

Darwin Plus Main & Strategic: Annual Report

To be completed with reference to the “Project Reporting Information Note”

(<https://darwinplus.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 2025

Submit to: BCF-Reports@niras.com including your project ref in the subject line

Darwin Plus Project Information

| | |
|--|---|
| Scheme (Main or Strategic) | Main |
| Project reference | DPLUS120 |
| Project title | Spatial segregation of seabirds at South Georgia |
| Territory(ies) | South Georgia |
| Lead Organisation | British Antarctic Survey |
| Project partner(s) | Birdlife International |
| Darwin Plus grant value | £269,234 |
| Start/end dates of project | March 2021 - 30 July 2026 |
| Reporting period (e.g. Apr 2024-Mar 2025) and number (e.g. Annual Report 1, 2) | April 2024 - March 2025, Annual Report number 5. |
| Project Leader name | Victoria Warwick-Evans |
| Project website/blog/social media | https://www.bas.ac.uk/project/spatial-segregation-of-seabirds-at-south-georgia/ |
| Report author(s) and date | Victoria Warwick-Evans 11 April 2025 |

1. Project summary

Despite measures to minimise bycatch of South Georgia’s globally important populations of seabirds, albatross and petrel populations are still declining, and at different rates across the archipelago. We are using biologging devices to track albatrosses and petrels from different colonies. We aim to characterise variation in colony-specific overlap of birds with fishing fleets, identify high-risk areas, and inform a more focussed approach to engaging with fisheries to better understand and address impacts of bycatch on these threatened species.

2. Project stakeholders/partners

We engaged with the project partners (Birdlife International) via email and informal catch ups. The purpose of these was to update the project partners about the timescales and logistical aspects of the project. The key role of the project partners is to disseminate the results, and to engage with fisheries, focussing management efforts on the relevant fishing fleets. As such, most of this activity will take place once we have completed analyses of particular datasets and the studies have been accepted by scientific journals, after which they will be submitted as papers to working groups of conservation or fisheries bodies.

We also engaged frequently with the Government of South Georgia and South Sandwich Islands (GSGSSI) who are our main stakeholders. We continue to engage in informal discussions as the project progresses.

3. Project progress

3.1 Progress in carrying out project Activities

Activity 1.1 Wandering albatrosses from Prion Island and Bird Island, and white-chinned petrels from Bird Island, Cooper Island and King Edward Point have been tracked using GPS and GLS devices. All tag recovery is now complete (see Supporting Documents 1, 2 and 3 for evidence).

Activity 1.2 Habitat models which link distribution of tracked individuals with environmental variables and predict the at-sea distributions have now been completed for wandering albatrosses and white-chinned petrels during the breeding season, and for white-chinned petrels during the non-breeding season (see Supporting Documents 1, 2 and 3 for evidence).

Activity 1.3 The core foraging areas for each species for each colony has been estimated and overlap between colonies has been calculated (see Supporting Documents 1, 2 and 3 for evidence).

Activity 2.1 Satellite-AIS data on all fishing vessels operating within the at-sea distributions of wandering albatrosses and white-chinned petrels during the breeding and non-breeding seasons have been collated (see Supporting Documents 1, 2 and 3 for evidence).

Activity 2.2 Fishing effort in these regions including by pelagic longline, demersal longline and trawl fisheries has been collated (see Supporting Documents 1, 2 and 3 for evidence).

Activity 2.3 Spatial overlap between fishing effort and at-sea distributions for both species during the breeding season has been calculated, and the fleets which present the highest risk to each species during both the breeding and non-breeding season have been identified (see Supporting Documents 1, 2 and 3 for evidence).

Activity 2.4 A series of maps and tables describing the overlap with different fishing fleets has been prepared (see Supporting Documents 1, 2 and 3 for evidence).

Activity 2.5 Two manuscripts which describe the spatial segregation and overlap with fisheries of wandering albatrosses during the breeding and non-breeding seasons have been prepared for publication and are under review at the journal *Conservation Biology* (Impact Factor 5.2). The analyses for a similar manuscript describing the spatial segregation and overlap of white-chinned petrels with fisheries during the breeding and non-breeding season are almost complete, and the manuscript will be written up shortly (see Supporting Documents 1, 2 and 3 for evidence).

3.2 Progress towards project Outputs

Output 1:

Habitat preferences of white-chinned petrels and wandering albatrosses from different colonies have been identified, and inter-colony variation in their at-sea distributions during the breeding season has been characterised. Habitat preferences of white-chinned petrels from different colonies, during the non-breeding season have been identified, and inter-colony

variation in their at-sea distributions has been characterised. On examination of the tracking data from wandering albatrosses during the non-breeding season, it was clear that birds from both colonies had very similar at-sea distributions, and thus very similar habitat preferences. Given that the aim of this study was to identify and characterise inter-colony variation in the use of areas at-sea, we decided that developing habitat models for wandering albatrosses during the non-breeding season was not necessary. All of the smart indicators for this output have been achieved. Please see Supporting Documents 1, 2 and 3 for evidence.

Output 2:

Overlap with fisheries during the breeding and non-breeding seasons has been estimated for both wandering albatrosses and white-chinned petrels. Specific high-risk areas from different fishing fleets have been identified. All of the smart indicators for this output have been achieved. Please see Supporting Documents 1, 2 and 3 for evidence.

Output 3:

The results of the first study identifying spatial segregation and relative overlap of wandering albatrosses with fisheries during the breeding is in the third round of review at *Conservation Biology*, and is expected to be accepted shortly. This paper has been circulated to the Government of South Georgia and the South Sandwich Islands (GSGSSI) and results have been discussed with project partners at Birdlife International. The results of a companion paper, describing spatial segregation and relative bycatch risk of wandering albatrosses during the non-breeding season is under review with *Conservation Biology*. This paper has also been circulated to GSGSSI. Once the analyses of spatial segregation and relative bycatch risk of white-chinned petrels from Cooper Island, King Edward Point and Bird Island have been finalised, we will hold formal meetings with project partner Birdlife International, and with GSGSSI to discuss the best strategy for dissemination of our results in order to maximise the uptake for fisheries management and conservation. These meetings will take place in the next few months. Included in the strategy will be the presentation of papers or bespoke products by Birdlife International at relevant meetings of regional fisheries management organisations (RFMOs), and by the UK at the next Advisory Committee meeting of the Agreement on the Conservation of Albatrosses and Petrels (ACAP). If requested, we will also provide bespoke analyses for BirdLife Partners in South America, southern Africa or Australasia. We have not yet achieved the SMART indicators, but anticipate that this will be achieved over the coming year.

3.3 Progress towards the project Outcome

Outcome:

We have identified colony-specific areas of high bycatch-risk during the breeding and non-breeding seasons for white-chinned petrels and wandering albatrosses. We anticipate that the initial steps towards modification of mitigation policy incorporating these results will begin over the coming year. SMART indicators 1 and 2 have been achieved, and we anticipate that indicators 3 and 4 will be achieved over the coming year. We think we are likely to achieve the project outcome.

3.4 Monitoring of assumptions

Assumption 0.1 Tracked birds will interact with fishing vessels, or overlap with areas used by pelagic or demersal fisheries. Previous tracking studies from Bird Island indicate that both of these species overlap with fisheries during the non-breeding season. Bycatch records from

South Georgia show that white-chinned petrels overlap with the South Georgia toothfish fishery if the season starts early.

Comments: Our results show that both wandering albatrosses and white-chinned petrels overlap with fishing activity during both the breeding and non-breeding season.

Assumption 1.1 White-chinned petrels and wandering albatrosses will be breeding at Cooper Island, King Edward Point and Bird Island and will be catchable. These species breed in large numbers and are tractable for tracking studies.

Comments: In the first field season (2021/22), white-chinned petrels breeding on Cooper Island and Bird Island were accessible, and tracking devices were deployed successfully at both sites. However, colonies of grey-headed albatrosses were considerably smaller than expected and in locations that were dangerous to access. However, we were able to switch our 2nd study species to wandering albatrosses, which has been very successful.

1.2 Environmental predictors will have sufficient predictive power to predict the distribution of seabirds. There is abundant evidence that seabirds select habitats based on oceanographic cues. Furthermore, extensive experience in this type of modelling, large sample sizes and abundant environmental information will optimise model performance.

Comments: The variables had high predictive power and the seabird distribution models are robust.

Assumption 2.1 Tracked birds will overlap with fisheries. Tracking studies from birds breeding at Bird Island have shown overlap of both wandering albatrosses and white-chinned petrels with both local and international fisheries.

Comments: There was extensive overlap between both wandering albatrosses and white-chinned petrels from both colonies at South Georgia and fisheries.

3.1 Outputs will be discussed at relevant stakeholder meetings. The decline in populations of white-chinned petrels and wandering albatrosses is a recognised conservation issue for all stakeholders. As such any measures to mitigate further declines in these populations are a priority for many stakeholders, and a consideration for fisheries management bodies.

Comments: The outputs have already been discussed with the Government of South Georgia and the South Sandwich Islands (GSGSSI) which is one of our key stakeholders. The issue of bycatch in fisheries is still high on the agenda of our project partner and other stakeholders and as such our results will be relevant to the upcoming fisheries management meetings.

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

Wandering albatrosses breeding on South Georgia are one of just nine High Priority Populations identified by the Agreement on the Conservation of Albatrosses and Petrels (ACAP). There is also a South Georgia [Conservation Action Plan](#) for this species. By investigating spatial segregation and fisheries overlap we are contributing to achieving the goals of this plan.

In addition, understanding the at-sea distribution and fisheries overlap of white-chinned petrels during the breeding and nonbreeding season is listed as a High priority research need in the [GSGSSI research and monitoring plan](#) for the Marine Protected Area.

We have made good progress this year in completing the activities required to bring this to the attention of the relevant stakeholders. Two papers are in the review stage of publication, and

the analyses for the third paper is near completion. These results will then be presented at relevant stakeholder meetings.

5. Gender Equality and Social Inclusion (GESI)

| GESI Scale | Description | Put X where you think your project is on the scale |
|--------------------------|--|--|
| Not yet sensitive | The GESI context may have been considered but the project isn't quite meeting the requirements of a 'sensitive' approach | |
| Sensitive | The GESI context has been considered and project activities take this into account in their design and implementation. The project addresses basic needs and vulnerabilities of women and marginalised groups and the project will not contribute to or create further inequalities. | |
| Empowering | The project has all the characteristics of a 'sensitive' approach whilst also increasing equal access to assets, resources and capabilities for women and marginalised groups | x |
| Transformative | The project has all the characteristics of an 'empowering' approach whilst also addressing unequal power relationships and seeking institutional and societal change | |

The PI on the project is a women and has undertaken the majority of the work. The first field season (at Prion Island and Cooper Island) was carried out by two women (the PI and a female PhD student). The second field season (at the Thatcher Peninsula, Prion Island and Cooper Island) was carried out by both sexes (Co-I Richard Phillips, one male and two female field assistants) as the PI was on maternity leave. Fieldwork at Bird Island in both seasons was carried out by three female and one male field assistant.

As PI on the project I believe the project is empowering. In addition to the ultimate goal of seabird conservation, the project has provided me with many opportunities including planning and budgeting fieldwork, supervising field assistants and leadership skills. The support received from Co-I Richard Phillips has been hugely valuable for the project, and for my development and leadership skills.

6. Monitoring and evaluation

The PI and Co-I at BAS have bi-weekly meetings to discuss progress. The PI takes notes at these meetings. This works very well for this project. The BAS team meet informally every 2 months with the Birdlife team to update them on progress. This also works well. As our results are finalised and papers are published and ready for discussion with project stakeholders we will engage more with project partners. It is clear that the outputs and activities will contribute to the project outcome as the activities and outputs identify colony-specific areas of high bycatch risk for the breeding and non-breeding season which is part of the project outcome. The indicators of achievement are maps, tables and reports and these have been successfully

developed for the wandering albatrosses and are almost complete for the white-chinned petrels. These have been measured by the submission of two manuscripts for publication.

7. Lessons learnt

Generally, the project has worked very well, and we are achieving all that we set out to do in the required timeframe. The one major difference is the switch of focus of our 2nd study species from grey-headed albatross to wandering albatross (see previous reports). Although the wandering albatross was not the original target species, we are able to answer similar questions about fisheries overlap. Wandering albatross populations are also declining at different rates across South Georgia, and it is likely that reflects spatial segregation in their foraging areas, and different degrees of overlap with fisheries. Additionally, the wandering albatross is classed as Vulnerable to extinction by the IUCN, as is our other study species, the white-chinned petrel. Apart from the switch to a different species the project is proceeding exactly as planned.

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

We have amended the log frame as suggested. We have also changed the wording of the project outputs to read less like an activity, added a timeline as recommended, and relabelled output 3.

9. Risk Management

No new risks have arisen in the last 12 months. All of the fieldwork is complete, two papers have been submitted to high impact journals, and the analyses is almost complete for the third paper.

10. Scalability and durability

- The work has been discussed with stakeholders many times during the duration of the project. It was discussed at the South Georgia and South Sandwich Islands Marine Protected Area 5-year Review Symposium (14 June, 2023), and the International Seabird Group Conference in 2022. The PI was also awarded a highly accredited internal award (the Laws Prize) and gave a lecture on her research, which included this project. The Co-I included slides on the project that featured the Darwin Plus logo at seminars which he gave at University of Liverpool (4 May 2023), South Georgia and South Sandwich Islands Marine Protected Area 5-year Review Symposium (14 June 2023), CEBC-CNRS, Chizé (11 Sept. 2024), University of Amsterdam (11 Oct. 2024), Norfolk Wildlife Trust/Cley Bird Club (21 Nov. 2024) and Peterborough Bird Club (26 Mar. 2025). The results were also discussed with the Foreign, Commonwealth and Development Office during a workshop in February 2024.
- The manuscripts will be published in open access journals and thus will be accessible to a wide audience including other scientists who may replicate the work for other species or locations, and also to those in management who may use the research for management purposes.
- The intended sustainable benefits post-project are still valid and the legacy will be as a result of dissemination of the results at relevant fisheries management meetings.

11. Darwin Plus identity

We acknowledge funding from Darwin Plus in both manuscripts, and will continue to do so in future manuscripts. The work has been presented at several meetings over the last 12 months,

although the opportunities for the PI to attend such events has been limited by childcare restrictions. However, we anticipate that these will be more accessible to the PI in the upcoming year. GSGSSI is very familiar with the Darwin Plus scheme and that it provided funding for our project.

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13. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2024 – 31 March 2025)

| Project spend (indicative) in this financial year | 2024/25 D+ Grant (£) | 202/25 Total actual D+ Costs (£) | Variance % | Comments (please explain significant variances) |
|---|-------------------------|-------------------------------------|---------------|--|
| Staff costs | | | | |
| Consultancy costs | | | | |
| Overhead Costs | | | | |
| Travel and subsistence | | | | |
| Operating Costs | | | | |
| Capital items | | | | |
| Others (Please specify) | | | | |
| TOTAL | 30673.54 | 30673.61 | | |

Table 2: Project mobilised or matched funding during the reporting period (1 April 2024 – 31 March 2025)

| | Secured to date | Expected by end of project | Sources |
|--|-----------------|----------------------------|---------|
| Matched funding leveraged by the partners to deliver the project (£) | | | |
| Total additional finance mobilised for new activities occurring outside of the project, building on evidence, best practices and the project (£) | | | |

14. Other comments on progress not covered elsewhere

Due to some unspent finances in the first year we were able to buy more tracking devices to expand the project to other species. As such, in the 2022/23 season, we deployed GPS loggers to tracking foraging trips during the breeding season of southern and northern giant petrels at Bird Island (n = 144 birds tracked mostly with archival loggers for single trips in incubation, brood-guard or post-guard chick rearing), and at the Thatcher Peninsula on mainland South Georgia (n = 28 birds tracked with remote-download loggers for multiple trips from incubation or late brood-guard into chick rearing). In that season, we also deployed 13 satellite transmitters on white-chinned petrels at Bird Island, and 12 satellite transmitters on white-chinned petrels at King Edward Point to track breeding birds in late incubation and chick-rearing. Geolocators were deployed on all three species at both sites in 2022/23 to track distribution during the following nonbreeding season. Recovery rates of geolocators over the last two seasons (2023/24 and 2024/25) at the Thatcher Peninsula are as follows: northern giant petrels (92%), white-chinned petrels (61.5%), southern giant petrels (46%). There are extensive data available from geolocators deployed on all three species in previous years at Bird Island.

15. OPTIONAL: Outstanding achievements or progress of your project so far (300-400 words maximum). This section may be used for publicity purposes.

Annex 1: Report of progress and achievements against logframe for Financial Year 2024-2025

| Project summary | Progress and Achievements April 2024 - March 2025 | Actions required/planned for next period |
|---|---|---|
| Impact Population declines of white-chinned petrels and grey-headed albatross breeding on South Georgia will reverse, and their conservation status will improve as a result of improved management practices. | We now understand more about the overlap between wandering albatrosses and fishing activities. This will allow us to focus management on the fishing fleets which directly interact with wandering albatrosses. | |
| Outcome Colony-specific areas of high bycatch-risk, during breeding and non-breeding seasons, are identified for white-chinned petrels and grey-headed albatrosses. Initial steps towards modification of mitigation policy incorporating these results. | | |
| Outcome indicator 0.1 Maps indicating spatially and temporally explicit high-risk areas are produced. | Maps indicating spatially and temporally explicit high-risk areas have been produced for wandering albatrosses. | Maps indicating spatially and temporally explicit high-risk areas will be produced for white-chinned petrels. |
| Outcome indicator 0.2, Engagement with Stakeholders (including relevant Fisheries managements, government stakeholders and NGOs). | We have engaged with stakeholders and NGOS at the South Georgia science symposium. | We will continue to engage with NGOs and stakeholders. We will meet formally with project partners Birdlife International to discuss our results for wandering albatrosses. Birdlife International will present the results at the Fisheries Management meetings. |
| 0.3 Commitment to change policy mitigation measures. | This will happen towards the end of the project | |

| | | |
|---|--|--|
| 0.4 Steps towards adoption of results into relevant fisheries management frameworks. | This will happen towards the end of the project | |
| Output 1. Habitat preferences of white-chinned petrels and grey-headed albatrosses from different colonies, during the breeding and non-breeding season, are identified, and inter-colony variation in their at-sea distributions is characterised | | |
| Output indicator 1.1 Relationships between seabird habitats and oceanographic variables are identified. | This is complete for wandering albatrosses and white-chinned petrels during the breeding season, and for white-chinned petrels during the non-breeding season. | We have assessed the suitability of developing these models for wandering albatrosses during the non-breeding season, and have concluded that it is not suitable. This is because wandering albatrosses from both breeding site visit the same locations during the non-breeding season and thus these models would show no difference in fisheries overlap between sites. As such we do not intend to develop these models. |
| Output indicator 1.2, Maps highlighting seabird distributions and high-density hotspots during the breeding and non-breeding season are produced. | This is complete for wandering albatrosses and white chinned petrels during the breeding and non-breeding season. | No further action is required |
| Output indicator 1.3, Spatial overlap in high-use areas of birds from different colonies are quantified. | This is complete for wandering albatrosses and white chinned petrels during the breeding and non-breeding season. | No further action is required |

| | | |
|--|---|---|
| Output 2. Overlap with fisheries during the breeding and non-breeding season and specific high-risk areas from different fishing fleets are identified. | | |
| Output indicator 2.1. A suite of detailed maps and tables describing the overlap between habitat use and different fishing fleets are produced for the breeding and non-breeding season. | This is complete for wandering albatrosses and white-chinned petrels during the breeding and non-breeding season. | No further action is required |
| Output 3. Disseminate results to partners and relevant stakeholders (July 2026). | | |
| Output indicator 3.1 Results and recommendations shared with stakeholders to inform their conservation and management frameworks. | | This will be completed over the coming year |
| Output indicator 3.2 Data deposited in global databases. | | This will be completed over the coming year |
| 3.3 Communication of results at national and international conferences. | | This will be completed over the coming year |

Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed)

| Project summary | SMART Indicators | Means of verification | Important Assumptions |
|---|---|--|---|
| Impact: Population declines of white-chinned petrels and wandering albatrosses breeding on South Georgia will reverse, and their conservation status will improve as a result of improved management practices. | | | |
| Outcome: Colony-specific, areas of high bycatch-risk, during breeding and non-breeding seasons, are identified for white-chinned petrels | 0.1 Maps indicating spatially and temporally explicit high-risk areas are produced. | 0.1 Independent meeting report text discussing the results of the project in a positive light. | 0.1 Tracked birds will interact with fishing vessels, or overlap with areas used by pelagic or demersal fisheries. Previous tracking studies from Bird Island indicate that the |

| Project summary | SMART Indicators | Means of verification | Important Assumptions |
|---|--|--|---|
| and wandering albatrosses. Initial steps towards modification of mitigation policy incorporating these results. | <p>0.2 Engagement with Stakeholders (including relevant Fisheries managements, government stakeholders and NGOs).</p> <p>0.3 Commitment to change policy mitigation measures.</p> <p>0.4 Steps towards adoption of results into relevant fisheries management frameworks.</p> | 0.2 Report text to include the next steps for incorporation into management frameworks. | both of these species overlap with fisheries during the non-breeding season. Bycatch records from South Georgia show that white-chinned petrels overlap with the South Georgia toothfish fishery if the season starts early. |
| <p>Output 1:</p> <p>Habitat preferences of white-chinned petrels and wandering albatrosses from different colonies, during the breeding and non-breeding seasons, are identified, and inter-colony variation in their at-sea distributions is characterised (June 2024).</p> | <p>1.1 Relationships between seabird habitats and oceanographic variables are identified (May 2024).</p> <p>1.2 Maps highlighting seabird distributions and high-density hotspots during the breeding and non-breeding seasons are produced (June 2024).</p> <p>1.3 Spatial overlap in high-use areas of birds from different colonies are quantified (July 2024).</p> | <p>1.1 Models will be validated to test their predictive power using recognised statistical techniques.</p> <p>1.2 Results will be discussed with project partners at bi-annual meetings which will be written up.</p> | <p>1.1 White-chinned petrels and wandering albatrosses will be breeding at Cooper Island, King Edward Point and Bird Island and will be catchable. These species breed in large numbers and are tractable for tracking studies.</p> <p>1.2 Environmental predictors will have sufficient predictive power to predict the distribution of seabirds. There is abundant evidence that seabirds select habitats based on oceanographic cues. Furthermore, extensive experience in this type of modelling, large sample sizes and abundant environmental</p> |

| Project summary | SMART Indicators | Means of verification | Important Assumptions |
|--|--|---|--|
| | | | information will optimise model performance. |
| Output 2: Identify overlap with fisheries during the breeding and non-breeding seasons, and identify specific high-risk areas from different fishing fleets (June 2025). | 2.1 A suite of detailed maps and tables describing the overlap between predicted habitat use and different fishing fleets are produced for the breeding and non-breeding seasons (December 2024). | 2.1 Submission of manuscripts for peer-reviewed papers, after quality assessment from co-authors. | 2.1 Tracked birds will overlap with fisheries. Tracking studies from birds breeding at Bird Island have shown overlap of both wandering albatrosses and white-chinned petrels with both local and international fisheries. |
| Output 3: Disseminate results to partners and relevant stakeholders (July 2026). | 3.1 Results and recommendations shared with stakeholders to inform their conservation and management frameworks (January to July 2026). 3.2 Data deposited in global databases (June 2026). 3.3 Communication of results at national and international conferences (January 2021 - July 2026). | 3.1 Text from independent meeting reports, and meeting minutes will discuss the results and the plans to implement changes to management frameworks. 3.2 Datasets available online. 3.3 Abstracts presented in conference programmes. | 3.1 Outputs will be discussed at relevant stakeholder meetings. The decline in populations of white-chinned petrels and wandering albatrosses is a recognised conservation issue for all stakeholders. As such any measures to mitigate further declines in these populations are a priority for many stakeholders, and a consideration for fisheries management bodies. |
| Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1) 1.1 Track wandering albatrosses from Prion Island and Bird Island, and track white-chinned petrels from Bird Island, Cooper Island and King Edward Point using GPS and GLS devices (January 2024). 1.2 Use statistical analyses to create habitat models which link distribution of tracked individuals with environmental variables during the breeding season. Use these models to predict at-sea distribution for all individuals from these colonies. 1.3 Calculate core foraging areas for each species for each colony and measure overlap between colonies. | | | |

| Project summary | SMART Indicators | Means of verification | Important Assumptions |
|---|------------------|-----------------------|-----------------------|
| <p>2.1 Collect satellite-AIS data on all fishing vessels operating in the core foraging areas of wandering albatrosses and white-chinned petrels.</p> <p>2.2 Collate fishing effort in these regions from existing datasets, including pelagic longline, demersal longline and trawl fisheries.</p> <p>2.3 Calculate spatial overlap between fishing effort and at-sea distribution for both species during the breeding season. Identify which fleets present the highest risk to each species at this time of year.</p> <p>2.4 Produce a series of maps and tables describing the overlap with different fishing fleets.</p> <p>2.5 Prepare manuscripts for publication in peer-reviewed journals.</p> <p>3.1 Prepare reports for meetings and working groups.</p> <p>3.2 Share results with all stakeholders via email, conferences, and attendance at meetings (e.g. ACAP, ICCAT and GSGSSI annual stakeholder/ working group meeting).</p> <p>3.3 BirdLife will engage directly with fishing fleets and fishing management organisations, to engender change in fisheries management practices in areas of high bird-fishery overlap.</p> <p>3.3 Deposit data into the Birdlife Tracking Database</p> <p>3.4 Attend national and international conferences to present results.</p> | | | |

Table 1 Project Standard Indicators

Please see the Standard Indicator guidance for more information on how to report in this section, including appropriate disaggregation.

| DPLUS Indicator number | Name of indicator | If this links directly to a project indicator(s), please note the indicator number here | Units | Disaggregation | Year 1 Total | Year 2 Total | Year 3 Total | Total to date | Total planned during the project |
|-------------------------------|---|--|--------------|------------------------------|---------------------|---------------------|---------------------|----------------------|---|
| DPLUS-C16 | Number of records added to accessible databases. | 3.2 | Number | database | | | | 0 | 7 |
| DPLUS-C18 | Number of papers published in peer reviewed journals. | | Number | Journal | | | | 2 in review | 3 |
| DPLUS-C05 | Number of projects contributing data, insights, and case studies to national Multilateral Environmental Agreements (MEAs) related reporting processes and calls for evidence. | | Number | Data, insights, case studies | | | | | 1 |
| | | | | | | | | | |

Table 2 Publications

| Title | Type (e.g. journals, best practice manual, blog post, online videos, podcasts, CDs) | Detail (authors, year) | Gender of Lead Author | Nationality of Lead Author | Publishers (name, city) | Available from (e.g. weblink or publisher if not available online) |
|--|---|---|------------------------------|-----------------------------------|--|--|
| Spatial segregation and bycatch risk as potential drivers of population trends of wandering albatrosses at South Georgia | Journal | Warwick-Evans, V, Pearmain, L, Philips, R | Female | British | In review at <i>Conservation Biology</i> (Impact Factor 5.2) | |
| Could relative fisheries overlap of non-breeding wandering albatrosses explain colony-specific population trajectories at South Georgia? | Journal | Warwick-Evans, V, Pearmain, L, Philips, R | Female | British | In review at <i>Conservation Biology</i> (Impact Factor 5.2) | |

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, scheme, type of report (i.e. Annual or Final), and year) and deleted the blue guidance text before submission? | x |
| Is the report less than 10MB? If so, please email to BCF-Reports@niras.com putting the project number in the Subject line. | x |
| Is your report more than 10MB? If so, please consider the best way to submit. One zipped file, or a download option, is recommended. We can work with most online options and will be in touch if we have a problem accessing material. If unsure, please discuss with BCF-Reports@niras.com 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. | x |
| Have you provided an updated risk register? If you have an existing risk register you should provide an updated version alongside your report. If your project was funded prior to this being a requirement, you are encourage to develop a risk register. | x |
| If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 15)? | |
| Have you involved your partners in preparation of the report and named the main contributors | x |
| Have you completed the Project Expenditure table fully? | x |
| Do not include claim forms or other communications with this report. | |