

## 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>	DPLUS179
<b>Project title</b>	Characterising pelagic biodiversity at South Georgia through novel sampling methods
<b>Country(ies)/territory(ies)</b>	South Georgia and the South Sandwich Islands
<b>Lead partner</b>	British Antarctic Survey
<b>Partner(s)</b>	Government of South Georgia and the South Sandwich Islands (GSGSSI) and Marine Biological Association (MBA)
<b>Project leader</b>	Cecilia Liszka
<b>Report date and number (e.g. HYR1)</b>	October 2023, HYR1
<b>Project website/blog/social media</b>	<a href="https://www.bas.ac.uk/project/south-georgia-pelagicbiodiversity/">https://www.bas.ac.uk/project/south-georgia-pelagicbiodiversity/</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 against the project implementation timetable has been made:

- A full time PDRA (Dr Victoria Fowler) is now in position (started April 2023) and is making progress towards the project indicators.
- A launch meeting was held in May 2023, which brought together all project partners to discuss and agree on how the project would move forwards.
- New optical and molecular equipment has been received. This includes the Underwater Vision Profiler 6 (UVP6), eDNA filtration rig and laboratory consumables. Equipment was received by the MV *Pharos SG* ahead of the first field campaign.
- The first field campaign took place in July 2023. This was a successful campaign with the UVP6, miniBongo, CTD, RMT1 and eDNA deployments carried out from the MV *Pharos SG* across sampling locations as described in the cruise report. This cruise report is available on <https://www.bas.ac.uk/project/south-georgia-pelagic-biodiversity>.
- A shake down station took place on board the MV *Pharos SG* prior to carrying out field work in July. This was to allow the crew and scientists to work with each other and train relevant team members on the safe deployment and retrieval of equipment.

- Training of project team members has been carried out. During the July 2023 fieldwork campaign, KEP science staff were trained on each of the methods, particularly the deployment of the UVP6, plankton nets, and water collection bottles, and subsequent eDNA filtration methods. We are in ongoing dialogue with the KEP staff to refine methods as appropriate as the fieldwork continues throughout the year.
- Following training, the King Edward Point (KEP) science team (Carrie Gunn and George Perry) successfully deployed all equipment independently during August (11/08/2023) and October (12/10/2023) surveys, and with support from Tracey Dornan (BAS scientist) and Jade Boughton (KEP scientist) on the September survey (08/09/2023-21/09/2023). During the August and October campaigns Cumberland Bay (CB) was sampled using the UVP6, Niskin bottles, RMT1, miniBongo and CTD. During the September campaign all equipment was deployed at Cumberland Bay and the Eastern Core box stations. This alternating pattern of deployments (CB one month, CB + ECB stations the next) will continue for ongoing fieldwork.
- Protocols have been developed for all methods and deployments. These are updated as required and maintained in a shared drive and are accessible to KEP science staff.
- Vicky Fowler (PDRA) attended formal training on the UVP6 (September 2023). The learnings from this course are being translated into training materials and manuals that will be disseminated to members of the project team. Final versions will be shared with all project staff and partners at the end of the project. This will enable the retention of knowledge and the ability to continue to implement these methods beyond the immediate project.
- To date, 45 historic samples have been scanned using the BAS ZooScan. These have been uploaded onto a machine assisted learning platform (EcoTaxa, <https://ecotaxa.obs-vlfr.fr/prj/10454>) for taxonomic classification and further analysis. Once classified these will aid in providing baseline data on plankton abundance around South Georgia.
- Six historic samples have been sent to the MBA for taxonomic analysis and analysis is underway. Voucher specimens are being identified from these samples to aid in the classification of plankton images from the ZooScan.
- A number of the scanned samples were classified to a basic level and used as a data set for an external event hosted by BAS's mapping team (<https://www.cartography.org.uk/annual-conference>). During the event participants explored novel ways of mapping and visualising the data.
- Progress has been made towards inputting to management. The PI presented an update on the project and future plans at the 5 Yearly SGSSI MPA Review Workshop in June 2023 and 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 SG Pelagic Biodiversity 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.

**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.**

1. As noted in the annual report, there were some delays to the procurement of the UVP6, meaning that there was limited time to carry out trials and develop protocols before the first field campaign. Some trials and basic protocols were developed, with the assistance of the UVP6 manufacturers, prior to consigning the equipment south for fieldwork, and further trials were conducted in situ. This has not affected the budget nor subsequent timetable of the project.
2. During the first field campaign some issues with the eDNA water filtration system arose that required some troubleshooting and revisions to the protocol. Further revisions of the protocol are expected to optimise the protocol following reviews and discussions with colleagues regarding previously used filtration systems. Some additional consumables were required to be purchased but this is being subsidised by underspend on the UVP6 (as discussed with NIRAS already). This will therefore not affect the budget nor timetable of the project.
3. The first field campaign was also impacted by bad weather delaying the arrival of key members of the project team and crew, causing the survey start to be delayed. However, good communication was maintained with SG government officers, *MV Pharos* SG officers and the project team throughout resulting in no loss of science days during the campaign and all our objectives being fully carried out. This will not affect the budget or timetable of the project but may be a risk for subsequent surveys.

**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

1 and 3 above were noted in the risk register and have been managed accordingly. The additional consumable spend in 2 has been discussed with NIRAS and a change request submitted.

Formal Change Request submitted: Yes/No

Received confirmation of change acceptance Yes/No

Indication was given that it would be accepted but formal acceptance has not yet been received.

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**