



**BIODIVERSITY  
CHALLENGE FUNDS**



## **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.**

**Submission Deadline: 31<sup>st</sup> October 2024**

**Please note all projects that were active before 1 October 2024 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>	<i>This should be the project reference provided in your offer paperwork and not your application number</i>
<b>Project title</b>	Evidence-based conservation of key biodiversity in the South Sandwich Islands
<b>Country(ies)/territory(ies)</b>	South Georgia South Sandwich Islands
<b>Lead Organisation</b>	BAS
<b>Partner(s)</b>	Oxford Brookes University, Edinburgh University, Antarctic Research Trust, Government of South Georgia and South Sandwich Islands
<b>Project leader</b>	<i>Norman Ratcliffe</i>
<b>Report date and number (e.g. HYR1)</b>	<i>Oct 2024, HYR2</i>
<b>Project website/blog/social media</b>	<a href="#"><i>Zavodovski Expedition - British Antarctic Survey (bas.ac.uk)</i></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).**

Penguin Survey (Output 1): Aerial images from the Zavodovski expedition have been stitched and georectified. Artificial Intelligence counting methods are now being used to produce population estimates. These will be validated with expert and crowd sourced manual counts through the Penguin Watch platform. Optical satellite images of the island have been collated and tasking of new images for Dec 2024/Jan 26 have been requested from Maxar and Airbus. SAR images have also been analysed that use the unique texture of radar reflectance from penguin colonies to estimate colony extent and density, which overcomes limitations of cloud cover that affects optical images.

Terrestrial survey (Output 1): All lichen and moss samples are now processed and DNA extracted for species analysis at the Royal Botanic Garden in Edinburgh. Soil samples from geothermal sites have been shared with the Geothermal Unit at Waikato University, New Zealand, for processing. Arrangements have been made with the BAS herbarium for the safe

storage of samples after identification. The location and extent of an important moss patch is being mapped using aerial images.

Penguin tracking (Output 2): Breeding season and pre-moult paths from satellite tags have been analysed from 12 chinstrap and 8 macaroni penguins to estimate hourly locations, corrected for observation errors. The four GLS tracks from chinstrap penguins have been analysed to reveal a directed easterly migration to wintering grounds south of Africa. Seasonal use of the SGSSI MPA, and the No Take Zones therein, have been quantified. Implications of the findings for marine spatial planning within the SGSSI MPA are being discussed with GSGSSI.

Penguin diets (Output 3): Extraction of DNA from faecal samples is ongoing. Fish specific primers are showing up in samples for both species which is unexpected as chinstraps are widely regarded as krill dietary specialists. Final fish results should be available in ~1 month but invertebrate primers will take ~6 months.

Outreach and Dissemination: Gemma Clucas gave a plenary presentation on Zavodovski penguins at the Pacific Seabird Group meeting in Seattle, USA February 2024, and a talk at the Cornell Lab of Ornithology Young Birders Event, USA, June 2024. Nicole Richter presented talks on satellite and UAV monitoring of Zavodovski volcanology and penguin colonies at the EGU General Assembly April 2024, Vienna, Austria and the 10th Physics of Volcanoes Workshop, March 2024, Oberpfaffenhofen, Germany. Norman Ratcliffe presented a talk on the Zavodovski penguin tracking work at the 16<sup>th</sup> Seabird Group conference September, Coimbra, Portugal.

M&E: Progress toward project and standard indicators is on schedule and important assumptions have been met. The majority of the risks and assumptions were related to the challenging field season that was completed successfully. The remaining work primarily involves analysis, dissemination and application of the findings to policy and management outcomes. The PI is maintaining oversight of progress toward outputs and indicators via email, 1:1 in person meetings (Oxford Brookes 2 Oct 2024) and full project Zoom meetings (most recently 15 Oct 2024). The PI and BAS Finance continue to monitor the expenditure against the budget. Completion of the project to budget at the end of March 2025 and submission of the final report in Sep 2025 are on track.

**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.**

None

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

Discussed with NIRAS:

NA

Formal Change Request submitted:

NA

Received confirmation of change acceptance:

NA

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*

NA

**4a. Please confirm your actual spend in this financial year to date (i.e. from 1 April 2024 – 30 September 2024)**

**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 2025)?**

Yes ☐ No ☒

**4c. If you expect and 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. 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 BCF management, monitoring, or financial procedures?**

No

**6. Please use this section to respond to any feedback provided when your project was confirmed, or from your most recent annual report.**

The review was largely positive but requested clarification on (1) changes in project partners to be explained and (2) whether opportunities might exist to recover more GLS tags in future.

- (1) We extended the partnership to include Gemma Clucas at Cornell and Nicole Richter from RWTH Aachen universities. Gemma is an experienced ornithologist who has worked on South Sandwich Island penguins previously and has skills in DNA analysis of diet. She formed half of the penguin team during the Zavodovski expedition and has since led on the DNA diet analysis. Nicole is an expert on volcanology and satellite imagery who brings skills needed to manage risks of working on a volcanic island, physical survey data to place biological observations in an environmental context and brings a novel approach to censusing penguins using SAR images. Both have been enthusiastic members of the team since they were co-opted and are making valuable contributions to the delivery of outputs.
- (2) The GLS tags are mounted on leg rings and may remain on birds for years, although numbers will decline through time with natural mortality. Zavodovski is a remote and difficult to access island and we know of no opportunities to revisit the island at present. Our partner Nicole Richter has submitted a grant application to return to the island but the outcome is at present unknown. We have asked our partners at GSGSSI to notify us if a permit request to visit the island is submitted so we can attempt to negotiate access onto the island to recover further tags.

## Checklist for submission

**For New Projects (i.e. starting after 1<sup>st</sup> April 2024)**

Have you **responded to any additional feedback** (other than caveats) received in the letter you received to say your application was successful which requested response at HYR (including safeguarding points)? You should respond in section 6, annexes other requested materials as appropriate.

NA

If not already submitted, have you attached your **risk register**?

NA

<b>For Existing Projects (i.e. started before 1<sup>st</sup> April 2024)</b>	
Have you responded to <b>feedback from your latest Annual Report Review</b> ? You should respond in section 6, annexes other requested materials as appropriate.	✓
<b>For All Projects</b>	
Include your <b>project reference</b> in the subject line of submission email.	✓
Submit to <a href="mailto:BCFs-Report@niras.com">BCFs-Report@niras.com</a> .	✓
Have you <b>clearly highlighted any confidential information</b> within the report that you do not wish to be shared on our website?	NA
Have you reported against the most <b>up to date information for your project</b> ?	✓
Please ensure claim forms and other communications for your project are not included with this report.	✓