

DPLR1\1075

Assessing Terrestrial Climate Change Impacts on a sub-Antarctic Archipelago

Problem:

Small Island territories and nations don't have the resource or capacity to tackle climate change at a global level, but they can mitigate and adapt to it locally with an understanding of risks and impact to natural/physical systems.

SGSSI are a chain of sub-Antarctic islands that form part of the Scotia Arc. Climate change impacts are especially evident on SG across the north coast where glaciers are retreating at an unprecedented rate, but it is probable climate change is affecting ecosystem processes at all levels. As warming continues, the islands' unique terrestrial communities are likely to respond dynamically and are expected to be more vulnerable to invasive species. SG harbours a variety of non-native invasive plants and invertebrates, with some now so widespread that eradication is impracticable. This poses the risk that natural biodiversity could become dominated by non-native species.

Climate change effects on the marine environment around SGSSI have been evaluated through scientific research and through a Marine and Climate Change Impacts Partnership (MCCIP) assessment of key climate effects (doi: 10.14465/2021.orc02.pol). However, this exercise has not been undertaken for the terrestrial environment. This information is particularly important given that, in July 2022, GSGSSI declared the island's entire land mass as a TPA. Undertaking this assessment will be key to informing the developing TPA framework, understanding gaps to prioritise research and guiding the management of this unique environment in a warming climate.

Overall Objective:

1. To improve GSGSSI and stakeholder understanding of potential impacts of climate change on SGSSI terrestrial ecosystems, and identify future actions/priorities for management that will be fed into the TPA management framework.
2. Understand knowledge gaps that will be prioritised for future research in TPA Research and Monitoring Plans.

Current Situation:

1. An assessment of the key climate change effects on coastal and marine environments around SGSSI was recently conducted; however, there has been no similar assessment of terrestrial environments. A terrestrial assessment, such as this, is seen as a key task for GSGSSI.
2. With the recent establishment of the TPA on SGSSI, understanding key threats, risk and potential impacts is key to informing the TPA management framework.
3. It is important to understand how climate change interfaces with other threats, in particular the spread of established invasive species and the potential arrival of new ones.

Success:

To achieve this, it is intended that the MCCIP methodology, or similar, is adapted to terrestrial environments to improve understanding of the following, amongst others:

- Changes to ocean productivity due to reduction in limiting nutrients (e.g., Fe) from retreating glaciers that cease to be tidewater and become land terminating.
- Changes in the connectivity of habitats due to glacial retreat.
- Changes to established invasive species abundance and distribution.
- Identifying the risk of non-natives arriving and prioritisation of management actions to control and mitigate risk.
- Integration of assessments of the effect of changing marine food webs and their subsequent connectivity with terrestrial ecosystems through nutrient input from higher predators

The project will be delivered by a 6-month Project Manager and will convene a group of SG experts to access relevant data, information and experience. A literature review will be conducted using MCCIP methodology, or similar, adapted to the terrestrial environment. A document examining the key climate change consequences will be produced and will assess some of the following priority themes:

- Understanding the current situation.
- Identifying the main climate drivers to terrestrial ecosystems.
- Identifying current and future impacts.
- Assess the level of confidence.
- Identify and prioritise future research to inform terrestrial management.

Measurement of Success includes a well-informed assessment that informs TPA management framework, climate resilience, adaption and mitigation tools.

CONTACT DETAILS

Title Miss
Name Sue
Surname Gregory
Organisation Government of South Georgia &
the South Sandwich Islands

Website [REDACTED]
Tel (Work) [REDACTED]
Email (Work) [REDACTED]
Address [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

DPLR1\1075

Assessing Terrestrial Climate Change Impacts on a sub-Antarctic Archipelago

Section 1 - Project Title & Contact Details

Q1. Project Title

Assessing Terrestrial Climate Change Impacts on a sub-Antarctic Archipelago

Q2. Please select whether you are applying as an organisation or as an individual (Guidance section 3 and Guidance Glossary)

Organisation

CONTACT DETAILS

Title Miss
Name Sue
Surname Gregory
Organisation Government of South Georgia & the South Sandwich Islands
Website [Redacted]
Tel (Work) [Redacted]
Email (Work) [Redacted]
Address [Redacted]

GMS ORGANISATION

Type	Organisation
Name	Government of South Georgia & the South Sandwich Islands
Phone (Mobile)	[Redacted]
Email (Work)	[Redacted]
Website (Work)	[Redacted]
Address	[Redacted]

Section 2 - Overseas Territory(ies)

Q3. Overseas Territory (Guidance section 1.3):

Which UK Overseas Territory(ies) will your project be working in? Please note that in case of a non-permanent resident population you need to demonstrate a clear, meaningful, long-term link to the territory.

South Georgia and The South Sandwich Islands (SGSSI)

* if you have indicated a territory group with an asterisk, please give detail on which territories you are working on here:

No Response

In addition to the UKOT(s) you have indicated, will your project directly benefit any other UK OT(s) or country(ies)?

Yes

Please list these below and describe how they will benefit:

The project will also benefit the Falkland Islands. The Project Manager (PDRA) will be employed in the Falkland Islands where the Government of South Georgia & the South Sandwich Islands (GSGSSI) and the South Atlantic Environmental Research Institute (SAERI) are based.

Section 3 - Project Partners

Q4. Project partners (Guidance section 3.2)

In this section, please give details of all the partners involved (including the Lead Partner) and provide a summary of their roles.

Project Leader name (Guidance section 3.1):	Sue Gregory
Lead Partner name (if applying as an organisation; Guidance section 3.1):	Government of South Georgia & the South Sandwich Islands
Lead Partner Website (if applicable):	www.gov.gs
Is the Lead Partner based in a UKOT where the project is working (Guidance section 3.1)?	<input checked="" type="radio"/> No
Please explain why this project is led from outside the UKOT:	South Georgia doesn't have a resident population. The Government of South Georgia & South Sandwich Islands (GSGSSI) are however based in another UKOT, with the main office being located in the Falkland Islands

List other partners involved and where are they based (Guidance section 3.2):

Dr Jennifer Black, Government of South Georgia & the South Sandwich Islands (GSGSSI), UK
Dr Paul Brickle, South Atlantic Environmental Research Institute (SAERI), Falkland Islands
Prof Peter Convey, Dr Kevin Hughes, British Antarctic Survey (BAS), Cambridge, UK

Summary of roles and responsibilities of each partner in the project:

Sue Gregory, Marine Environment & Fisheries Manager for GSGSSI, coordinates Darwin Plus projects within SGSSI. Sue will provide project leadership with responsibility for deliverables, finances and reporting, will facilitate contact with priority stakeholders/experts, and provide input into the assessment process.

Dr Jennifer Black, GSGSSI Environment Manager, leads on implementing the SGSSI Terrestrial Protected Area process. Jennifer will work closely with other project partners to ensure project outputs contribute directly to conservation priorities and integrate project outputs into future management plans.

Dr Paul Brickle, Executive Director at SAERI, has managed multiple projects, seeing them through to timely and successful delivery, including several Darwin Plus grants. Paul will line manage the Post-Doctoral Research Assistant employed to manage the project through SAERI. SAERI will be responsible for ensuring that the agreed project methodology is followed, and all outputs are robust and credible.

Prof. Peter Convey is a leading polar terrestrial ecologist with 34+ years' experience working with BAS and in a wide range of polar environments. Pete's extensive expertise on SGSSI terrestrial environments will be key to the climate change impacts assessment process. He partners on three Darwin projects on SGSSI biodiversity, including the impacts of invasive species.

Dr Kevin Hughes, BAS Environmental Research and Monitoring Manager, has been part of the UK Delegation to the Antarctic Treaty Consultative Meetings since 2005, and former Vice-Chair of the Committee for Environmental Protection and Convenor of the Subsidiary Group on Climate Change Response. Kevin will bring relevant expertise to the climate change impacts assessment process.

I confirm that all listed partners are aware of this application and have indicated support:

Checked

Attach a Cover Letter for your application (Guidance section 4.2).

 [GSGSSI Darwin Climate Change cover letter](#)

 14/02/2023

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Section 4 - Project Summary & Description

Q5. Project Summary (Guidance section 3.8)

Please provide a brief summary of your project. This may be used in communication activities and/or published online, if your application is successful.

Understanding the impacts of climate change on terrestrial environments is essential to implement and manage an effective Terrestrial Protected Areas (TPA) framework. This project will develop a report, through a systematic data assessment and literature review, on the consequences of climate change for SGSSI terrestrial ecosystems, including assessment of future changes and potential management approaches. Information will be used by Government to inform data-led decision making on how to monitor and mitigate impacts of climate change within the SGSSI TPA.

Q6. Description (Guidance section 2.1)

Please provide a description of your project, including:

- the overall objective
- the current situation and the problem the project is trying to address
- what success will look like and how you will measure it

Please be as specific as possible when describing the project, using quantified data and evidence where available. You may wish to consider: what are the specific threats to the environment that the project will attempt to address, and what should we know about these threats? What does your successful project look like? And how will you demonstrate whether and how your project has been successful?

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Measurement of Success includes a well-informed assessment that informs TPA management framework, climate resilience, adaption and mitigation tools.

(Optional) Please upload any additional and supporting materials or files (such as maps of project sites, etc) below. Maximum of 5 pages:

 [BAS Letter of Support 11-02-2023](#)
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 [SAERI Letter of Support 13-02-2023](#)
 14/02/2023
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Section 5 - Project Outcome(s)

Q7. Project Outcome(s) (Guidance section 1.2)

Successful Darwin Plus Local projects must demonstrate measurable outcomes in at least one of the themes of Darwin Plus, either by the end of the project or soon after through a credible plan.

Please tick which theme(s) of Darwin Plus your project underpins:

Checked **Biodiversity: improving and conserving biodiversity, and slowing or reversing biodiversity loss and degradation;**

Checked **Climate change: responding to, mitigating and adapting to climate change and its effects on the natural environment and local communities;**

Checked **Environmental quality: improving the condition and protection of the natural environment**

Unchecked **Capability and capacity building: enhancing the capacity within OTs, including through community engagement and awareness, to support the environment in the short- and long-term.**

Please justify your selection.

This project primarily contributes to the Climate Change theme by assessing the impacts of climate change on the terrestrial environment at SGSSI. Outputs will also be relevant to the Biodiversity and Environmental Quality themes. The report will provide information that will feed into core activities to protect biodiversity, helping inform future policy, management and practice. By contributing to the development of the TPA management framework, the report will support enhanced protection of biodiversity in terms of species, habitats and landscapes, and sustainable management of natural resources and activities such as tourism.

Section 6 - Project Timeline

Q8. Project timeline (Guidance section 2.2)

Please provide anticipated dates for the start and end of your planned project here. Please use the Darwin Plus Local Project Implementation Timetable Template (which can be downloaded below) to provide a list of the individual activities you have planned for this project, a brief description of what each activity entails, and the months in which the activities will be carried out. If the project involves

only one activity (e.g. a purchase), please still provide project start and end dates (noting estimated times for procurement). Please note that your project will need to be completed by 31 March 2024.

Start date:	End date:	Duration (e.g. 3 months):
01 April 2023	31 December 2023	9 months

Please upload the completed Darwin Plus Local Project Implementation Timetable template with your proposed project activities below.

-  [R1-DPlus-Local-Implementation-Timetable-SG SSI \(002\)](#)
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Section 7 - Costs

Q9. Costs (Guidance section 2.2 and please read the Finance Guidance)

Please provide a breakdown of costs to be funded through Darwin Plus Local (in GBP).

Are you seeking any matched funding for this project? (Please note that this is optional and there is no requirement to seek matched funding for Darwin Plus Local projects).

Yes

How much matched funding are you seeking and where from?

We have committed match funding in terms of costs in kind:

SAERI: Paul Brickle 13.5 days = ██████; Teresa Bowers 3 days = ██████; Amy Constantine 2 days = ██████; laptop computer = ██████.

GSGSSI: Sue Gregory 10 days = ██████; Jennifer Black 5 days = ██████ (salaries plus ██████ overheads). Design and publishing of report = ██████.

BAS applies reduced overhead costs for Darwin projects (█████), effectively providing ██████ matched funding.

Total = ██████

Budget line	Explanation	Cost in GBP
Staff costs:	Staff costs include salary for a PDRA and statutory contributions for six months and staff time for BAS partners	████████
Overhead costs:	Overhead costs on salary only (█████) and relocation costs for the PDRA. Also included are overheads (█████) on staff costs for BAS partners to join meetings	████████

Travel & subsistence costs:	Travel and subsistence to and from the Falkland Islands	████████
Operating costs:	Final Meeting / Workshop to validate findings and recommendations. Monitoring & Evaluation throughout the project	████████
Capital equipment:	n/a	██████
Consultancy costs:	n/a	██████
Total:		████████

This section provides more information on the budget to help evaluators understand how you will use the funds you are requesting. You do not need to list all costs, but please list and detail costs of more than £1,000 per item below, under the appropriate budget line.

Details of staff costs over £1,000 (if relevant)

████████

A suitability qualified PDRA or equivalent is required for six months to deliver the project under guidance of the Project Management Team comprising staff from GSGSSI and SAERI. Disparate data sources and multiple experts will need to be consulted in order reach an understanding of potential impacts of climate change at SGSSI and identify future actions/priorities for management actions. There is no capacity in terms of staff resource to deliver this work in GSGSSI or SAERI. This large piece of work will require concentrated effort for delivery. Staff costs also include salary to cover essential input from BAS experts.

Details of overhead costs over £1,000 (if relevant):

████████.

The project is being delivered by SAERI for GSGSSI. SAERI is not FEC and charges an overhead cost of ██████ on staff costs

Details of travel and subsistence costs over £1,000 (if relevant):

████████

The Project Manager/PDRA will be based in the Falkland Islands where GSGSSI and SAERI have office. The travel and subsistence are to cover the costs of a flight and travel to and from the Falkland Islands at the end of the project.

Details of operating costs over £1,000 (if relevant):

No Response

Details of capital equipment costs over £1,000 (if relevant):

n/a

Details of consultancy costs over £1,000 (if relevant):

n/a

Details of other costs over £1,000 (if relevant)

No Response

If your project budget was prepared in another currency and converted to GBP, please provide the exchange rate, its source, and the date it was accessed:

Other currency:	Exchange rate:	Source of this exchange rate:	Date exchange rate accessed:
No Response	No Response	No Response	No Response

Darwin Plus Local has been created to build capacity and contribute to local economies in-territory.

What % of the total will be spent in the OTs?

If less than 80% of the total project spend is to be spent within the OT(s), please explain why.

To note, whilst this is a South Georgia & the South Sandwich Islands project, the 83% of total spend will be in the Falkland Islands OT. SGSSI do not have a resident population and there are no opportunities to spend any of the project budget within that territory. As previously stated however, both the lead applicant (the Government of South Georgia & the South Sandwich Islands) and project partner (South Atlantic Environmental Research Institute, SAERI) are based in the neighbouring Overseas Territory of the Falkland Islands and therefore most of the total budget (83%) will be spent in that OT.

Section 8 - Local and National Priorities

Q10. Local and national priorities

Please explain how this project aligns with local and national priorities? You may wish to consider the project in the context of national environmental laws, objectives, strategies, territory specific agreements, action plans or policies.

GSGSSI's 'Protect Sustain Inspire (PSI) Stewardship Framework 2021-2025' - sets out a clear vision and values-driven approach for the management of SGSSI, guiding how GSGSSI conducts its work, meets international obligations, and responds to global and regional issues including climate change. The document acknowledges climate change is likely to be affecting ecosystems at all levels. In 'Delivering PSI: The Government's Implementation Programme', a clear commitment was made that "By end 2023 a report on the effects of climate change in terms of the ecosystems in SGSSI will be completed, including an assessment of potential future changes and approaches".

The commitment to delivering a climate change report is reiterated in the draft 'SGSSI Terrestrial Protected Areas Management Plan' under the management aim "Acknowledging the profound impacts on biodiversity, measures are in place to contribute to global efforts to halt climate change".

GSGSSI is committed to environmental protection through evidence-based, sustainable management.

Significant work has been carried out to protect the SGSSI Maritime Zone since the establishment of a Marine Protected Area in 2012, and this project will contribute to GSGSSI's harmonisation of environmental management across both Terrestrial and Marine Protected Areas

All GSGSSI documents are available via the website www.gov.gs

Will the project take place on Government owned land or water?

No

Section 9 - Project Risks

Q11. Project Risks

Please demonstrate your consideration of any risks involved in this project and how you intend to manage them. Depending on your project, you may wish to consider:

- Biosecurity risks – particularly for projects involving external equipment.
- Safeguarding risks – particularly for projects involving vulnerable groups such as children, older people or people with disabilities.

Risk	Mitigation
Recruitment – Finding a suitably qualified/experienced Project Manager/Post Doctoral Research Associate (PDRA).	Recruitment through new and existing networks. Existing knowledge base in SAERI with an extensive network of researcher, University and institute partners within the OTs and internationally.
Knowledge sharing - Engagement with wider expert group / access to information.	Letter of support provided by British Antarctic Survey confirming their awareness of the project and willingness to engage. Relevant partners and stakeholders will be engaged early in the project to ensure support and buy in.
Good attendance at the final meeting/workshop – This meeting of experts will be to examine the project's findings and deliverables.	Good communication with relevant stakeholders and partners to ensure attendance.

Do you require more fields?

No

Section 10 - Terms & Conditions

Q12. Terms and conditions (Guidance section 3.10)

By applying for Darwin Plus Local you are adhering in full to the grant Terms and Conditions in full

(available at: <https://dplus.darwininitiative.org.uk/apply> and as referenced in the Guidance at section 3.10). For information, the Terms and Conditions include requirements for all applicants to (amongst other requirements as per the full Terms and Conditions):

- Uphold a zero tolerance for inaction approach to tackling sexual exploitation, abuse, and harassment.
- Where appropriate, make all reasonable and adequate efforts to address gender inequality and other power imbalances.
- Notify all cases of fraud and theft (whether proven or suspected) relating to the project to the Grant Administrator as soon as they identified.

Please indicate you have read, and understood, and will adhere to the Terms and Conditions.

Checked

If your application is successful: If your project application is successful, the Fund Administrator (NIRAS) will ask you to provide some financial evidence for due diligence checks before you receive your project grant. (Please see section 3.3 of the Darwin Plus Local Finance Guidance). Please be ready to provide this evidence promptly.

Financial evidence for organisations: Year-end financial statements, the latest management accounts or audited accounts (if you have these).

Financial evidence for individuals: Proof of identity such as a passport, ID card or driving licence and solvency (such as bank statements) and a police check.

Section 11 - Certification

Certification

I certify that, to the best of my knowledge and belief, the statements made in this application are true and the information provided is correct.

Checked

I have the authority to submit an application on behalf of my organisation.

Checked

Name: Sue Gregory

Position in the organisation: (if applicable) Marine Environment & Fisheries Manager

Signature (please upload e-signature)  [Sue Gregory signature](#)
 14/02/2023
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Date: 14 February 2023

Section 12 - Submission Checklist

Checklist for submission

	Check
I have read the Guidance documents, including the “Darwin Plus Local Guidance” and the “Darwin Plus Local Finance Guidance”.	Checked
If my proposed project takes place on public lands or water, I have uploaded a Letter of Support from Government.	Unchecked
I have uploaded a cover letter that details the information requested in the guidance (Guidance section 4.2 has information on what this cover letter should include).	Checked
I have read, and can meet, the current Terms and Conditions for this fund.	Checked
I have provided actual start and end dates for the project.	Checked
I have provided my summary budget based on UK government financial years i.e. 1 April – 31 March and in GBP in the application form.	Checked
I have uploaded my project implementation timetable using the specific template provided.	Checked
(If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form.	Checked
The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).	Checked
I have checked the Darwin Plus website immediately prior to submission to ensure there are no late updates.	Checked
I have read and understood the Privacy Notice on the Darwin Plus website.	Checked

We would like to keep in touch!

Please check this box if you would be happy for the lead applicant (Flexi-Grant Account Holder) and project leader (if different) to be added to our mailing list. Through our mailing list we share updates on upcoming and current application rounds under Darwin Plus. We also provide occasional updates on other UK Government activities related to biodiversity conservation and share project news. You

are free to unsubscribe at any time.

Checked

Data protection and use of personal data

Information supplied in the application form, including personal data, will be used by Defra as set out in the **Privacy Notice**, available from the [Forms and Guidance Portal](#).

This **Privacy Notice must be provided to all individuals** whose personal data is supplied in the application form. Some information may be used when publicising Darwin Plus including project details (usually title, lead partner, project leader, location, and total grant value).

Darwin Plus Local

Provide a **Project Implementation Timetable** that shows the key milestones in project activities. Complete the following table as appropriate to describe the intended workplan for your project. Projects are based on UK Financial Years (**1 April – 31 March** - therefore starts April 2023).

Please add/remove columns to reflect the length of your project. For each activity (add/remove rows as appropriate) indicate the number of months it will last, and shade only the months in which an activity will be carried out. The workplan can span multiple pages if necessary.

Activity #	Description (max 25 words)	No. of months	UK Financial Year 2023/24											
			Calendar Year 2023									Calendar Year 2024		
			Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
	Project Management													
1.	Project Management Group Meetings (GSGSSI/SAERI)	0.2												
2.	Project Manager - recruitment	0.3												
3.	Literature review to understand current situation, climate drivers, impacts (current and future)	2												
4.	Project partner / stakeholder engagement to agree on assessment methodology	0.75												
5.	Validate literature review with experts	0.3												
6.	Conduct a Climate Change Assessment to agreed methodology	2												
7.	Validation workshop to review assessment	0.1												
8.	Final Terrestrial Climate Change Impacts Assessment delivered that informs TPA management framework	0.75												
	N.B. not just PM time here so total 6.4 months													