

## Biodiversity Challenge Funds Projects Darwin Initiative, Illegal Wildlife Trade Challenge Fund, and Darwin Plus Half Year Report

*Note: If there is any confidential information within the report that you do not wish to be shared on our website, please ensure you clearly highlight this.*

**Submission Deadline: 31<sup>st</sup> October 2023**

<b>Project reference</b>	DPLUS149
<b>Project title</b>	<i>Resolving ecosystem effects of the South Georgia winter krill fishery</i>
<b>Country(ies)/territory(ies)</b>	<i>South Georgia and the South Sandwich Islands</i>
<b>Lead partner</b>	<i>British Antarctic Survey</i>
<b>Partner(s)</b>	<i>Government of South Georgia and the South Sandwich Islands (GSGSSI) and Antarctic Research Trust (ART)</i>
<b>Project leader</b>	<i>Martin Collins</i>
<b>Report date and number (e.g. HYR1)</b>	<i>October 2023, HYR2</i>
<b>Project website/blog/social media</b>	<a href="https://www.bas.ac.uk/project/winter-krill-at-south-georgia/">https://www.bas.ac.uk/project/winter-krill-at-south-georgia/</a>

**Outline progress over the last 6 months (April – Sept) against the agreed project implementation timetable (if your project has started less than 6 months ago, please report on the period since start up to end September).**

Although we are not looking for specific reporting against your indicators, please use this opportunity to consider the appropriateness of your M&E systems (are your indicators still relevant, can you report against any Standard Indicators, do your assumptions still hold true?). The guidance can be found on the resources page of the relevant fund website.

Between April and September 2023 the following progress has been made against the implementation timetable:

- All winter surveys for the second year of fieldwork were completed. These took place in March/April (26/03/2023 - 05/04/23) rather than May as originally planned due to the vessel being in dry dock during May – see approved Change Request); July (15/07/2023 - 20/07/2023) and September (11/09/2023 - 20/09/2023) 2023.
- Reports for all surveys are complete and available on the website: <https://www.bas.ac.uk/project/winter-krill-at-south-georgia/#data>
- An additional opportunistic survey was carried out in February 2023. As this was not part of the original proposal, this only comprised acoustic surveys and net trawls. Cetacean observations were opportunistic and there was no seabird observer due to lack of funds for an additional survey. However, the acoustic and net data will add value to the project and aid interpretation of results between years and through the seasonal progression.
- The Pharos SG echosounders were calibrated in February 2023, July 2023 and September 2023 in Husvik Harbour.

- The Pharos SG crew and KEP science team (Carrie Marell Gunn, George Perry and Jade Boughton) were trained in operation and calibration of the echosounders on Pharos SG, and particularly in the methods of the Winter Krill project and ongoing acoustic survey operation.
- The methods manual describing the methods for acoustics operation and calibration on Pharos SG, and for the other aspects of the project (plankton trawls, penguin tagging, cetacean observation, and seabirds at sea observation) was reviewed and updated. These are maintained in a shared drive and are accessible to GSGSSI staff, Pharos crew and KEP science staff.
- At-sea observations of marine mammals were undertaken on each survey alongside the acoustic and plankton trawls. In March/April this was carried out by the project team and KEP scientists. During the July survey, this was carried out by a single dedicated cetacean observer (Conor Ryan) for which additional matched funds were obtained from GSGSSI. In September, this was carried out by the same team of three specialist cetacean researchers (Russell Leaper, Susannah Calderan and Paula Olson) who joined the team in July 2022, carrying out dedicated visual and passive acoustic surveys for marine mammals.
- At-sea observations of seabirds were undertaken on the July and September surveys only by dedicated seabird observers trained in JNCC Seabirds at Sea methods (Garry Taylor in July, Paul French in September). This was supported by matched funding provided by the GSGSSI. Due to having to bring the survey forward at short notice because of the Pharos going into dry dock in May, it was not possible to recruit a seabird observer in time for the March/April survey.
- Eight gentoo penguins were fitted with Wildlife Computers SPOT-367A PTT satellite tags at Maiviken, and four at Bird Island in May/June 2023. This totals 12 PTT tags deployed in Year 2 of the project. As an addition to the original aim of the project, 9 GPS tags were also deployed on gentoo penguins at Bird Island, which download data to local base stations. Four of those have been transmitting good data throughout but the remainder have not returned to within range of the base stations. Data continued to be received until September 2023 at which point recovery of the tags began.
- Data from the tracked penguins is relayed via the Argos satellite system and uploaded to the BAS project page for track visualisation. Currently the tracks can be found at the bottom of the 'About' tab (<https://www.bas.ac.uk/project/winter-krill-at-south-georgia/>).
- Progress is underway to archive all project data with the BAS Polar Data Centre (PDC) and the GSGSSI Data Portal.
- Progress has been made towards inputting to management through presentation of the interim project results at the 5 Yearly SGSSI MPA Review Workshop in June 2023. The PI also gave a [short media interview](#) to UK Government Blue Belt which was shared on X (at the time known as Twitter). An article about the Symposium (including a [link to the talk on the Winter Krill project](#)) was posted on the GSGSSI [website](#). This included direct and online engagement with key project stakeholders from the science, NGO and government sectors who were present at the workshop.
- Papers containing results and analysis to date were also presented at two CCAMLR meetings, WG-ASAM (Working Group on Acoustic Survey and Analysis Methods) in May 2023 and WG-EMM (Working Group on Ecosystem Monitoring and Management) in July 2023. This constituted further engagement with international science, management and fishery stakeholders.
- Two further general interest articles were published. One was in *Ocean Challenge* magazine in April 2023, a magazine sent to all members of the Challenger Society for Marine Science, and the second was published in the *Marine Biologist* (magazine for members of the Marine Biological Association) in July 2023. See PDFs attached to email for copies of both articles.
- A date has been set and plans are underway for a Project Workshop, to discuss emerging results and implications from both years of surveys as final analyses are

completed, in December 2023, and a Stakeholder Workshop in May 2024, for which the goals will be wider dissemination of results and discussion of implications for management.

**2. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.**

The first problem that we encountered earlier in the year was the Pharos SG having to go into dry dock during May 2023, during the period we had planned our first survey of the season. This was mitigated by being able to carry out a survey slightly earlier in March/ April instead and was approved with a previous Change Request. This will have no impact on the budget or timetable of the project but will require consideration in analysis and interpretation of results. Nevertheless, it should not impact the overall assessment of krill abundance and distribution throughout the season as a whole, as our July and September surveys were carried out at the intended times.

The second development was the presence of significant amounts of ice during both the July and September surveys as a result of the breakup of iceberg A76-A. This meant that the captain of the vessel had to be responsive to ice during the occupation of the transects in the Eastern Core Box (ECB). As a result, they occasionally had to be cut short or deviated from, both in order to complete the full set within the required time window, and to carry out associated sampling at the correct times. Again, this will have no impact on the budget or timetable of the project but will require consideration in the execution of the acoustic analysis.

**3. Have any of these issues been discussed with NIRAS and if so, have changes been made to the original agreement?**

Discussed with NIRAS: Yes/No

Formal Change Request submitted: Yes/No

Received confirmation of change acceptance Yes/No

Change request reference if known:

**4a. Please confirm your actual spend in this financial year to date (i.e. from 1 April 2023 – 30 September 2023)**

Actual spend: ██████████

**4b. Do you currently expect to have any significant (e.g. more than £5,000) underspend in your budget for this financial year (ending 31 March 2024)?**

Yes  No  Estimated underspend: £

**4c. If yes, then you need to consider your project budget needs carefully.** Please remember that any funds agreed for this financial year are only available to the project in this financial year.

**If you anticipate a significant underspend because of justifiable changes within the project, please submit a re-budget Change Request as soon as possible. There is no guarantee that Defra will agree a re-budget so please ensure you have enough time to make appropriate changes if necessary. Please DO NOT send these in the same email as your report.**

**NB: if you expect an underspend, do not claim anything more than you expect to spend this financial year.**

**5. Are there any other issues you wish to raise relating to the project or to BCF management, monitoring, or financial procedures?**

**If you are a new project and you received feedback comments that requested a response, or if your Annual Report Review asked you to provide a response with your next half year report, please attach your response to this document.**

**All new projects (excluding Darwin Plus Fellowships and IWT Challenge Fund Evidence projects) should submit their Risk Register with this report if they have not already done so.**

**Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also** be raised with NIRAS through a Change Request. **Please DO NOT send these in the same email.****

Please send your **completed report by email** to [BCF-Reports@niras.com](mailto:BCF-Reports@niras.com). The report should be between 2-3 pages maximum. **Please state your project reference number, followed by the specific fund in the header of your email message e.g. Subject: 29-001 Darwin Initiative Half Year Report**