South Atlantic

Anchor Project Report

Deliverable nº D.3.5

November 2022

Citation: MOVE-ON project (2022), European Commission Directorate General Environment Grant Agreement no. 07.027735/2019/808239/SUB/ENV.D2. Deliverable D.3.5 – South Atlantic Anchor Project Report

Coordinated by:

GOVERNO DOS AÇORES

FRCT
FUNDO REGIONAL PARA A CIÊNCIA E TECNOLOGIA

Partners:

Leibniz Universität Hannover

Universidad Rey Juan Carlos

Nexa
AGENCE RÉGIONALE DE DÉVELOPPEMENT D'INVESTISSEMENT ET D'INNOVATION

UR UNIVERSITÉ DE LA RÉUNION

BIODIVERSIDAD ATLANTICA Y SOSTENIBILIDAD

UNIVERSITY OF PORTSMOUTH

WWF

IRD
Institut de Recherche pour le Développement
FRANCE

SOUTH ATLANTIC
SAERI (FALKLANDS) LIMITED

UNIVERSITY OF TRENTO

NBE NOVA BLUE ENVIRONMENT

Supported by:

This project has received funding from the European Union represented by European Commission Directorate General Environment under grant agreement Nº 07.027735/2019/SI2.808239/SUB/ENV.D2. This document only reflects the views of its authors. The Commission is not responsible for any use that may be made of the information it contains.

MOVE ON

FROM CASE STUDIES TO ANCHOR PROJECTS - SETTING THE GROUND TO ADVANCE MAES IN EUROPE'S OVERSEAS.

Project Acronym	**MOVE-ON**
Project Title	**From case studies to anchor projects - setting the ground to advance MAES in Europe's overseas.**
Grant Agreement nº	07.027735/2019/808239/SUB/ENV.D2
Start of the project	May 2020
Duration	36 months
Project coordinator	Regional Fund for Science and Technology, Regional Government of the Azores (Portugal)
Website	www.moveon-project.eu

Deliverable title	**South Atlantic Anchor Project Report**
Deliverable nº	**D.3.5**
Activity title	Activity 3 – Methods integration and implementation in Regional Projects
Task title	Task 3.5 – Anchor Project - South Atlantic Region
Task Leader(s)	*Add partners acronyms*
Lead authors	Azra Gordy (SAERI)
Contributing authors	Tara Pelembe (SAERI), Devlin Yon (SHG), Ryan Benjamin (SHG)
Due date of deliverable	30/04/2022
Actual submission date	09/11/2022
Dissemination Level:	Public

Version	Status	Date	Author(s)
1.0	Draft	13/05/2022	Azra Gordy (SAERI)
1.2	Draft	July 2022	Tara Pelembe (SAERI), Devlin Yon (SHG), Ryan Benjamin (SHG)
1.3	Draft	July 2022	Artur Gil (FRCT), Benjamin Burkhard (LUH), Ina Sieber (LUH), Paul Brickle (SAERI), Al Baylis (SAERI).
1.4	Draft	October 2022	Artur Gil (FRCT), Carolina Parelho (FRCT), Benjamin

			Burkhard (LUH), Ina Sieber (LUH)
1.5	Final draft	October 2022	Consortium partners

Summary

The South Atlantic Anchor Project focused on the Island of St. Helena, and used a variety of approaches to bridge the gap between evidence and policy and decision-making.

A pivotal element of the project was to create an evidence-policy 'bridging' role that focused on existing environmental spatial data - particularly relating to the mapping and assessment of ecosystems and their services (MAES). A wide range of cross-government stakeholders were identified and engaged in understanding the availability and potential use of this data to answer decision-makers questions live. Through the lifespan of the project, the increased interest generated at a high level of government resulted in the Spatial Data Analyst (SDA) providing advice on other thematic areas in addition to MAES e.g. spatial planning.

Analysis and mapping activities were determined throughout the project through a "bottom-up" approach, carried out in response to requests from staff working across SHG after they had been introduced to MAES data and mapping possibilities.

Through an innovative suite of approaches, ranging from the very basic (e.g. cleaning data sets) to the more complex (e.g. identifying flat land available for building that did not compromise the provision of ecosystem services), this highly flexible project was able to raise the profile of MAES across the whole of the Government of St. Helena, culminating in direct requests from high level decision- makers for spatial data for their decisions.

The use of an evidence-policy bridging role, recommended several times in literature had a successful application as a case study in the South Atlantic Anchor Project. In addition to the recommendation to make use of such roles long-term, the Anchor Project also found that it could be valuable to incorporate some type of spatial evidence analysis at an early stage across policies as a part of government functioning. On St Helena, techniques such as constraints mapping were well understood and relatively easy for the GIS Office to carry out, but a standardisation of the process ensuring smooth workflows and faster turnarounds would be valuable in increasing the uptake of this type of mapping. These conclusions are particularly relevant to small islands and environments where it is similarly possible for one individual to work across many departments. Further research could explore whether such an approach could be translated to an even larger scale, for example by expanding SDA role to a team.

1. Table of Contents

2. List of Figures

3. List of Tables

1 INTRODUCTION

Ecosystem services and MAES

"Ecosystem services" describes the multiple benefits that humans receive from ecosystems. These includes regulating ecosystem services that regulate the environment to humans' benefit (for example, a tree root systems decreasing the risk of flooding), provisioning ecosystem services that contribute toto humans' survival (for example, food), or cultural ecosystem services that form important parts of human culture (for example, through providing recreational areas or places of cultural significance). Because of this linkage of both ecological conditions and human activities in the ecosystem services framework, it is seen as a valuable concept for advocating for the protection of nature and has been enshrined in the UN Aichi Targets and the EU Biodiversity Strategy for 2020 and 2030 (Maes, et al., 2012).

To reach these targets, a methodology for Mapping and Assessment of Ecosystems and their Services (MAES) has been developed and contributed to the EU Biodiversity Strategy for 2020 (European Commission, 2011). However, Europe's Outermost Regions (ORs) and Overseas Countries and Territories (OCTs) have often not been included in these assessments or had a large uptake of the concept of ecosystem services (Sieber, Borges, & Burkhard, 2018), despite hosting a large amount of significant biodiversity that may be especially vulnerable to the impacts of climate change (Petit and Prudent, 2008). The MOVE-ON project seeks to address this gap applying several methods, including implementing a series of Anchor Projects intended to integrate various MAES methodologies according to the specific context of each Anchor Project region.

1.1 Anchor Project study area: St Helena Island

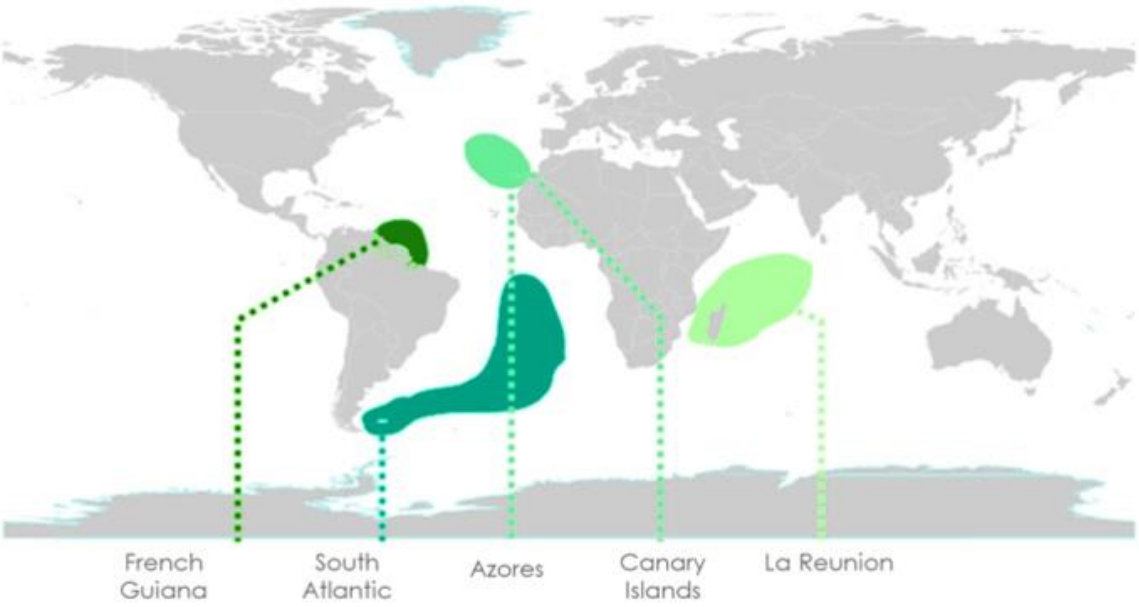

Figure 1: Anchor Project Regions of the MOVE-ON project.

The MOVE-ON project is carrying out four Anchor Projects in French Guiana, La Réunion, Macaronesia (the Azores and Canary Islands), and the South Atlantic (Figure 1). Although the South Atlantic includes other territories such as the Falklands, Ascension, and Tristan da Cunha, the Anchor Project is focused exclusively on St Helena Island, one of the most remote inhabited islands in the world located in the middle of the South Atlantic Ocean (Figure 2).

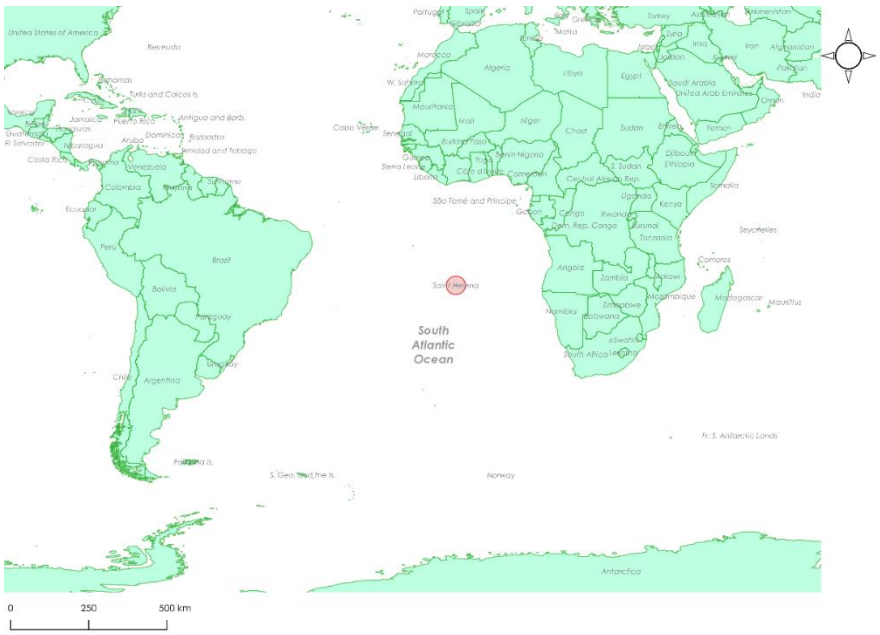

Figure 2: World map showing 200km buffer around St Helena Island in red.

St Helena represents an interesting case study as it is biodiverse with very high rates of endemism. Much of this biodiversity is extremely vulnerable due to large-scale habitat loss on the island since its discovery in the 1500s as a populated volcanic island with very few areas of flat land, there is are often conflicting priorities for land use between residential, commercial, archaeological, and environmental considerations. However, thanks to previous projects St Helena is also in an advanced stage of its implementation of MAES with a large variety of spatial data on ecosystems and their services kept in a standardised format by the St Helena Government (SHG) Geographic Information Systems (GIS) Office. The remaining knowledge gap is located in the bridge between evidence and decision-making, addressed in the South Atlantic Anchor Project.

1.2 Anchor Project research question

The research question the South Atlantic Anchor Project aimed to investigate was: "How can the gap between evidence and policy on small islands be bridged?" This question was investigated through trialing the creation of a role dedicated to communicating to decision-makers about evidence to support their decisions and analysing it in real-time. This role was embedded in the SHG GIS Office, working with the local GIS team to promote their services and develop their ability to support decision-making.

The method for doing this was the installation of a "bridging person" acting as an interface between evidence and decision-making in SHG, analysing data in real time addressing current questions in government and advising on the status of evidence and how it can be interpreted.

2 OVERVIEW OF THE STUDY AREA

2.1 St Helena Island

Figure 3: Map of St Helena Island. Credit: OpenStreetMap contributors.

St Helena is a small volcanic island of approximately 47 km^2 located in the middle of the South Atlantic Ocean, approximately 1950 km from the west coast of Africa and 4000 km from the east coast of South America (Figure 1). Until 2018, the island was one of the most remote in the world, with a five-day boat journey from Cape Town shortened to a six-hour flight from Johannesburg once the St. Helena airport began operating flights. In 2021, the island had a population of 4,439 (St Helena Statistics Office, 2021). Jamestown, the capital city, is located in a narrow valley on the northeast coast of the island. While

Jamestown functions as the administrative and commercial centre, the most populated area is Half Tree Hollow on a neighbouring plateau. Other small populated areas are spread out over the rest of the island (Figure 3).

The island has a lush green area in its centre that includes woodlands, pastures, and an endemic cloud forest habitat on the Central Peaks. This gives way to dry, rocky, and often barren areas by the coast. Due to its remoteness, the island has an extremely high concentration of endemic species, but currently endemic plants remain ononly 3.5% of the island's area (Lambdon & Cronk, 2020). Invasive species such as goats, cats, centipedes, and New Zealand flax have strongly impacted St Helena's ecosystems and currently introduced species make up an estimated 99% of its biomass (Lambdon, 2012). Even so, St Helena still makes up one-third of the total endemic biodiversity of the UK and its Overseas Territories, with a variety of endemic plants, invertebrates, and one remaining endemic bird (Pike, Medcalf, Naumann, Scullion, Detheridge, 2018).

Politically, St Helena is governed by a group of twelve elected Councilors representing the whole island, which made up the Legislative Council. After a consultative poll in March 2021 the system of government changed to a ministerial system with the first elections under this system held in October 2021. Under the new system, a Chief Minister is appointed by secret ballot among the new Elected Members, who then proceeds to appoint Ministers for each of the five Government Portfolios as laid out in Figure 4. The Chief Minister and appointed ministers then form the Executive Council who advise the Governor on most areas of government policy (St Helena Government, 2021). The Governor oversees the entire UK Overseas Territory of St Helena, Ascension and Tristan da Cunha and is appointed every four years from the UK Foreign, Commonwealth and Development Office (FCDO).

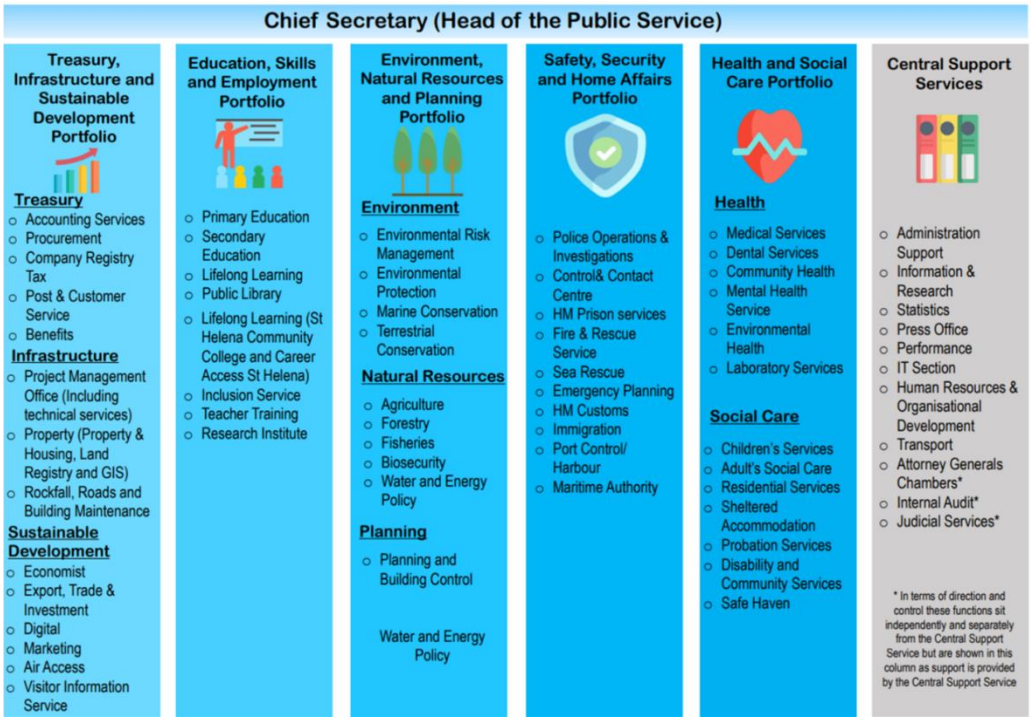

Figure 4: The St Helena Government public service structure adopted from 1 April 2021. (St Helena Government, 2021)

St Helena faces a variety of challenges. The island is dependent on central UK government for aid, and government budgets are often very limited. Although the cost of living on St Helena is 25% higher on average than most of the UK, wages are approximately one-third of average UK wages (St Helena Equality & Human Rights Commission, 2019). As in many UK Overseas Territories, ex-patriates from the UK and other countries are often hired to fill specialist roles, and can often command higher "international" salaries even when having the same qualifications as a St Helenian working in the same role. Because of this and other factors, there is a large amount of emigration from the island for work. Population projections for 2051 estimate a decrease in the total and working age populations of St Helena while an increase in the population aged 65 and older is predicted, implying a decrease in income-earners on the island (St Helena Statistics Office, 2022). Both the UK and SHGs aim to make the island self-funding through development of its tourist industry aided by the new airport. Due to the volcanic landscape there is a high premium on any flat land, with variety of conflicts for land use between residential, industrial, and recreational uses as well as archaeological heritage and environmental factors.

2.2 MAES activities on St Helena

Much of the environmental and conservation work carried out on St Helena has been focused on the preservation of its endemic biodiversity. Recently, there has been investigation into the ecosystem services provided by this endemic habitat, in particular

the role of endemic species in capturing mist and therefore most of the island's fresh water (Sansom & Henry, 2019), stabilising soils and preventing erosion (Cairnswicks R., pers comm), and sequestering carbon (Ellick, 2015). Linking conservation efforts to ecosystem service provision has continued with for example the St Helena Cloud Forest Project focusing on water provisioning services and carried out in collaboration with Connect St Helena, the island's utility company.

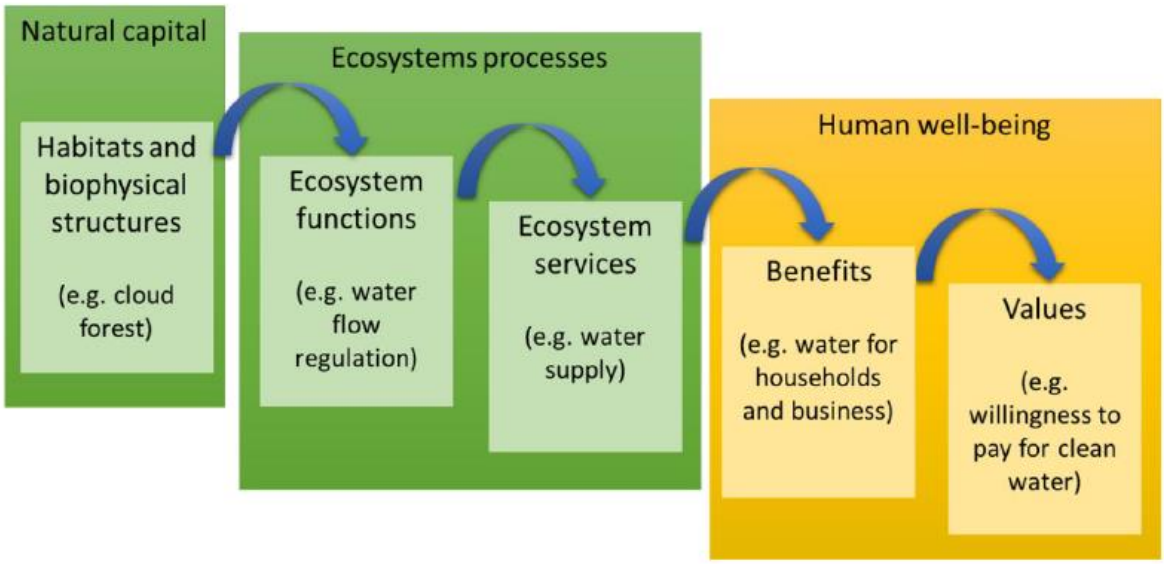

Figure 5: Ecosystem services cascade used for constructing land-use model for 2019 Natural Capital Assessment of St Helena. The example provided runs through the cascade of ecosystem services provided by the endemic cloud forest habitat located on St Helena's central peaks (McVittie, Hutchison, Marengo, & Smith, 2019).

Two key projects capturing MAES data on St Helena were the Darwin Project "DPLUS052: Mapping St Helena's Biodiversity and Natural Environment" (Pike, Medcalf, Naumann, Scullion, & Detheridge, 2018) and the land-use model outputs (Figure 5) created for the South Atlantic Natural Capital Assessment (McVittie, Hutchison, Marengo, & Smith, 2019). The DPLUS052 used satellite imagery and field surveys to create island-wide habitat maps based on International Union for Conservation of Nature (IUCN) levels 1, 2, and 3. The project also carried out a soils survey on the island, using spatial interpolation to produce island-wide maps of indicators such as soil pH, erosion risk, and potential productivity. The Natural Capital Assessment used data from this project as well as other datasets maintained by the SHG GIS Office as input into a Bayesian land-use model to create outputs about the potential ecosystem service provision, with a particular focus on the services provided by the green central portions of the island (see Figure 3). The outputs provide island-wide maps at 1km^2 resolution of the probability of potential provisioning, regulating, and cultural ecosystem services, as well as scenario maps such as increasing

honey production and replacing invasive flax with native vegetation. Outputs from both of these projects are hosted on a WebGIS freely available for the public to view (Figure 6).

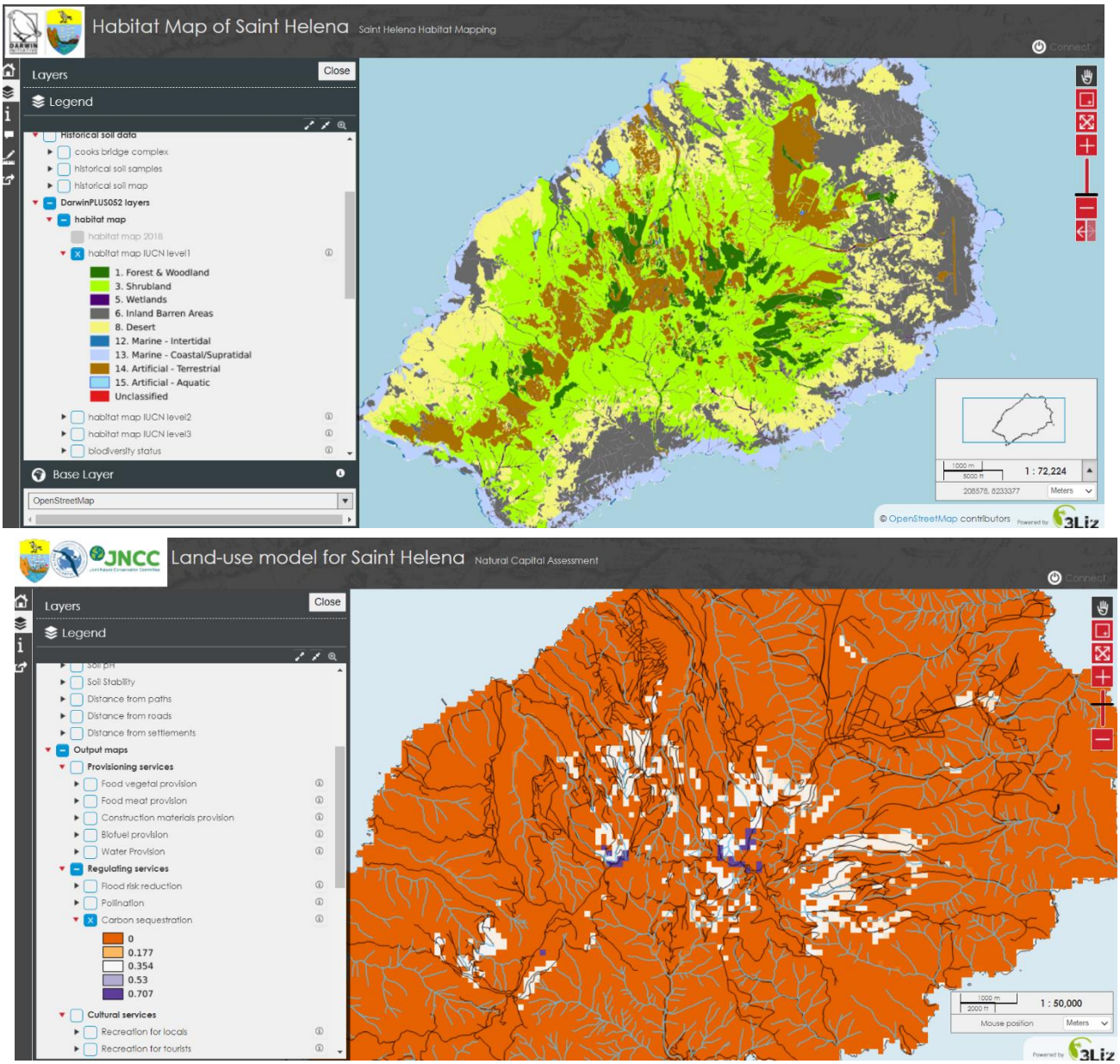

Figure 1: WebGIS providing MAES data about St Helena. Top: IUCN level 1 map from DPLUS052 project (Cherrett, 2018). Bottom: Map of probability of carbon sequestration services being "high" from Natural Capital Assessment (Smith, 2019).

2.3 GIS on St Helena

SHG founded a GIS unit in 2005 as a way to center various initiatives using GIS to determine freshwater borehole replacement, build a cadastre for the island, and monitor conservation interventions including invasive species clearance and endemic reintroductions (Mills, 2009). Originally placed within the Legal and Lands Department, the GIS Office was eventually merged with the Land Registry Office and moved to the Treasury, Infrastructure, and Sustainable Development Directorate in April 2021. This meant a divide in workload of the SHG GIS Office between desk-based GIS mapping and field surveying work for updating and confirming land registry parcel boundaries. Connect St Helena, the island's utility company, also has a GIS office with focus on surveying and maintaining CAD database of Connect assets.

Due to St Helena's small size and high demand for land, the surveying portion of GIS Office's role requireshigh standards of accuracy and precision and therefore consumes a majority of the Office's time and resources. Subsequently both within SHG and beyond, the perception of the role and expertise of the office defaults to land survey. However, over time the desk-based GIS capabilities and skills of the office have been increasing as the MAES projects mentioned above (2.2) and others allocated resources to training the SHG GIS staff. MAES and other data was deposited at the GIS Office when projects were completed. GIS Office staff have been trained in a variety of topics including GIS data management and storage, constraints mapping and remote sensing techniques. Data on the servers of GIS Office span a wide range of topics including the environment, society, infrastructure, and MAES data, and a searchable catalogue of this data is published online via the St Helena Data Portal. As a result, the SHG GIS Office was widely underestimated before commencement of the South Atlantic Anchor Project, despite being well positioned and equipped to provide data and analysis services to make evidence-based decisions.

3 ANCHOR PROJECT OBJECTIVES, RESEARCH QUESTIONS AND/OR THEMES

3.1 Background on research themes

According to Burt, Nuno & Bunbury (2021), two major barriers to island ecosystem conservation persist: financial limitations and a lack of evidence-based decision-making in management. In addition, their interviews of conservation and management practitioners found that the most frequently mentioned barrier was a lack of data analysis and management capacity. Potential solutions to this issue often bring up dedicating a role to analysis and communication of evidence to bridge this gap, for example through a "knowledge broker" whose role during and after research is to facilitate the exchange of knowledge between researchers and stakeholders (Cvitanovic, McDonald, & Hobday, 2016) or a "boundary spanner" who may currently do this type of

communication work in a way that is not recognised or professionalised (Goodrich, et al., 2020).

Small islands could be a particularly suitable location to trial adapting the dedication of a role to this type of data analysis and outreach activity due to the relatively large influence that a single person can have. Building upon these types of suggestions and the MOVE project recommendations that scientific advice should reflect political and policy priorities (MOVE Project, 2021), this project focuses on trialling the embedding of a "bridging person" within SHG (referred to by the job title Spatial Data Analyst - SDA in this report). This role was focused on providing advice on the availability of evidence and analysing it in real time in response to current priorities and (environmental) questions in government.

3.2 Research question

The research question addressed in the South Atlantic Anchor Project was: "How can the gap between evidence and policy on small islands be bridged?"

The method for doing this was to assess one possible technique for bridging this gap: the installation of a "bridging person" to act as the interface between evidence and decision-making in SHG, analysing data in real time according to current questions in government and advising on the status of evidence and how it can be interpreted.

Due to the various mapping and assessment activities above, the South Atlantic Anchor Project began with St Helena in the "implementation" stage of MAES methodology (see Table 1). Despite potential gaps in MAES data that require further research, there existed a suitable selection of data to begin using as evidence in decision-making. Therefore, the role of the SDA focused on applying previously collected data rather than gathering new evidence. The CoVID Pandemic St Helena confirmed this approach.

Table 1: Summary of the stages reached by each region covered by the MOVE-ON project to achieve the implementation of MAES (MOVE-ON project, 2021).

	1 What kind of questions do stakeholders have?	2 Identification of relevant stakeholders	3 Network creation and involvement of stakeholders	4 Mapping and assessment process	5 MAES case study applications	6 Dissemination and communication	7 Implementation
Azores	✓	✓	✓	MOVE ON			

La Réunion	✓	✓	✓	✓	MOVE ON		
Canary Islands	✓	✓	✓	MOVE ON			
French Guiana	✓	✓	✓	✓	MOVE ON		
South Atlantic	✓	✓	✓	✓	✓	✓	MOVE ON

4 METHODS AND MATERIALS FOR ECOSYSTEM SERVICES MAPPING AND ASSESSMENT

4.1 Project methodology: stakeholder engagement, capacity building and "bottom-up" approach

As discussed, the method being trialed for the South Atlantic Anchor Project involved the embedding of a SDA focused on bridging the gap between evidence and decision-making within SHG. Once the individual was in post, the methods for this embedding and communications were applied and included through carrying out a detailed stakeholder mapping. On completion of the stakeholder mapping, the SDA varied working locations on a two-weekly schedule as detailed in Table 2 in order to engage with key departments and sections within SHG. In addition, engagement with a wider range of stakeholders was carried out through a range of methods including steering committee meetings, workshops, and public events. More detail about the stakeholder mapping process and engagement activities carried out can be found in Section 6 of this report.

Table 2: Working locations schedule for the South Atlantic Anchor Project. The locations were cycled through on a two-weekly basis, with Week 1 starting the week beginning 16 August.

WEEK	M	T	W	T	F
Week 1	GIS Office	GIS Office	Scotland (main headquarters for Environment, Natural Resources and Planning Portfolio)	St Helena Research Institute	GIS Office

Week 2	GIS Office	GIS Office	GIS Office	Sustainable Development Office	The Castle (main SHG headquarters)

Analysis and mapping activities were determined throughout the project through a "bottom-up" approach, carried out in response to requests from staff working across SHG after they had been introduced to MAES data and mapping possibilities. However, some mapping activities were also carried out as demonstrations for possible uses of GIS in various fields. Most often these demonstrations were carried out as part of a policy linking methodology as at the start of the SDA role, current policy frameworks were looked over and possible analyses presented. Further along in the project timeline, demonstrations were carried out in response to new policies or observing the work of SHG departments.

Collaboration with other projects was a key part of the approach. SDA identified training needs for the Darwin funded project entitled 'Sustainable Management Planning for St Helena's National Conservation Areas (NCAs) (DPLUS154), carried out work on species data that will be fed into the BEST 2.0+ project "A Biological Records Database for St Helena," and provided maps used for public consultation in the Peaks project. This collaborative approach could be seen, as an inherent part of the job role as outreach and communication of results from previous research was a key part of the job's description.

4.2 Mapping and analysis techniques used

The various mapping activities conducted during the project are outlined in detail in a tracker Annex 2 which includes the topic, whether the activity began as a request from SHG staff or developed from a demonstration of potential uses, principle GIS technique used for the activity, and the date of the request or demonstration beginning. This provided the main source of data for analysis in this report. It is worth highlighting that this method of recording activities had limitations as there is a the risk of smaller activities not being recorded. In addition, it is difficult to assign a single GIS technique to activities that often required several, and to differentiate between activities that often followed from each other. However, the results offer a useful indication of which techniques and topics followed on from the stakeholder engagement methodology laid out above.

Figure 7 shows the frequency of principal GIS methods used for activities from the tracker (Annex 2). The most common type of request was derived from the category of "viewing/accessing data" – includes the creation of any type of map displaying one or more GIS layers in overlay. Such overlay maps were most commonly used in SHG prior to the project and were usually very quick to produce. As result this was and may continue to be the most common type of request received by GIS Office. However, it is worth noting

that throughout the South Atlantic Anchor Project this type of request often followed the introduction of the MAES data (section 2.2), to view further detail and their relation to other datasets. The next most frequently requested analysis was for spatial joins, as many engagement activities of the project worked as an impetus for departments to share and map spatial data previously kept in non-GIS formats. The techniques most often taken up for policy and spatial planning uses initially were Multi-Criteria Decision Analysis (MCDA) and constraints mapping, however further on in the project there were several requests to use remote sensing data and develop the island's capacities further, for example through drone surveys for habitat mapping.

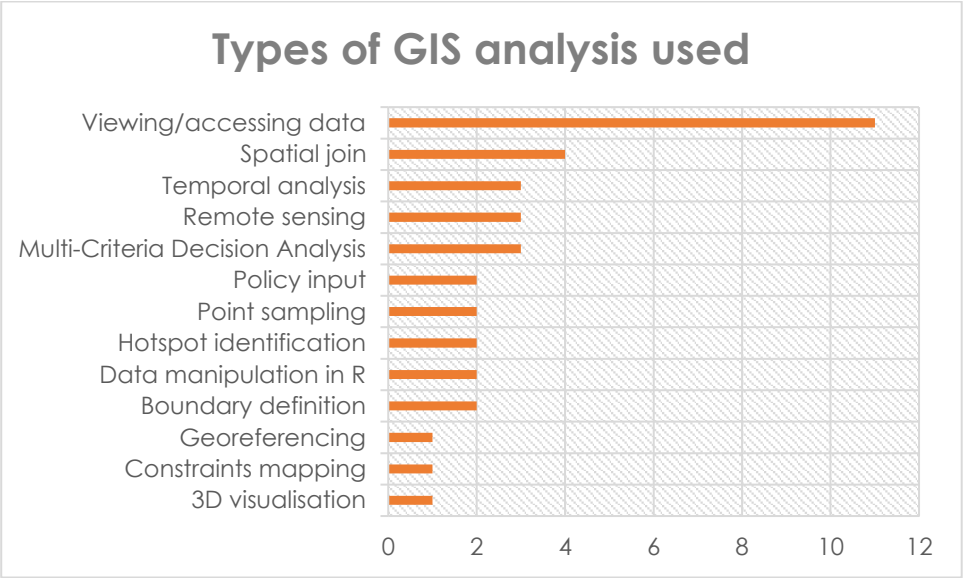

Figure 7: Bar chart of principal types of GIS analysis used for each activity throughout the South Atlantic Anchor Project.

5 RESULTS

5.1 Results of mapping and engagement activities

Throughout the South Atlantic Anchor Project delivery period of 48 weeks, there were approximately 37 mapping activities carried out. 8 of these activities began as demonstrations while the remaining 29 were requests. As might be expected, demonstration activities were concentrated at the beginning of the Anchor Project period and then became only intermittent as numbers of requests increased (Figure 8).

Substantial requests came from the Environmental Management Division, with requests for both general work within the division as well as specific offices, including the Terrestrial Conservation and Biosecurity. In second place, The Statistics Office, St Helena Research Institute, and Sustainable Development Office followed. As a result of

dissemination activities, which had the widest reach of engagement activities for the project, it is likely that requests will increase and there will be more variety in departments requesting GIS analysis.

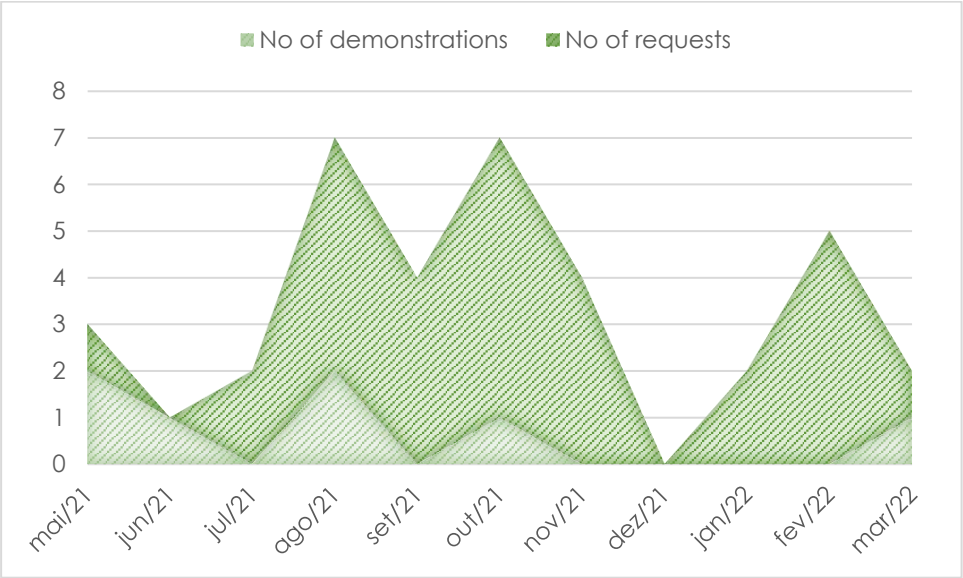

Figure 8: Graph of number of Anchor Project activities over time, categorised by whether activity began as demonstration or request.

As shown in Figure 9, the most frequent topic of activity was invertebrate conservation. Early in the project, a demonstration was carried out on an extensive invertebrate database maintained on Excel by St Helena National Trust (SHNT). This database was uploaded into spatial format and analyzed to allow for easier requests of the data in GIS and for the possibility of more advanced types of visualization such as time lapses. This demonstration resulted in a snowball effect as the data was requested to be accessed and viewed alongside other MAES data such as habitat or ecosystem services provision.

In third place, requests were made concerning spatial planning, a direct result of the promotion of GIS decision support techniques such as constraints mapping and MCDA throughout the project duration. This was followed by plant conservation, similarly to the invertebrate conservation topic due to a snowball effect from a comprehensive Rare Plants Census kept on GIS servers. Most of the other topics of request seen in Figure 9 came about as Anchor Project engagement activities acted as a catalyst for more departments to share and convert formats of spatial data they had previously kept in non-GIS formats.

Figure 9: Bar chart showing frequency of topics investigated in Anchor Project activities.

5.2 Results of policy activities

5.2.1 Data policy

As part of Anchor Project activities, the SHG GIS Manager aimed to push forward a spatial data policy for SHG. Several issues arose from a lack of a policy defining data management, ethics, and retention on St Helena.

Data access levels within the GIS Office had often been assigned with "environmental" or "commercial" sensitivity; however, there was no clear definition of these terms within SHGs working and so, for instances where the categorisation had been seemingly over cautious (for example, the boundaries for administrative districts being classed as "commercially sensitive"), there was no clear mechanism to change this. Issues with data access levels caused particular challenges for data sharing with the public and non-government institutions. This was compounded by the lack of formal data sharing agreements with non-SHG organisations where this would be extremely beneficial to both

parties– for example Connect St Helena, SHNT (the island's main environmental and historical non-profit), and Sure St Helena (the island's only telecommunications provider). In addition, existing data retention agreements only covered research projects and there had been issues with accessing data collected by commercial projects such as the airport construction.

To determine what solution might be most suitable to address these issues, a meeting was held gathering stakeholders whose work also heavily intersected with data access and management. It was agreed that a 2-pronged approach would be pursued: (1) a case would be made for a high-level policy addressing the government's priorities for data, (2) GIS Office would standardise its own policies with regard to data management and changing data access levels. By the end of the project the GIS Office had decided its approach to standardisation and aim to formally articulate these in writing. In addition, the Chief Secretary (Head of SHG Civil Service) announced a commitment to the creation of a high-level data policy for SHG at the final anchor project event.

5.2.2 Invertebrate Conservation Strategy

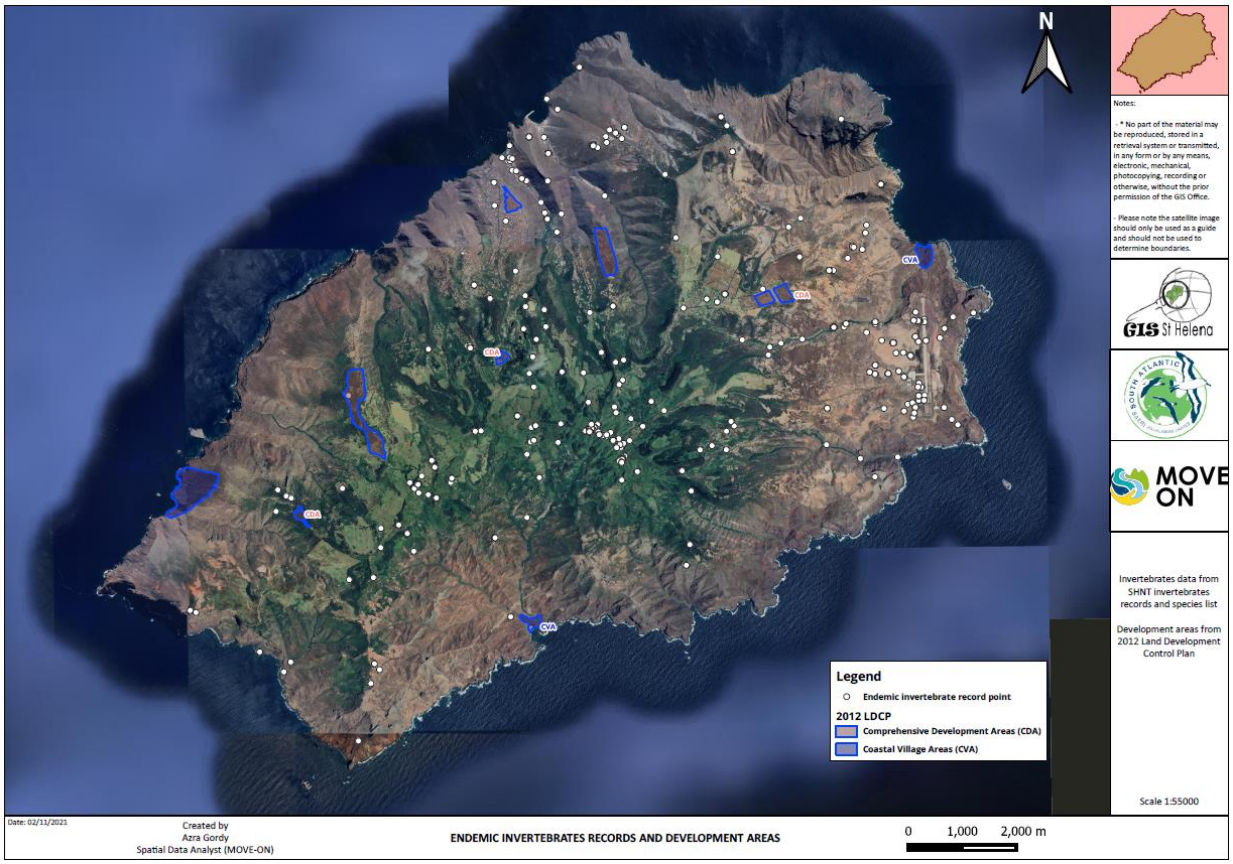

Figure 10: Example of map produced for consultations of the St Helena Invertebrate Consultation Strategy in November 2021.

In November 2021, the SDA received requests to produce maps for consultations on the update of the St Helena Invertebrate Conservation Strategy. These consultations brought together a variety of experts and decision-makers from SHG, SHNT, and the Species Recovery Trust (SRT). After discussion with SHNT and SRT, three maps were produced (see Figure 10 for example) with a point layer of records of endemic invertebrates since 2001 with IUCN Level 1 habitats, Nature Conservation Areas, and potential development areas from the 2012 Land Development Control Plan (LDCP). This request could be seen as typical of GIS requests for conservation purposes prior to the Anchor Project, and the main contributions from the Anchor Project were the development of the invertebrates records and providing the human resources to carry out the request.

5.2.3 Distribution zones for "special-case" plants

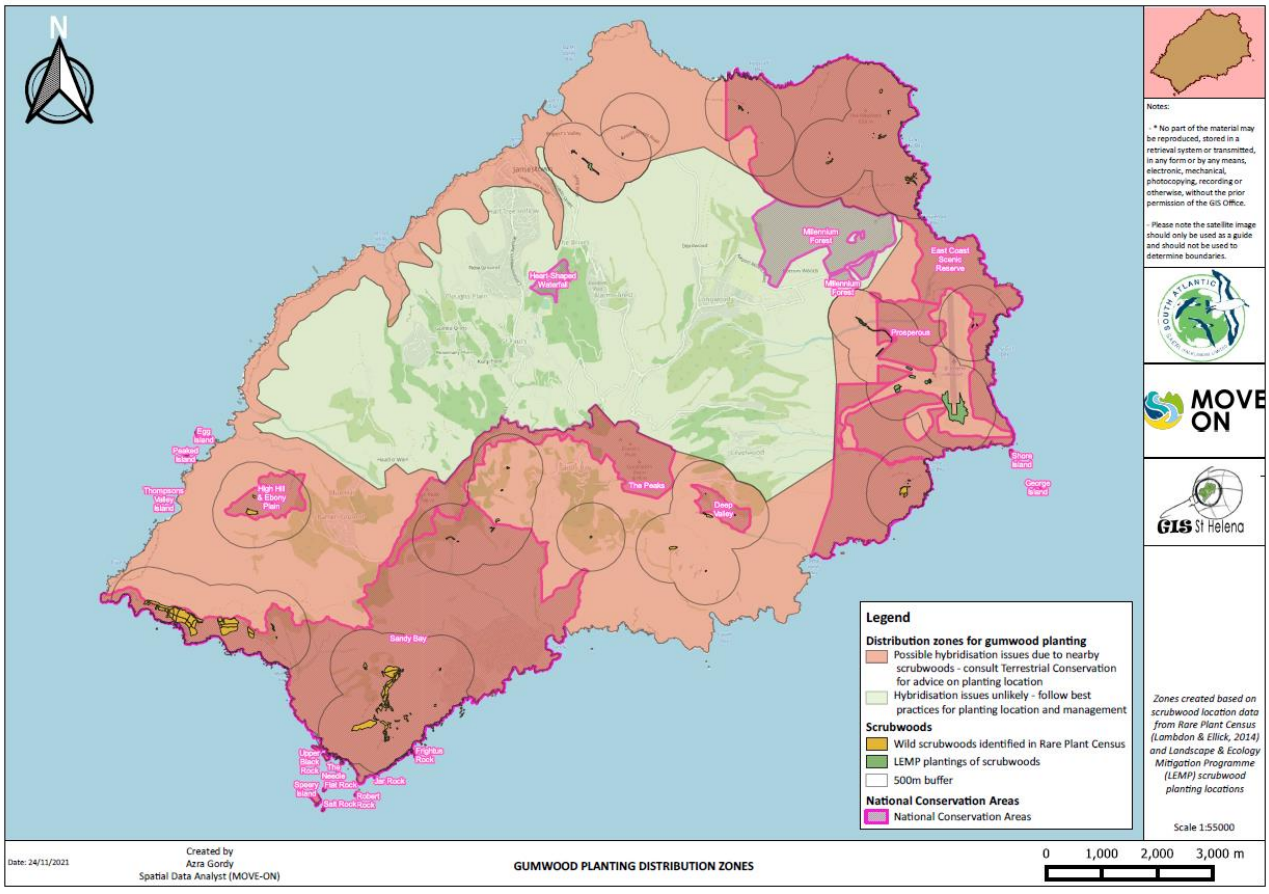

Figure 11: Map of distribution woods for St Helena gumwood (Commidendrum robustum), a "special-case" species with concern of hybridisation under the Policy for Collection, Propagation and Distribution of Endemic/Native Plants.

Due to their endangered status and low numbers, there was concern that some endemic species on St Helena that naturally hybridise with each other could become extinct through being replaced by their more successful hybrid. Because of this, the SHG

Policy for Collection, Propagation and Distribution of Endemic/Native Plants (SHG Environmental Management Division, 2020) defined a category for "special-case" species. These species may only be grown by commercial nurseries after obtaining advice from the Environmental Management Division (EMD) on the final destination for any plant. However, two of the three "special-case" category plants are very popular with a large amount of interest in their cultivation for personal and commercial uses.

Because of this, there has been a goal for several years to create maps to aid commercial growers and the public to follow best practices for planting location rather than consulting with EMD in every instance. The SDA was asked to produce one such map for the St Helena gumwood in July 2021. Initial maps were produced using existing data on wild and planted locations of these species as well as the postulated original vegetation zones of the island pre-discovery (Cronk Q.,1989). A series of consultations with Terrestrial Conservation Nursery staff followed for expert input on suitable boundaries and instructions for each zone. Final maps were produced and accepted both special-case species with commercial interest, the St Helena gumwood (*Commidendrum robustum*) and the St Helena ebony (*Trocheptiosis ebenus*), and will be incorporated into the propagation policy (See figure 11 example).

5.2.4 Feedback on Marine Management Plan

As a result of the Anchor Project's positioning within the work of SHG, the SDA was invited to provide feedback at the internal review stage of SHG's updated Marine Management Plan. This feedback was used to support the requirement for a standardised data collection and sharing process, point to sources of spatial data about marine activities, and raise awareness of the value of participatory GIS techniques as effective means of public consultation.

5.2.5 Review of the St Helena Land Development Control Plan

The Land Development Control Plan (LDCP) defines spatial planning on the island. The LDCP sets policy zones regarding development, defining three zones with varying levels of restriction on development (called the Coastal Zone, Intermediate Zone, and Green Heartland Zone) as well as a series of Comprehensive Development Areas (CDAs) and Natural Conservation Areas (NCAs) (St Helena Government, 2012). The current iteration of the LDCP is scheduled to expire in 2022 and an updated plan is being developed to supersede the current one, however, the process for putting in place the reviewed plan is still ongoing.

Previously, GIS Office was used during the LDCP public consultation process to visualize draft zones on screens, and was subsequently responsible for the management

and storage of digitised final LDCP boundaries. However, none of the spatial decision-making techniques that GIS developed through training, such as constraints mapping or Multi-Criteria Decision Analysis (MCDA), had been used for an LDCP review. Coming into the South Atlantic Anchor Project, it was a priority for GIS Office and the Anchor Project team to promote the use of these techniques and MAES concepts in the LDCP review, due to its inherent spatial nature and strong impact on land use in the island for the next decade.

There were many barriers to achieving this throughout the duration of the Anchor Project, due to the high-level nature of the LDCP and timing of the project. As GIS Office was not involved in the LDCP review, there was a need to dedicate time to determining how best to promote for its involvement and which stakeholders to target. Although the LDCP review was and is ongoing, the Anchor Project occurred at a very late stage in the LDCP review, and during an election year. In addition, from February 2022 onwards there was no Chief Planning Officer in position at SHG, the lead author of the LDCP. Despite these barriers, there was success in presenting constraints mapping as a relevant technique to stakeholders and two case study mapping assessments were carried out in potential CDAs.

5.2.6 St Helena Government Internal Recharging Policy

SHG operates a "recharging" policy where if any work is done cross-departmentally, the departments are required to bill each other for hours worked and attempt to recoup their yearly budgets through this mechanism in addition to any other income generation. While mainly intended as a way to track hours worked across SHG, when financial resources are severely limited as is often the case on St Helena, this policy effectively acted as a deterrent for requesting any type of map or analysis from the GIS Office within SHG. The recharging policy therefore ran counter to the aims of GIS Office and the MOVE-ON project, as there was a serious risk of known evidence (e.g. for assessing the consequences of various types of land-use) not being used simply due to departmental budget constraints. Through making this case to relevant stakeholders within SHG, the Anchor Project leaders were able to secure a high-level commitment to create an exemption from internal recharging requirements for the GIS Office.

5.3 Interpersonal/unintended results

Notably, the South Atlantic Anchor Project had an unintended result of upskilling local capacity exceeding technical GIS skills. As a result of the project's methodology and stakeholder engagement activities, the GIS Manager and GIS Office Team were involved in more presentations, event delivery, and high-level government meetings than at any other point in the office's recent history, requiring "social Skills". This effect also carried on to a lesser extent to other employees beyond the GIS Office who were asked to present at workshops and events.

Local dynamics can be an important part of any regional projects. St Helena's distinct culture, small island context, and power dynamics between "ex-pat" and "local" can mean that there is hesitance from some St Helenians to speak out or ask questions in larger group settings. As St Helenians also make up the majority of the technical staff in government, this can mean that those in senior SHG roles do not hear the technical expert input from those in roles more in touch with evidence on the ground. The outcomes of these more interpersonal aspects of the project suggest that understanding both non-technical skill requirements and local dynamics are important components in understanding how evidence is used in policy.

6 STAKEHOLDERS INVOLVEMENT

6.1 Stakeholder mapping

The nature of the South Atlantic Anchor Project required detailed knowledge on the current use of spatial evidence on the island and identification of those with the most potential to expand their use and collaborate on increasing the uptake of spatial evidence across SHG sectors. Because of this, during the first project a stakeholder mapping exercise was carried with the help of key SHG partners in order to set out a rigorous and continuous analysis of the possible stakeholders and definition of the means of communication with them.

There were two main sources used as reference lists for potential stakeholders: the MOVE-ON stakeholders and experts database (MOVE-ON Project, 2021) and the press release for the new SHG public service structure (SHG Press Office, 2021). Any of the employees listed in the new government structure whose areas of work or interest might intersect with the course of the South Atlantic Anchor Project were determined to be stakeholders.

The key reference used for planning stakeholder mapping methods, categorisations, and advice for this task was the Stakeholder Engagement Handbook (Durham, Baker, Smith, Moore, & Morgan, 2014) produced under BiodivERsA, a network of national funding organisations promoting pan-European research on conservation and sustainable management of biodiversity and ecosystem services. Out of the stakeholder mapping techniques shown in the BiodivERSA handbook, an interest-influence matrix (shown in Figure 12) was chosen as the first stage of stakeholder mapping. In this stakeholder mapping technique, each stakeholders' level of interest in the project and potential ability to influence the project's success are determined. Based on these factors, each stakeholder is then assigned to one of four categories:

- **Collaborate:** high interest, high influence
- **Consult:** high interest, low influence
- **Involve:** low interest, high influence

- **Inform:** low interest, low influence

Figure 12 then details suggestions on general engagement strategies with each of these categories of stakeholder.

Figure 12: Influence-interest matrix as presented in the BiodivERsA stakeholder engagement handbook (Durham et al., 2014,). This method suggests that stakeholders be assigned to a category according to likely contribution to and interest in the project. The text in the boxes describes different suggestions about the levels of engagement.

In addition to being classified according to their interest in and influence over the project, during the same sessions of the St Helena mapping exercise stakeholders were also classified according to those who already knew how to use GIS software and those that frequently asked for services from the GIS Office but were not familiar with using the software themselves. Based on the above stakeholder mapping categories and this additional information on GIS usage, engagement strategies were devised for each of the main groups. The outcomes of this mapping exercise could also be used to update the MOVE-ON stakeholder database (Deliverable 4.1.b) and are explained in more detail in the intermedium report in Annex 1.

6.2 Stakeholder engagement

The stakeholder mapping exercise led to the development of strategies to engage with each group of stakeholders:

- For the key **Collaborate** stakeholders with large amounts of interest and influence in the project a steering committee of "spatial data stakeholders" was formed to meet regularly for the project's duration.
- The **Involve** group consisting of lower interest and high influence stakeholders were the politicians and highest level government officials, and they were engaged with mostly in the form of presentations through official channels such as the Informal Legislative Council (Info LegCo) and Senior Leadership Team meetings – however, as the project progressed there were instances of the project being approached by members of this group for mapping exercises.
- The high-interest but lower-influence **Consult** group had the largest number of technical staff familiar with GIS, so it was decided that in addition to engagement through regular mapping carried out for these stakeholders, they would be invited to be added to SAERI's UK Overseas Territories Knowledge Exchange forum on Slack in order to increase their access to GIS knowledge and troubleshooting.
- The final category, **Inform**, consisted of stakeholders whose work intersected with GIS in some manner but who might have low interest in and influence over the MOVE-ON project specifically. These stakeholders were captured through several large-scale events focusing on GIS applications to a wide variety of contexts, and through smaller meetings toward the end of the project.

In addition, at the end of the South Atlantic Anchor Project delivery period in March 2022, SAERI's Deputy Director – Innovation and GIS and Database Manager visited St Helena for a final round of engagement presenting key outputs of the South Atlantic Anchor Project to stakeholders. These engagements included a public-facing GIS education and training workshop; presentations at the government Senior Leadership Teams; and a presentation to the Informal Legislative Council consisting of all elected officials on St Helena. Table 1 summarises all events held throughout the course of the project delivery from June 2021 to April 2022.

Table 3: Summary of stakeholder events held as part of the South Atlantic Anchor Project.

Event	Audience	Description	Type of event	Date	Location
MOVE-ON introductions	On-island stakeholders from SHG and external entities	Various presentations introducing the South Atlantic Anchor Project aims and showcasing GIS uses and data available	Presentations	04/2021 to 09/2021	Online, in-person
First Spatial Data Stakeholders Meeting	Stakeholders from Collaborate group	Presentation of mapping done so far, discussion of potential activities	Stakeholder meeting	21/09/2021	In-person, online

GIS Day	Public	Public-facing event with exhibitions of GIS work on St Helena and sessions for schoolchildren. Concluded with online UKOT GIS link-up featuring presentations of GIS work from Falkland Islands, Montserrat and Turks and Caicos Islands.	Public event	18/11/2021	In-person, online component
Second Spatial Data Stakeholders Meeting	Stakeholders from Collaborate group	Presentation of mapping done so far, discussion of potential activities	Stakeholder meeting	23/11/2021	In-person, online
Workshop: How Can GIS Help You?	SHG stakeholders from Inform and Consult groups	Workshop showcasing application of GIS for South Atlantic Anchor Project work and beyond, brainstorming activities on applications to other SHG sections	Workshop	18/01/2022	In-person
Maps, Nature, People and Decisions	Public	1-day workshop open to the public featuring project dissemination, training and feedback sessions	Public event	21/03/2022	In-person, online component
Environment, Natural Resources and Planning (ENRP) Senior Management Team	Senior ENRP staff	Dissemination of project outputs and guidelines for integrating evidence into decision-making	SHG official meeting	23/03/2022	In-person
Treasury, Infrastructure and Sustainable Development (TISD) Advisory Board	Senior TISD staff	Dissemination of project outputs and guidelines for integrating evidence into decision-making	SHG official meeting	23/03/2022	In-person
SHG Senior Leadership Team	Senior Government staff including all Portfolio Heads and Chief Secretary	Dissemination of project outputs and guidelines for integrating evidence into decision-making	SHG official meeting	28/03/2022	In-person
Informal Legislative Council Session	Elected councillors	Dissemination of project outputs and guidelines for integrating evidence into decision-making	SHG official meeting	01/04/2022	In-person
MOVE-ON Project Final Event	All SHG stakeholders	Wrap-up event featuring keynote speeches from Minister for Treasury, Infrastructure and Sustainable Development, South Atlantic Anchor Project Manager, and SHG Chief Secretary	Lunch event	04/04/2022	In-person

Prince Andrew School Careers Presentation	Secondary school students	Presentation of GIS as career path to secondary school students	School careers session	05/04/2022	In-person

7 DISCUSSION

7.1 Bridging the gap between evidence and policy

There was a variety of results achieved by the South Atlantic Anchor Project. There was an increase in cross-departmental usage of GIS analyses and MAES data throughout the Anchor Project and this looks set to continue. Commitments have been received to address potential barriers to this continuation, such as internal recharging and lack of a data policy. In addition to the increased usage in numbers, there is increased awareness among stakeholders of potential methods that can make use of GIS and MAES data for decision-making, such as constraints mapping, MCDA, or the consultation process used for the special-case species zones.

Findings strongly support the suggested use in the literature of a "key person," "knowledge broker," or "boundary spanner" – a dedicated role set aside specifically for communicating and supporting the use of a wide variety of research data. In the South Atlantic Anchor Project, it was possible to embed this role within government functions, which allowed for large impacts, engagement with a wide variety of sectors, and participation in consultations at internal stages such as the Marine Management Plan. Whether this is feasible in other small island or small territory contexts but is complicated in larger territories, or depends more on other dynamics within a territory, could be an area for further investigation.

It is worth noting that the most frequent topics for activities in the Anchor Project were those that had at least one relevant dataset that was comprehensive, accessible and easily used for a variety of purposes. This suggests going beyond gathering data on areas where knowledge gaps exist, but also keeping ease and flexibility of use post-project in mind. Advice on post-project sustainability for data should be embedded in the job description of an SDA role.

In addition, it is interesting to note which topics the SDA was most likely to be approached for (usually environmental topics relating to conservation such as the invertebrate and plant conservation policies) compared to which required a great deal of initiative to convince stakeholders of GIS relevance at decision-making stages (often in planning and infrastructure). Another aspect of this is that throughout the project much of the impetus from GIS use travelled from more junior technical staff to more Senior Officials such as portfolio heads. However, after dissemination activities, which included several presentations to portfolio heads, there may be more instances of the initiative for GIS

uptake travelling "top-down." For example, because of project dissemination the Director for Health and Social Care hoped to nominate staff to undertake GIS training to carry out analyses for the Portfolio. It may be of interest to compare the results of these different dynamics, especially keeping in mind that the project results emphasised the importance of local context and social dynamics in influencing how evidence is used in decision-making.

7.2 Barriers identified and suggested measures

There were several barriers identified that prevented both the South Atlantic Anchor Project and the work of the SHG GIS Office in general from achieving as much success as possible in using MAES data and analysis to support evidence-based decision-making. A summary of the barriers identified and proposed solutions is provided in this section, and more detail can be found in MOVE-ON Deliverable 5.4: Guidelines for bridging the gap between evidence and decision-making on small islands.

Often, a general barrier to uptake of GIS methods and MAES data for evidence-based decision-making was simply a lack of familiarity with what capabilities these methods and data have and their relevance for all portfolios, not just environmental. Many of the changes observed throughout the project could be attributed to simply the SDA having communication and dissemination of these techniques as a major part of their role. Therefore, aside from the finding of the value of this job role, it could be that setting aside dedicated time and resources for regular outreach activities even to previously reached stakeholders could be a useful measure for increasing uptake of evidence for decision-making across many contexts besides small islands.

Another frequent barrier was a lack of resources, both human and financial, to allow for both these types of communication activities and the actual mapping and analysis to be carried out. On St Helena, this issue is further compounded by the larger job specification of its GIS Office, as these activities also need to be carried out alongside their surveying and land registry duties. The SDA role helped to increase these resources throughout the year, and it is hoped that the removal of internal recharges will also play a role in reducing the barriers presented by limited financial resources. However, it may be worth highlighting that if GIS is increasingly used as a tool for evidence-based decision-making, the resources allocated to it will correspondingly need to increase.

St Helena's lack of either its own data policy or acknowledgment of UK policies such as the General Data Protection Regulation (GDPR) often worked as a bottleneck in the uptake of evidence for decision-making. It particularly hindered the sharing of data from GIS Office with non-government entities and the public. When categories were unclear or seemed to be wrongly assigned, a great deal of resources were required to think through the possibilities and what actions should be taken next, especially since the SHG GIS Office does not have expertise on data ethics or seniority to make decisions about data access

that could have implications for the whole government. A data policy that could be referred to clearly setting out the principles for how data should be used, accessed and shared would help reduce this bottleneck a great deal. To increase public engagement and participation, it would be a strong preference for data to be open and for access to it to be as easy and frictionless as possible.

A final step that could be taken to ensure that evidence is used in decision-making would be to articulate and standardise a process for this to happen. This would begin with the collection of clean data, as currently many of GIS's resources go into data cleaning and manipulation. In addition, stating the intent for GIS analysis at the beginning of data collection and consulting with those with GIS knowledge on the best format for the data would help to increase the number of datasets GIS is able to analyse and their analysis speed. Where a technique such as constraints mapping and MCDA is required, a standard process for defining these constraints in requests would also increase the ability of GIS to rapidly respond to real-time decisions. Such a process could then be embedded as a requirement for any policy with a spatial dimension as a means to ensure evidence-based decision-making.

8 CONCLUSIONS

The use of an evidence-policy bridging, SDA role, as recommended in literature, has had a successful application as a case study in the South Atlantic Anchor Project. In addition to the recommendation to make use of such roles long-term, the Anchor Project also found that it could be valuable to incorporate some type of spatial evidence analysis at an early stage across policies as a part of government functioning. On St Helena, techniques such as constraints mapping were well understood and relatively easy for the GIS Office to carry out, but a standardisation of the process to ensure smooth workflows and faster turnarounds would be valuable in increasing the uptake of this type of mapping. Often the tasks and requests were not technically difficult, yet they were so important for informing policy and decision-making. The creation of an SDA role is therefore a very powerful method for supporting the inclusion of MAES and other environmental considerations in decision-making. These conclusions are particularly relevant to small islands and environments where it is similarly possible for one individual to work across many departments. Further research could explore whether such an approach could be translated to an even larger scale, for example by expanding the single person role to a team.

9 REFERENCES

Burt, A. J., Nuno, A., & Bunbury, N. (2021). Defining and bridging the barriers to more effective conservation of island ecosystems: A practicioner's perspective. *Conservation Science and Practice, e587*.

Cherrett, S. (2018). *Habitat Map of Saint Helena*. Retrieved from South Atlantic Environmental Research WebGIS: https://data.saeri.org/saeri_webgis/lizmap/www/index.php/view/map/?repository=01sh&project=saint_helena_web

Cronk, Q.C.B., 1989. The past and present vegetation of St Helena. *Journal of Biogeography*, pp.47-64.

Cvitanovic, C., McDonald, J., & Hobday, A. J. (2016). From science to action: Principles for undertaking environmental research that enables knowledge exchange and evidence-based decision-making. *Journal of Environmental Management*(183), 864-874.

Durham, E., Baker, H., Smith, M., Moore, E., & Morgan, V. (2014). *The BiodivERsA Stakeholder Engagement Handbook.* Paris: BiodivERsA.

Ellick, S. (2015). The carbon sequestration potential of Commidendrum robustum Roxb. (DC.) within the Millennium Forest restoration site, St Helena Island. (Unpublished Master's thesis). University of York.

European Commission (2011): Our life insurance, our natural capital: an EU biodiversity strategy to 2020. Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of Regions, Brussels, Belgium, 17pp.

Goodrich, K. A., Sjostrom, K. D., Vaughan, C., Nichols, L., Bednarek, A., & Lemos, M. (2020). Who are boundary spanners and how can we support them in making knowledge more actionable in sustainability fields? *Current Opinion in Environmental Sustainability, 42pp*.

Lambdon, P. (2012). *Flowering Plants and Ferns of St Helena.* Newbury: Pisces Publications.

Lambdon, P., & Cronk, Q. (2020). Extinction dynamics under extreme conservation threat: The flora of St Helena. *Frontiers in Ecology and Evolution*.

Maes, J., Egoh, B., Willemen, L., Liquete, C., Vihervaara, P., Schagner, J., Bidoglio, G. (2012). Mapping ecosystem services for policy support and decision making in the European Union. *Ecosystem Services*, 31-39.

McVittie, A., Hutchison, J., Marengo, i., & Smith, N. (2019). *Modelling St Helena's Natural Capital, Final Report for the South Atlantic Overseas Natural Capital Assessment.*

Mills, A. (2009, June). Small Islands Spatial Data Infrastructure. *GEOconnexion International Magazine*.

MOVE Project. (2021). *European Commission Directorate General Environment Grant Agreement 07.027735/2018/776517/SUB/ENV.D2. D.5.2 - Report on Constraints and Solutions for the implementation of MAES in European Overseas.*

MOVE-ON project. (2021). *European Commission Directorate General Environment Grant Agreement no. 07.027735/2019/808239/SUB/ENV.D2. Deliverable 2.2b - Report on ecosystem services mapping and assessment methods in ORs and OCTs.*

MOVE-ON Project. (2021). European Commission Directorate General Environment Grant Agreement no. 07.027735/2019/808239/SUB/ENV.D2. Deliverable D.4.1 Database of MAES projects and experts.

Petit, J.; Prudent, G. (2008): Climate change and biodiversity in the European Union overseas entities. Gland, Switzerland and Brussels: IUC

Pike, S., Medcalf, K., Naumann, E.-K., Scullion, J., & Detheridge, A. P. (2018). *DPLUS052: Mapping St Helena's Biodiversity and Natural Environment Final Report.* Aberystwyth: Environment Systems Ltd.

Sansom, B., & Henry, D. (2019). *DPLUS051: Water Security and Sustainable Cloud Forest Restoration on St Helena.* Darwin Initiative.

Sieber, I. M., Borges, P. A., & Burkhard, B. (2018). Hotspots of biodiversity and ecosystem services: the Outermost Regions and Overseas Countries and Territories of the European Union. *One Ecosystem*.

Smith, N. (2019). *Land-use model for St Helena*. Retrieved from South Atlantic Environmental Research Institute WebGIS: https://data.saeri.org/saeri_webgis/lizmap/www/index.php/view/map/?repository=02sh&project=saint_helena_web_NCA

St Helena Equality & Human Rights Commission. (2019). *Annual Report for the Year 2018-19.* Jamestown.

St Helena Government. (2021). *Government Structure*. Retrieved from https://www.sainthelena.gov.sh/government/government-structure/

St Helena Government. (2021). *Your Council*. Retrieved from https://www.sainthelena.gov.sh/government/legislative-council/your-council/

St Helena Government Press Office. (2021). *The New St Helena Public Service Structure.* Retrieved from St Helena Government: https://www.sainthelena.gov.sh/wp-content/uploads/2021/04/The-St-Helena-Public-Service-April-2021-21-April-2021.pdf

St Helena Statistics Office. (2021). *St Helena 2021 Population & Housing Census: Main Report.* Jamestown: St Helena Government.

St Helena Statistics Office. (2022). *St Helena Population Projections 2022 to 2051.* Jamestown: St Helena Government.

10 Annex 1

STAKEHOLDER MAPPING INTERMEDIUM REPORT

(attached)

11 Annex 2

WORKSHOP REPORT

(attached)

12 Annex 3

FUTURE RESEARCH IDEAS REPORT

(attached)

13 Annex 4: Activities tracker

Table 4: Mapping activities tracked during the South Atlantic Anchor Project.

Activity name	Initiative	Topic	Principal GIS technique	Timeline - Start
Land registry code	Request	Land registry	Data manipulation in R	2021-05-28
Blushing snail sightings map	Request	Invertebrate conservation	Viewing/accessing data	2021-07-02
Blushing snail + habitat map	Request	Invertebrate conservation	Point sampling	2021-09-03
Plot invasive/intercepted invertebrates	Request	Invertebrate conservation	Viewing/accessing data	2021-10-04
Spatialise data from Pest Control's fruit fly traps	Request	Biosecurity	Spatial join	2021-08-04
Soil substrate types for mole spider	Request	Invertebrate conservation	Point sampling	2021-10-22
Map for gumwood planting licenses	Request	Plant conservation	Boundary definition	2021-08-04
Postbox walk mapping	Request	Tourism	Viewing/accessing data	2021-08-26
Dark skies map	Request	Tourism	Viewing/accessing data	2021-09-09
Master plan request from Sustainable Development	Request	Spatial planning	Multi-Criteria Decision Analysis	2021-09-22
Joint Strategic Needs Assessment	Request	Public health	Viewing/accessing data	2022-01-14
Maps to be used for new St Helena Invertebrate Conservation Strategy workshop	Request	Invertebrate conservation	Viewing/accessing data	2021-10-08
Whale shark maps	Request	Marine conservation	Temporal analysis	2021-11-16
Land availability map for housing	Request	Spatial planning	Multi-Criteria Decision Analysis	2021-11-17
Mapping for NCA project	Demonstration	Terrestrial conservation	Viewing/accessing data	2021-05-18
Spatialise historical census records by district	Request	Social statistics	Spatial join	2022-01-04
Invertebrates hotspots	Request	Invertebrate conservation	Hotspot identification	2021-10-25
Harlequin ladybird timelapse	Request	Biosecurity	Temporal analysis	2022-02-02
Forestry spatial species data	Request	Forestry	Spatial join	2021-10-06

Weather data timelapse	Request	Meteorology	Temporal analysis	2022-02-02
LDCP maps	Request	Spatial planning	Multi-Criteria Decision Analysis	2022-02-01
Hospital 3D closeup	Request	Spatial planning	3D visualisation	2022-02-10
Spiky yellow woodlouse data request	Request	Invertebrate conservation	Viewing/accessing data	2022-03-09
Check stats building footprint against old building footprint	Request	Social statistics	Data manipulation in R	2022-02-09
NCA maps	Demonstration	Conservation	Viewing/accessing data	2021-05-13
LDCP e.g. maps	Demonstration	Spatial planning	Viewing/accessing data	2021-06-22
Beehives maps	Demonstration	Food provisioning services	Viewing/accessing data	2021-08-05
Redwood/ebony map	Demonstration	Plant conservation	Boundary definition	2021-11-10
Living map process	Demonstration	Habitat mapping	Remote sensing	2021-08-04
Spatial join for new invertebrates data	Request	Invertebrate conservation	Spatial join	2021-08-27
Sharing DPLUS052 algorithm/Living Map	Request	Habitat mapping	Remote sensing	2021-08-01
Data policy	Request	Data governance	Policy input	2021-07-01
Georeference historical maps	Request	History	Georeferencing	2021-10-01
Feedback to St Helena Marine Management Plan	Request	Marine conservation	Policy input	2021-09-28
Drone habitat mapping support	Request	Plant conservation	Remote sensing	2021-11-30
Ecosystem services hotspots	Demonstration	Ecosystem services	Hotspot identification	2021-10-07
Land availability areas	Demonstration	Spatial planning	Constraints mapping	2022-03-31