



## **Biodiversity Challenge Funds Projects Darwin Initiative, Illegal Wildlife Trade Challenge Fund, and Darwin Plus**

### **Half Year Report**

It is expected that this report will be a **maximum of 2-3 pages** in length.

**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.**

**CONFIDENTIAL INFORMATION HIGHLIGHTED IN BLUE.**

**Submission Deadline: 31<sup>st</sup> October 2025**

**Please note all projects that were active before 1<sup>st</sup> October 2025 are required to complete a Half Year Report.**

Submit to: [BCF-Reports@niras.com](mailto:BCF-Reports@niras.com) including your project ref in the subject line.

<b>Project reference</b>	DPLUS185
<b>Project title</b>	Safeguarding Antarctic krill stocks for baleen whales
<b>Country(ies)/territory(ies)</b>	British Antarctic Territory
<b>Lead Organisation</b>	University of Southampton
<b>Partner(s)</b>	British Antarctic Survey, Scottish Association for Marine Sciences, Non-partner collaborator: University of California Santa Cruz
<b>Project Leader</b>	Ryan Reisinger
<b>Report date and number (e.g. HYR1)</b>	HYR3 – 28 November 2025
<b>Project website/blog/social media</b>	<a href="https://www.bas.ac.uk/project/safeguarding-antarctic-krill-stocks-for-baleen-whales/">https://www.bas.ac.uk/project/safeguarding-antarctic-krill-stocks-for-baleen-whales/</a>

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

Although we are not looking for specific reporting against your indicators, please use this opportunity to consider the appropriateness of your monitoring, evaluation and learning (MEL) 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.

## Project team

### *Outputs 1, 3, 4, and 5*

Over the reporting period, postdoctoral researcher Julie Mestre (University of Southampton) has been employed at 1.0 FTE.

### *Output 2*

Over the reporting period, postdoctoral researcher Tracey Dornan (British Antarctic Survey) has been employed at 0.9 FTE.

## **Output 1 – whales**

### *Tracking*

Following our failure to tag fin whales during the second field season because of adverse weather conditions, collaboration has been started with Prof. Dr. Helena Herr (Hamburg University/Alfred Wegener Institute), who agreed to share with us satellite tracks from fin whales tagged in 2021 (n = 4) and 2023 (n = 9). We are also in discussion with Prof. Luciano Dalla Rosa (Federal University of Rio Grande, Brazil) regarding access to fin whale tracking data (n = 1) from the Brazilian Antarctic programme, and deployment of our project's remaining tags (n = 3) in February/March 2026, alongside deployment of Brazilian Antarctic Programme tags (n ~ 7). Through an in-kind contribution of tags (UC Santa Cruz) and vessel berths (Quark Expeditions), Reisinger and Friedlaender will deploy ~10 tags on humpback whales in early March 2026. These data will be used to assess late-season movement and dive behaviour of humpback whales with respect to the krill fishery.

### *Passive Acoustic Monitoring*

Data from two hydrophones deployed during our fieldwork in March 2024 and three hydrophones during March 2025 are being analysed by PhD candidate Amy Feakes. Two hydrophones remain deployed at Elephant Island and will be retrieved in early 2026 [REDACTED]

## **Output 2 - Krill**

Dornan is continuing to analyse krill acoustic data from the first field season to produce spatially-explicit fine-scale krill abundance estimates from the original survey data (Outputs 2.2 & 2.3). These data are currently being analysed in relation to opportunistic whale observation data collected in the first cruise to observe fine-scale whale krill interactions at the Antarctic Peninsula.

The ImpYak was successfully deployed in Ryder Bay, Rothera, Antarctica with the support of the captain and crew of the RRS Sir David Attenborough in May 2025 (Output 2.1). Dornan has completed a technical report outlining results, capabilities and future development needs. Further tank-based trials are being run at BAS to see if data quality can be improved for krill surveys.

The project team are currently working on accessing Antarctic Peninsula acoustic data from collaborators at NOAA and other institutes, as well as fishing vessel data from Ocean Data Hub, to build spatially-explicit krill distribution maps (Output 2.3) covering available whale tracking data (2012-2024).

## **Output 3 – 3D predator-consumer interactions**

Krill acoustic survey and marine mammal observations (MMO) were performed simultaneously during dedicated transects during the first field season. Dornan has been analysing krill acoustic data, Mestre formatted and pre-processed the MMO data, while Natalie Nickells (BAS/Southampton PhD student) controlled the quality of data and robustness of the MMO survey protocol, with the guidance of Natalie Kelly, Australian Antarctic Division, an expert in statistical analysis of cetacean survey observations. All of them are currently working on putting together krill and MMO datasets, to explore the link between whale occurrence and behavior with the characteristics of krill swarms.

Dornan is analysing outputs from fine-scale acoustic survey from Yr 1 in relation to the concurrent opportunistic whale observations (Output 3.1) Outputs from this analysis will be submitted to CCAMLR WG-ASAM in 2026 and prepared for peer-review publication (related to Output 3.2).

#### **Output 4 – Integrated krill-consumer fisheries interactions**

Mestre has analysed existing humpback and minke whale tracking data (2012-2018) and assessed the spatiotemporal overlap with krill trawler AIS data sourced from Global Fishing Watch. Recently accessed tracking data (see Output 1) will enable to add fin whales to the analysis, and trawler AIS time series will be extended (2019-2024).

CCAMLR C1 data are being requested through Chile, to enable estimation of functional overlap between whales and the fishery, which was one of the major talking points around our working Paper submission to CCAMLR WG-EMM (see Communication, below). This will include an analysis of the environmental niche of whales and fisheries.

#### **Output 5 – Forecasting**

Mainly on hold during the reporting period, although Visting MSc researcher Maelis Girard (Sorbonne University) produced preliminary habitat models for her MSc Marine Sciences thesis. Previously, preliminary habitat models for whales were developed in 2024 by Burleigh. Note comments in section 2 below, regarding loss of ca. 4 months of time for Mestre.

#### **Communication**

Reisinger gave a talk to the South Georgia Association at their summer meeting held at the British Antarctic Survey, Cambridge.

Dornan delivered a presentation on the ImpYak to crew and passengers onboard the RRS Sir David Attenborough; Led on an international working group paper to CCAMLR WG-ASAM 2025 paper *Use of autonomous platforms to study krill in the Southern Ocean*; and is lead author on a paper on the *Applications of active-acoustic and complementary technologies in marine ecosystem science* to ICES Journal of Marine Science (under review).

Mestre presented a poster (co-authored with Reisinger, Trathan and Friedlaender, among others) on the spatiotemporal overlap between fisheries, humpback and minke whales at the 36<sup>h</sup> European Cetacean Society held in the Azores.

Mestre, Reisinger, Trathan and Friedlaender, coauthored, with other collaborators, a working paper on the spatiotemporal overlap between humpback and mike whales and fisheries to the CCAMLR WG-EMM 2025: “Spatiotemporal overlap of minke and humpback whales with krill fishing vessels in the Western Antarctic Peninsula” (<https://meetings.ccamlr.org/en/wg-emm-2025/57>).

Reisinger was among the coauthors of another report to CCAMLR WG-EMM 2025: “Integrating cetacean research into the CCAMLR Ecosystem Monitoring Program and the revised Krill Fishery Management Approach: Review and recommendations” (<https://meetings.ccamlr.org/en/wg-emm-2025/43>).

Visting MSc researcher Maelis Girard (Sorbonne University) produced the MSc Marine Sciences thesis “Identification of Areas of Ecological Significance and Ecoregions in the Antarctic Peninsula from predators’ behavioural patterns” under the supervision of Reisinger.

**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.**

Over the last 6 months we have responded to the challenges posed by another disappointing field season, where usable tagging data were not collected, and BAS unexpectedly withdrew from fieldwork, meaning gold-standard acoustics data could not be collected. However, Southampton project members have come to an agreement with Hamburg University collaborators to use their tracking data. BAS project members have been able to call on collaborators and connections with CCAMLR to find alternative acoustics data. Despite not being able to go on the second cruise (March 2025), BAS's logistical capability meant that the ImpYak could be tested at Rothera Station in the Antarctic Peninsula.



Finally, negotiations around krill fishery management in CCAMLR have become fractious and heavily driven by geopolitics. CCAMLR operates through complete consensus among its members. Therefore, as pointed out in our project's mid-term review, single member nations can block proposed management reforms. Indeed, following disagreement among members, CCAMLR's Conservation Measure 51-07, which subdivides krill catch limits among Subareas and is an important element of CCMLR's precautionary krill fishery management approach, was not renewed and lapsed in November 2024 (discussed in our paper: <https://www.sciencedirect.com/science/article/pii/S0308597X25002027>).

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

Discussed with NIRAS:	[REDACTED]
Formal Change Request submitted:	[REDACTED]
Received confirmation of change acceptance:	[REDACTED]

Change Request reference if known: *If you submitted a financial Change Request, you can find the reference in the email from NIRAS confirming the outcome*

**Guidance for Section 4:** The information you provide in this section will be used by Defra to review the financial status of projects. This review will identify projects at random for spot checks on financial management and will include requests for evidence of the actual spend information provided below. Please ensure the figures you provide are as accurate as possible and that you have the evidence to support it. You do not need to provide it now.

**4a. Please confirm your actual spend in this financial year to date (i.e. from 1 April 2025 – 30 September 2025)**

Actual spend: £ [REDACTED]

**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 2026)?**



**4c. If you expect an underspend, then you should 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, and not later than 31<sup>st</sup> December. There is no guarantee that Defra will agree a re-budget so please ensure you have enough time to make appropriate changes to your project 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 BCFs management, monitoring, or financial procedures?**

Suspicions or allegations related to fraud and error concerns should be reported to [fraudanderror@Defra.gov.uk](mailto:fraudanderror@Defra.gov.uk)

- [REDACTED]
- [REDACTED]

**6. Project risk management**

**6a. If your project has an Overseas Security and Justice assessment, please provide an update on any related risks, and any special conditions in your award paperwork if relevant for your project.**

Overseas Security and Justice assessment: Not relevant.

Overall, risks continue to be monitored and managed using the risk register.

**6b. Have any concerns or allegations relating to sexual exploitation, abuse or harassment been reported in the past 6 months?**

Suspicions or allegations related to safeguarding concerns should be reported to [ODA.Safeguarding@defra.gov.uk](mailto:ODA.Safeguarding@defra.gov.uk)

Not applicable.

**7. Please use this section to respond to any feedback provided when your project was confirmed, or from your most recent Annual Report. As a reminder, all projects that were scored as 'Not Yet Sensitive' in the Gender Equality and Social Inclusion (GESI) assessment of their latest Annual Report should demonstrate how they are meeting the minimum GESI-Sensitive standard.**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]





