data Centre](#)). Introductions have also been made to the Head of the Polar Data Centre, and time has been scheduled (for early in Y2) with the technical team to advance plans for discussing considerations which will need to be made from a data flow perspective during the design phase of the reporting forms (Indicator 3.1). Work against the remaining Indicators (3.2 – 3.3) was not planned for this reporting period. **Evidence for Output 3 is provided in Section 3.1.** It is expected that Output 2 will be achieved within the project timeframe, and the current Indicators are still considered appropriate.

Output 4. Easy-to-follow guidelines for non-bird specialists showing how to handle and care for birds that may be injured after striking and landing on vessels developed and presented to GSGSSI for circulation across fleets operating in SGSSI MZ.

Output 4 is progressing according to schedule and progress against the individual Indicators is outlined fully in the **Annex 1** logframe. A range of bird-handling and identification guidelines have been developed for a variety of purposes, with some focussing on birds that have struck vessels (**Annex 4b**). As for Output 2, formulating the objectives and agenda, and identifying relevant invitees for a stakeholder consultation to be held in Y2Q1, represent the first steps to be taken towards the systematic review of existing guidelines and exploring how they may be enhanced to specifically help non-bird specialists to handle and care for birds that have struck and landed on vessels (Indicator 4.1). Work against the remaining Indicators (4.2 – 4.4) was not planned for this reporting period. **Evidence for Output 4 is provided in Section 3.1 and Annex 4.** It is expected that Output 4 will be achieved within the project timeframe, and the current Indicators are still considered appropriate.

Output 5. Strategic programme of prioritised research to advance use and/or development of mitigation measures to reduce bird-strike in SGSSI MZ, including identification of resourcing options, is formulated.

There was no planned work against this output in this reporting period, and at this stage of the project there is no reason to believe that this Output won't be achieved with the project timeframe. The current Indicators are also still considered to be appropriate.

3.3 Progress towards the project Outcome

The stated outcome for this project is *'Practical tools and guidelines for long-term monitoring of bird-strike in SGSSI, enhanced survival of landed birds, and the foundation of a strategic research programme to manage and reduce bird-strike'*.

The project has made a steady start towards achieving this Outcome in this first reporting period. While there are existing forms for reporting bird-strike in SGSSI and some bird-handling guidelines, it was recognised that these tools could be enhanced to improve long-term monitoring and assessment of the impact of bird-strike on SGSSI seabird populations, and increase the likelihood of survival of landed birds. In this first reporting period, work has primarily focussed on gathering background information on what is known from elsewhere about where and why bird-strike may occur, and initial review of existing forms, guidelines and data management systems (see Section 3.1 Output 1, 2, 3 and 4). All of these preparatory steps are fundamental for setting the project on the right path for achieving the overall project Outcome. At this stage of the project, it is not possible to evidence specific progression against the Outcome Indicators, as relevant products will not be produced until Y2 and Y3. However, **evidence cited in Section 3.1 Output 1, 2, 3 and 4 as well as Annexes 3 and 4 shows good progress** against the baseline activities. Hence, at this stage all Outcome indicators are still considered appropriate, and it is anticipated that the project will be able to achieve the stated Outcome by the end of the project (March 2024).

3.4 Monitoring of assumptions

A number of important Risks and Assumptions were identified for this project and included in the project logframe (see **Annex 2**). All identified risks and assumptions remained true for this reporting period and for the coming (Y2) reporting period. However, it should be noted that Assumption 2.6 and 4.6 should be modified to account for ongoing developments regarding the longlining toothfish fishery in 2022. See the following for details.

Assumptions 2.6 and 4.6 currently state: In regard to engaging sufficient fishing company volunteers to participate in the [bird-strike reporting form and bird-handling guideline] trials, the ongoing Covid-19 pandemic does not interrupt fishing operations. (In the 2020 fishing season, Covid-19 did present operational challenges to GSGSSI and licensed fishing companies, but the fishing season did proceed).

Comments: Due to some uncertainties regarding whether there will be a longlining toothfish fishing season in South Georgia waters in 2022, thereby rendering it not possible to use these particular vessels to trial the beta versions of the bird-strike reporting forms and bird-handling guidelines (Activities 2.3 and 4.3), Assumption 2.6 and 4.6 should be modified to: *In regard to engaging sufficient fishing company volunteers to participate in the [bird-strike reporting form and bird-handling guideline] trials, the ongoing Covid-19 pandemic does not interrupt fishing operations. (In the 2020 fishing season, Covid-19 did present operational challenges to GSGSSI and licensed fishing companies, but the fishing season did proceed).*

Further, if there is no longline fishing for toothfish in South Georgia waters in 2022, all field trials on fishing vessels will occur on krill and/or ice-fish trawlers instead of across both longliners and trawlers as originally planned.

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

As evidenced through its range of strategies, legislation and signatory status to a number of international conventions, GSGSSI is committed to protecting its natural environments and managing its resources in a responsible and sustainable way. The outcome of this project will help to support GSGSSI's commitments by providing tools that will enable monitoring of an impact that has the potential to have detrimental effects on GSGSSI's already threatened seabird populations, to assess effectiveness of mitigation techniques and ultimately enhance associated conservation management decisions. In this first reporting period for the project, work has primarily been on some of the founding steps – i.e. gathering and assessing baseline information on bird-strike incidents, reporting systems, handling guidelines and data management systems (see Section 3.1) – to place it in a good position in Y2 to begin tool development and testing, with refinement and finalisation in Y3.

More specifically, this project will help to meet the following **key priorities and national commitments** of GSGSSI:

- **SGSSI ACAP Implementation Plan:** specifically, actioning a review of the information on incidents of bird-strike on vessels operating in SGSSI Maritime Zones (MZ); improve and standardise information collected; and oblige all vessels to complete these reports.
- **Protect Sustain Inspire: SGSSI Stewardship Framework 2021-2025:** specifically, the Key Priority of Marine Protection (Set exceptional standards for management of our marine environment, underpinned by robust science); under the Guiding Value of Environmental Protection (To safeguard the long-term protection of SGSSI, we must first understand the changes to the environment that may result from any activities, and Develop best practice that can sustain long-term environmental recovery and protection).
- **National Biodiversity Action Plan:** specifically Objective 2 (increasing SGSSI environmental global outreach through knowledge sharing with stakeholders); 3 (meeting obligations set by multi-lateral environmental agreements); 5 (establishing scientific baselines).
- **Environment Charter:** specifically guiding principles 5 (to aim for solutions which benefit both the environment and development), 7 (to safeguard and restore native species, habitats and landscape features), and 8 (to encourage activities and technologies that benefit the environment).
- **SGSSI Marine Protected Area Monitoring Plan:** specifically, the research need 'Investigate relative risk of potential threats from different human activities'.

It will also help GSGSSI and the UK support the following **key international commitments**:

- **ACAP:** specifically, Article II (Parties shall take measures to achieve and maintain a favourable conservation status for albatrosses and petrels), Article III Conservation Measures c,d,e,g, and elements of Annex 2 (ACAP Action Plan).
- **Convention on Biological Diversity:** specifically Targets 6 (Sustainable Fisheries), 11 (Marine Protected Areas [MPA]), and 19 (Knowledge Exchange).
- **Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR):** specifically Article II, Article IX, and Conservation Measures 25 (Minimization of incidental mortality), and 31-01 (Regulation of fishing around South Georgia).
- **Antarctic Treaty System's Protocol on Environmental Protection to the Antarctic Treaty:** specifically Article II (Protection of the Antarctic environment and dependent and associated ecosystems) and III (Environmental Principles).

5. OPTIONAL: Consideration of gender equality issues

The core project team working on development and delivery of this project has a gender ratio of 63% women and 37% men. While gender ratios of expedition or research staff on tourist/research vessels are likely to be relatively balanced, crews of all vessels that partake in the trials of the reporting forms and

guidelines are likely to be predominantly male. Even though no stakeholder events or the trials of the form/guidelines have taken place, the proposed project implementation has been designed to ensure gender inequality will not be increased – i.e. participation will be open to anyone regardless of gender (or age, ability, race, religion, or sexual-orientation). During the design phase, consideration will also be given to ensure that reporting forms/guidelines produced do not promote gender bias – for example, techniques used to report and handle birds safely will be those that can be performed by either sex; and if photos of people are used in the guidelines or other project-related media, we will make sure there is equal representation of men and women in these images.

In regard to social inclusion, the project team will be mindful of being as inclusive as possible, ensuring stakeholder events are accessible regardless of gender, age or ability; and trials and design of reporting forms/guidelines will be made with all vessel types and their operation in mind. Further, the forms and guidelines will, in the first instance, be translated into at least five of the most common languages used by crew/staff aboard these vessels.

6. Monitoring and evaluation

In this first reporting round the PMG has taken the primary responsibility for overseeing the activities necessary to meet the timelines, been responsible for reviewing the project implementation, and advising on and approving any adjustments required. This has been achieved through PMG meetings and regular email correspondence. Although not yet finalised, three tools are also in development for the project which will further assist the PMG to effectively monitor and govern the project: a Monitoring and Evaluation Plan, Risk Register, and Issues Log. The Project Leader will present updates on each, plus financials, at each forthcoming quarterly PMG meeting. The PMG, which is comprised of representatives from each project partner (JNCC, GSGSSI, IAATO, AFL) is jointly responsible for monitoring and steering the project, ensuring it aligns with the project proposal, and that the project is delivered on time and within budget. The PMG will also review and approve all primary project outputs prior to external release.

The project logframe (**Annexes 1 and 2**) provides a clear set of Indicators and Outputs against which the project can be monitored and evaluated. Timeframes have been amended (through one Change Request) for some indicators in the logframe as a result of delays in project start date and the Project Leader not being available for the first half of the reporting period (see more details in Section 9), but the indicators and outputs themselves have remained the same. Progress towards the stated Outcome and Outputs can be clearly cross-referenced with the relevant indicators. As most of the indicators relate to specific markers of progress or end products, they are relatively easy to measure – e.g. reports or guidelines published, meeting agenda and minutes, photos of stakeholder events and/or field trials, email trains etc..

7. Lessons learnt

In this first reporting period, the following aspects have been of benefit to the project, and would be recommended approaches for other projects where relevant:

- *In-territory Partner*: Having GSGSSI as a lead partner on the project has proved invaluable for i) ensuring the direction of the project and the outputs will be of true value and relevance to the GSGSSI; and ii) early identification of other relevant partners and stakeholders, both for project concept and for ongoing engagement and buy-in to the project.
- *Working with known partners*: All the project partners have worked with either one or all of the other partners in the past. These strong, established relationships have resulted in good cooperation and ensured a high level of enthusiasm for project has been maintained.

Fortunately, the project has not faced any substantial challenges in its first year; however for future projects/proposals, it is recommended that the realistic time-frames and resources required to get a project up and running, including development of project management and communication tools are carefully considered and incorporated into project plans accordingly.

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

N/A – this is the first Annual Report for this project.

9. Other comments on progress not covered elsewhere

No significant challenges were encountered in this reporting period; however, one Change Request was submitted in December 2021, and subsequently approved in March 2022 to extend the timeline for the literature search on incidence and mitigation methods to Y1Q4 (Activities 1.1 and 1.2). This was to reflect a later than planned start to the work (see below) and internal time strictures in JNCC in Y1Q2. This will not impact any other part of the work plan.

It is also noted that the Project leader needed to return to Australia on compassionate grounds for the first half of the reporting period (April – October 2021), and which coincided with the planned start date of this project (July 2021). The Project Leader did continue to work during this period but sometimes at reduced capacity, which led to some delays in project kick-off. It also meant that the Project Leader and colleagues in the UK and the Falkland Islands (where some of the GSGSSI project staff were based at the time) were working on vastly different time zones. Together these things impacted on the level of ‘face-to-face’ (virtual) communications and presented some challenges in forward planning. Communication moved primarily to email and the Project Leader joining key calls. Overall this had minimal impact on progress of the technical aspects of the project, however substantial forward planning was not possible until the Project Leader returned to their home base (Falkland Islands) in October. The Change Request noted above captured the changes to relevant project activities, timelines and budget. Note, LTS were informed of the Project Leader’s situation and how it may impact on the project. LTS were very understanding and supportive, which the Project Leader and Partners were very grateful for.

10. Sustainability and legacy

At this stage of the project there has been limited opportunities to raise the profile of the project within the SGSSI community. However all Project Partners have alerted their networks that the project has commenced and that there will be opportunities to participate both through consultation sessions (to help design the reporting forms and handling guidelines) and to test the forms/handling guidelines. The partners have reported positive responses from their networks. JNCC also discussed the project when participating in the 3rd World Seabird Conference Workshop on ‘Night-time collisions with lighted vessels and structures at sea, and development of hazard reduction methods to reduce collisions’. With consultation sessions and the sea-trials scheduled to take place in Y2 of the project, it is anticipated that there will be more opportunities to raise the profile of the project.

There are currently no foreseen changes to the planned exit strategy, and therefore project outcomes will still be sustained through:

- Development of stand-alone and finite products (i.e. standardised bird-strike reporting forms, bird-handling guidelines, data management system) that can be used long-term to facilitate standardised and on-going monitoring of bird-strike and facilitate improved chances of survival of landed birds across the array of fleets operating in SGSSI MZ.
- GSGSSI, being responsible for regulating all activities within the Territory and having the capacity to introduce legislation, policy or guidelines as required based on the results of the long-term outcomes of this study.
- Beyond the life of the project, AFL commit to promoting uptake and use of reporting forms and bird-handling guidelines and to encourage their industry networks to implement them globally. IAATO will incorporate any tools into its field operations manual as required by GSGSSI and/or agreed by members, thereby also ensuring longevity. IAATO will also share outputs with industry partners.
- Reporting forms and bird-handling guidelines will need revisions to ensure on-going effectiveness. One avenue already identified to regulate this is to incorporate it into the revision time-table of the GSGSSI ACAP Implementation Plan, coordinated by JNCC.

11. Darwin identity

There is a good understanding of the Darwin Initiative within the community of organisations whose work is focussed on SGSSI, with a range of projects having been funded by it over the years.

Due to the nature of the initial activities, there has been relatively few opportunities for the project to specifically publicise the Darwin Initiative, however as can be seen from the draft agenda and invitation to stakeholders to join the first consultation session on the bird-strike reporting forms and bird-handling guidelines, it is clearly stated the project is supported by the Darwin Plus Initiative and the Darwin Plus Initiative logo has been included along with the partner logos in the document header (**Annex 4c,d**). There will be more opportunities in the next reporting round to further promote the support of Darwin Plus to this project.

12. Impact of COVID-19 on project delivery

Apart from some members of the project team needing to juggle competing commitments that have been brought about by the requirement to work from home – e.g. home schooling, caring for family members etc., there have been no other significant problems/delays related to Covid-19 encountered in this reporting period. The whole project team has embraced some of the new ways of working that have been developed over the last two years of the pandemic, especially the greater use of virtual meetings. While lessons are still being learned as to the most effective way to use these approaches, it is anticipated that the project will continue to employ some of these tools to progress and deliver aspects of the project (e.g. the stakeholder consultation planned for Y2Q1 will be conducted as an online event). All project partners are following the advice given by their respective governments and the executive committees/directors of their organisations to ensure the health and safety of all staff and beneficiaries involved with the project. This has included obeying stay-at-home orders/advice, not undertaking international travel unless absolutely necessary, and regular welfare checks on staff.

13. Safeguarding

Please tick this box if any safeguarding violations have occurred during this financial year.

If you have ticked the box, please ensure these are reported to ODA.safeguarding@defra.gov.uk as indicated in the T&Cs.

As the lead partner, JNCC is committed to creating a safe environment for all staff and those with whom we work. For JNCC, safeguarding means protecting its staff and communities from potential harm from coming into contact with anyone working for, or with us, or from our activities/programmes of work. JNCC's primary safeguarding objective is to do no harm, and we take a zero-tolerance approach to anyone who contravenes our policies.

Safeguarding is a specific risk in the JNCC organisational risk register. JNCC's safeguarding policy makes clear the JNCC policy applies to all partners and contractors. For this project, the partner MoUs will: a) incorporate JNCC's Safeguarding Policy or otherwise implement reasonable due diligence and monitoring procedures of its sub-awards consistent with JNCC's Policy; b) include appropriate language requiring contracting entities/individuals, and their employees/volunteers to abide with a Code of Conduct that reflects standards of JNCC's Policy; and c) expressly state that the failure of those entities/individuals to take preventive measures against sexual harassment, exploitation and abuse and child abuse, to investigate and report allegations in a timely manner, or to take corrective actions when breaches have occurred, shall constitute grounds for JNCC to terminate such agreements.

14. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2021 – 31 March 2022)

Project spend (indicative) in this financial year	2021/22 D+ Grant (£)	2021/22 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs	██████	██████	██████	The primary activity in Y1 was to undertake the literature review. The variance observed in the budget is a combined factor of some initial time strictures of the technical team due to the delayed start of the project; and then not as much of the estimated time being required to complete the first part of the literature review.
Consultancy costs	██████			
Overhead Costs	██████	██████	██████	As Overheads are directly to staff costs, this variance reflects that of the Staff Costs – see above for explanation.
Travel and subsistence	██████			
Operating Costs	██████			
Capital items	██████			
Others (Please specify)	██████			
TOTAL	██████	██████		

The D+ Grant figures in Table 1 (Column 2) are those which were approved in the Change Request submitted in December 2021. In this Change Request, the total grant for the 2021-22 FY was reduced from ██████ (original) to ██████. The difference of £█████ is to be moved to the 2022-23 FY. This change was requested to reflect replanning of staff time required in each FY.

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

We have opted not to complete this section for this reporting round.

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 Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	✓
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	✗
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.	✓
Do you have hard copies of material you need to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	✗
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.	