

The St Helena Cloud Forest Project



Restoring St Helena's internationally important
Cloud Forest for wildlife, water security and people.

Annual Report 2021/22

 UK Government

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Summary

St Helena Island is a UK Overseas Territory in the South Atlantic Ocean. The St Helena Cloud Forest Project is a highly collaborative multi-year project working to implement the Peaks Management Plan for St Helena's 'Peaks National Park'. This globally significant area holds over one sixth of the UK's total endemic biodiversity (approximately 250 unique species) including the island's iconic spiky yellow woodlouse (*Pseudolaureola atlantica*), provides the majority of the island's freshwater through mist capture and groundwater recharge, and offers a unique wilderness experience in an area that has been voted one of St Helena's 'Seven Wonders'. This project is vital for St Helena's ability to adapt to and mitigate against climate change, and over the next five years works will take place within the Peaks National Park under three main pillars:

- **Biodiversity** – improving, restoring and creating cloud forest habitat, research into and conservation of associated species with the aim of safeguarding an internationally important wildlife hotspot from further extinctions.
- **Water security** and climate change - re-vegetating around native habitat fragments in key areas of mist capture, and monitoring and research to inform and secure the island's water security and climate change adaptation efforts.
- **Socio-economic** – supporting the sustainable development of St Helena by developing opportunities through ecotourism, education, sustainable land use, and conservation training.

The project started in July 2021 with funding of £900K for 2021-2022 provided by the UK Government. Along with matched funding from project partners and under various Darwin Plus projects the total funding value was £1.3million for year 1.

Funding to deliver the project until March 2025 has also recently been confirmed from the UK Foreign, Commonwealth & Development Office (FCDO).

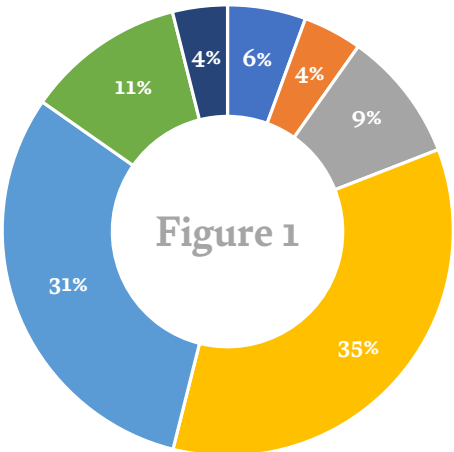
The project is managed by the RSPB, working with local partners St Helena Government's (SHG) Environmental Management Division (EMD), Sustainable Development and Education departments and the St Helena Research Institute (SHRI) as well as the St Helena National Trust (SHNT), Connect St Helena and Bottom Woods Met Office. The project is also supported by core international partners Arctium, the UK Centre for Ecology and Hydrology (CEH), the Royal Botanic Gardens Kew and Dr Quentin Cronk from the University of British Columbia (UBC).

Financial Accounts

Grant funding of £900,000 for year 1 (July 2021 to March 2022) of the Cloud Forest Project was received from the UK Government’s Foreign, Commonwealth and Development Office (FCDO). Of the grant funding awarded, £662,667 was spent during the first year with an additional spend of £202,095 matched funding from partners and the Darwin Initiative. Although the full allocated budget spend was not achieved within the financial year, the majority of key milestones and Peaks National Park (PNP) Implementation plan actions were achieved or good progress towards completion was made. Reduced spend was primarily due to the later than expected start date with the consequent recruitment and procurement delays, plus the impact of the Covid-19 pandemic.

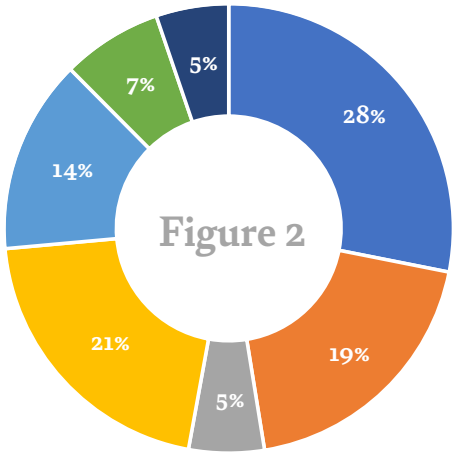
In November 2021 a decision was made to delay the geological aspects of the project to year 2 to give more time for planning. This meant that the budget allocated to this milestone was not utilised but enabled learning from field work in year 1 to better inform plans for delivery of these outputs for year 2.

Proportion of grant funding (£662,667) allocated to core partners is outlined in Figure 1 below. The spend categories for the total budget (£864,762) are illustrated in Figure 2.



Percentage of grant funding allocated to core Cloud Forest Project Partners in year 1.

- Arctium
- Connect St Helena
- Royal Botanic Gardens Kew
- Royal Society for the Protection of Birds
- St Helena Government
- St Helena National Trust
- UK Centre for Ecology and Hydrology



Percentage of project spend (grant and match funding) across budget categories in year 1.

- Staff costs
- Consultancy
- Travel
- Equipment
- Materials and consumables
- Other
- Overheads

NB: Funding allocated to RSPB included spend of approximately £55k on equipment procured for partners and infrastructure on island.



Cloud Forest habitat corridor restoration

Year 1 key achievements



50%

In this financial year work has been undertaken in **50% of remaining cloud forest fragments** to clear invasive species and/or plant with endemics.

Pillars: Success stories and challenges

Biodiversity

Restoration works undertaken by SHG's core team, DPLUS099 staff and new Cloud Forest Project team members, including invasive clearance and / or new planting, have taken place in 50% of the remaining 120 fragments of cloud forest. In addition, four new corridors connecting remaining fragments have been created and four maintained.

Plant production targets for 2021/22 were a 25% percent increase in production across both the Peaks and EMD Scotland nurseries from a baseline of 22,000 plants. The target for propagation was 27,500 plants from Peaks species across both nurseries and the actual propagated was an incredible 42,773 plants. This included propagation of 17,500 she cabbage seedlings produced by Scotland nursery this year, securing the future of this critically endangered species.

A further step change in scale in year 2 is anticipated which will include an increase in fern production within the world class micro propagation unit set up in year 1 by EMD staff, supported by a team from the Royal Botanic Gardens Kew. The building for the laboratory was renovated through project funding and vital equipment was purchased and installed; training has been provided by experts from Kew. This will be a real game changer in terms of production of the difficult to grow, rare endemic fern species. Materials have also been purchased to create additional space within the nursery at Scotland.

Further research into plant ecology, genetics, soil biodiversity and pathogens has been undertaken which will inform conservation practice in future. A team from CABI (Centre for Agriculture and

Biosciences International) and the Birmingham Institute of Forestry Research (BIFoR) were on island in February and March 2022 for a scoping visit for the DPLUS157 project to look at plant disease and pathogens. As part of their research they looked at pathogens in the nursery, at the Peaks and on the Peaks tree species. The visit confirmed that several of the rare endemic tree species are showing symptoms associated with tree disease. Field gene banks for all these species will be expanded in year 2 of the project, and it is hoped that further research will provide advice on future conservation of these threatened species.

The invertebrate monitoring and conservation aspects of the programme have included production of agreed lists of both priority endemic and invasive species, which will inform research and action. A surveying methodology has also been produced and trialled and the baseline monitoring started. This will be completed, and results analysed, in the first quarter of year 2. Risk assessments have been started on the key invasive invertebrate species impacting on St Helena's endemics and DNA analysis has been undertaken on specimens of endemic invertebrates by the Natural History Museum.

During the early invertebrate survey work by the St Helena National Trust (SHNT), spiky yellow woodlice were found amongst native vegetation in a four-year-old corridor that was cleared of invasives and planted with native species. It is incredibly positive to see this critically endangered species, and other key species, beginning to move into newly restored areas.



She cabbage propagation

Year 1 key achievements



10,882 plants from 17 different Peaks' species were planted into wild restoration sites.



5

7,934 plants were planted into 5 living field gene banks.

Water security and climate change

Water security and climate change work in year 1 of the Cloud Forest Project has been aligned with and is enhancing work being completed under year 2 of the DPLUS103 project 'St Helena Climate Change and Drought Warning Network'. During the synergistic year funding from both projects has been used to set up climate and water monitoring networks and complete a review of background data and information on climate and water resources on St Helena. Cloud Forest Project funding has focused on resources within the Peaks National Park which provides the majority of the island's water supply.

Sites to support climate monitoring have been identified and additional equipment procured. This included the addition of two fully automatic weather monitoring stations which have been set up within the Peaks National Park area, adding to the network of seven stations in total across the island. Fieldwork from visiting meteorologist, Steve Palmer, supported the on island Met Office team to assess and refine the locations for the weather stations and set up a database for recording, analysing and sharing the data collated.

A Water Resource Monitoring Technician was employed through DPLUS103 in January 2021 and their role, working alongside international experts, has been to establish a water monitoring network. This included research and procurement of equipment, identification of monitoring locations and installation of equipment.

Hydrogeologist, Ben Sansom, and geophysicist, Michel Groen, were on island for fieldwork to evaluate the study area's geology, hydrogeology and hydrology in January and February 2022. They also delivered training to Connect's Water Resources Monitoring Technician including borehole monitoring, stream flow measurement, geophysics and soil sampling.

Canopy drip and trunk flow monitoring equipment was installed in February 2022 and initial soil samples have been taken by Connect, SHRI and EMD staff to look at soil chemistry and physical properties. These have been shipped to the UK for further analysis by the UK Centre for Ecology and Hydrology.

Year 1 key achievements



42,773 plants were propagated from Peaks species across both nurseries (target was 27,500 plants).



Visits from **eight international, expert partners** provided training for staff in EMD, SHRI, Connect St Helena and SHNT.





Socio-economic

St Helena's primary level education pack is being updated by the St Helena National Trust incorporating Cloud Forest information. A final draft was produced in quarter 4 and is receiving feedback from schools before it is finalised. Prince Andrew's School teacher, Steve Coates, has also been working on developing resources and lessons that engage with the Cloud Forest for secondary students.

Nine school sessions with 142 children were held as part of the project in year 1 and in addition to this a number of community events were held or attended. Members from the local Scouting community participated in conservation activities on Scouts Founders' Day, local partners of the Cloud Forest Project attended Harford Primary School's Techno Earth Day, showcasing what's going on as part of the project to members of the public, and St Helena's Environment Minister visited the Peaks with project partners to view the amazing work being done. Further engagement events are planned for year 2 including a visit by all elected members and councillors and a public planting event as part of the Queen's Platinum Jubilee.

A new logo for the Peaks National Park was designed through a public competition and has been launched. The project webpage and Facebook

page have also been developed and an online visitor survey was open for the month of March to establish a baseline of visitors to the park and their views on facilities.

During January and February eight staff from five international partner organisations were on island to complete fieldwork and support on island teams. Eight formal training sessions/programmes and presentations were held during that time on micro propagation techniques, horticultural techniques, seed banking and soil sampling. Staff also had the opportunity to work alongside experts, building capacity in the water and climate monitoring aspects of the project and plant and invertebrate monitoring.

The St Helena Research Institute launched a research bursary and the first bursary was awarded to Amy Webster (doctoral student with the University of Birmingham). The bursary will support her PhD studies aiming to identify the pathogens causing disease across endemic tree species within the cloud forest.

Year 1 key achievements



9 school sessions with **142 children** held as part of the project in year 1.



A new world class

facility for the Micro Propagation of plants, particularly threatened fern species was set up on St Helena by St Helena Government's Environmental Management Division, supported by the **Royal Botanic Gardens Kew.**

The project in the media

- RSPB and SHG released press releases to promote the project after the announcement of funding for Year 1:
<https://www.sainthelena.gov.sh/2021/press-releases/the-st-helena-cloud-forest-project/>

<https://www.rspb.org.uk/about-the-rspb/about-us/media-centre/press-releases/new-page/>
- Daily Telegraph on 5 August:
<https://www.telegraph.co.uk/news/2021/08/05/government-backs-bid-save-uks-last-cloud-forest/>
- Governor Rushbrook promoted the project on **Twitter** after a visit to Royal Botanic Gardens Kew.
- A locally produced film on the restoration of the endemic she cabbage won an award at COP26. **Locally Produced Short Film Wins 'Impact Award' At COP26 | St Helena Government (sainthelena.gov.sh)**
- The Peaks restoration was discussed in an associated BBC World Service Newshour interview with SHG Marketing Manager Emma Weaver.
- A video funded by the International National Trusts Organisation promoted the work at the cloud forest, with narrative provided by SHNT's Martina Peters; this was launched at COP26: Nature based solutions for climate resilient heritage - **YouTube**
- SAMS and Saint FM radio interviews promoted the project locally in November.
- Articles regarding the project and RSPB's visit to the island appeared in local press in November: **2021123 (independent.sh) and St-Helena Independent-20211119.pdf**
- The project was mentioned in SHG's press release on the large bellflower. And this article along with a SHCF project update appeared in local press in late December: **20211203 (independent.sh)**
- Article regarding the Kew Team's visit to St Helena appeared in the St Helena Ambassador newsletter:
<https://www.sainthelena.gov.sh/wp-content/uploads/2022/03/St-Helena-Ambassador-February-2022.pdf>
- Sky News interview with Vanessa Thomas Williams (MBE) on the Breakfast Show on 11 Feb 22 to celebrate International Women in Science day.
- Peaks National Park Facebook page (<https://www.facebook.com/St-Helena-Peaks-National-Park-101494412559000>) and website page (<https://www.sthelenatourism.com/st-helenas-cloudforest-project/>) were launched.

As part of the project in year 1 a communications plan was drafted and shared with project partners. This will be finalised and agreed early in year 2. Local film production company Capricorn Studios (What the Saints Did Next) were engaged to produce six introductory film clips about the project. These have been shown on the project Facebook page and are available on YouTube: **What The Saints Did Next - YouTube**. The films will also be shown on St Helena's promotional TV channel.

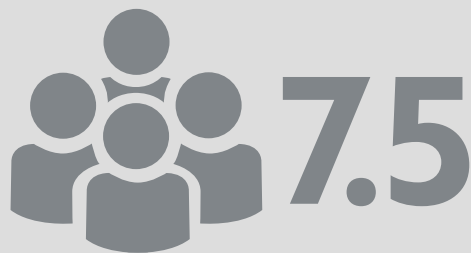


Fern propagation, Peaks nursery

Year 1 key achievements



Over 1900 invertebrate species records were collected, of which 476 were endemic species records.



7.5 full time equivalent posts were recruited to support the Cloud Forest Project in Year 1, of which **6.5 posts** were locally based St Helenians or Saints.



Looking ahead: Priorities for 2022/23 and beyond

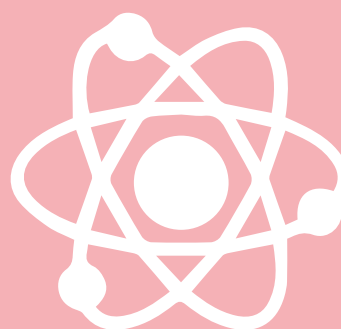
Year 1 of the Cloud Forest Project set the foundation of the project by building capacity through establishing the majority of the staff, equipment and infrastructure needed to scale up habitat restoration as well as to establish the monitoring network and baseline information needed to inform restoration plans and measure success. Years 2 to 4 will build on year 1 by utilising that capacity to achieve a step change in the scale of habitat restoration being completed each year, and to ensure that habitat restoration is underpinned by good conservation practice. Information from the water and climate monitoring network will also ensure that restoration activities are aligned to both biodiversity and water security priorities.

Key outputs planned for year 2

- Protocol for scaling up plant production, including through micro propagation of ferns, completed and plant production increased by a further 25% over both nurseries (target 32,200 plants).
- A step change in the scale of habitat restoration achieved.
- Baseline invertebrate surveys completed and research into the genetics, ecology and habitats of priority plant and invertebrate species undertaken.
- Annual monitoring of water and climate data undertaken, and initial analysis completed to inform the national water resource management plan.
- Stage 1 of the geological and geophysical survey fieldwork completed.
- Exposure visits by key St Helena partner staff to the UK for training to further build capacity in island personnel.
- Review of existing infrastructure and outreach facilities and activities within the Peaks National Park completed and options/recommendations for potential improvements agreed.

Year 1 key achievements

More than **100 responses** to our baseline engagement survey were received in March 2022.



The Cloud Forest Project featured on Sky news on 11 February celebrating **'Women in Science Day'**, represented by EMD's Nursery Officer, Vanessa Thomas-Williams (MBE).

Thank you to funders and partners

Thank you to our funders and partners who make this work possible:

Funding organisations

Funding for the St Helena Cloud Forest Project is provided through the UK Government's Foreign, Commonwealth and Development Office (FCDO)



Match funding is provided through several Darwin Initiatives and through core partner organisations



Associated Partners

- Species Recovery Trust.
- UK Met office.
- CABI (Centre for Agriculture and Bioscience International).
- BIFoR (Birmingham Institute of Forestry Research).
- Natural History Museum.

Core Partners



St Helena
Government

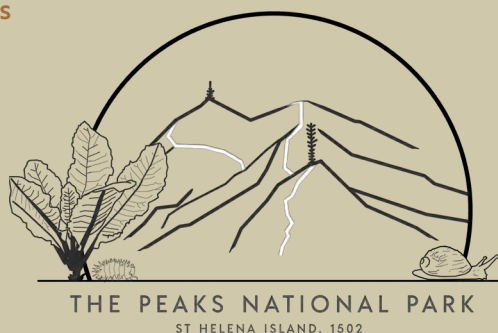


UK Centre for
Ecology & Hydrology



St Helena Island
A breath of fresh air

Year 1 key achievements



A new **Peaks National Park logo** was designed and launched.



Funding for **3 further years** secured for the Cloud Forest Project.

