The St Helena Cloud Forest Project





Restoring St Helena's internationally important cloud forest for wildlife, water security and people.

Annual Report 2023/24



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Cover photo: The cloud covered Central Peaks, Shayla Ellick.



Summary

St Helena Island is a UK Overseas Territory in the South Atlantic Ocean. This report provides an overview of the key achievements, challenges and promotional activities during year three of the St Helena Cloud Forest Project, 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 many critically endangered plants and invertebrates found nowhere else on earth. The cloud forest also provides the majority of St Helena's freshwater through mist capture and groundwater recharge, and is found in an area that has been voted one of St Helena's 'Seven Wonders'. This project supports St Helena's ability to adapt to and mitigate against climate change. Works are taking 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 from the UK Government's Foreign Commonwealth and Development Office through to March 2025.

Managed by the RSPB, and led by St Helena
Government (SHG), the project also works with local partners including a number of SHG departments
(Environmental Management Division (EMD),
Sustainable Development, Education and the St
Helena Research Institute (SHRI) and Bottom Woods
Met Office), the St Helena National Trust (SHNT) and
Connect Saint Helena. The project is also supported by core international partners Arctium, the UK
Centre for Ecology and Hydrology (CEH) & the Royal Botanic Gardens Kew.

Following this initial four-year phase the partners' vision is to continue cloud forest restoration in the longer term.

In year three, as with the previous year, the challenge of plant pathogens within the rare cloud forest habitat continued to impact the project. The project continued to adapt work programmes and activities to mitigating this challenge, particularly under the biodiversity pillar. Excellent progress was made under the water pillar with a number of exciting firsts for the island.

Details of previous project achievements can be found in annual reports (years' one and two) on the project's <u>webpage</u>.

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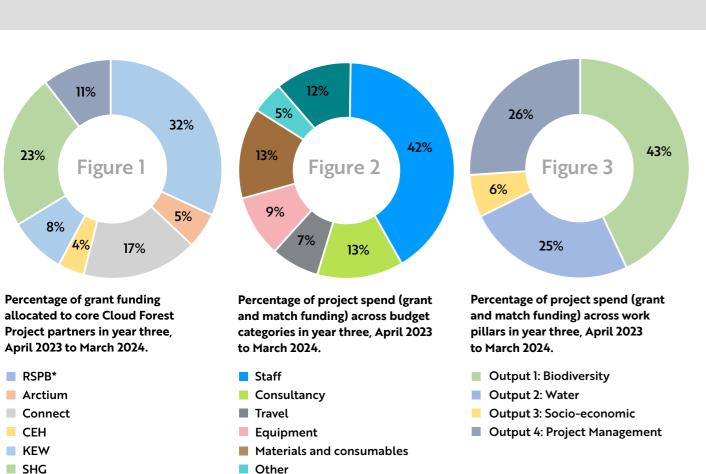
Financial accounts

Funding of £1.9m was committed for delivery in years' one and two of the project by the UK Government's Foreign Commonwealth and Development Office (FCDO). Along with matched funding from project partners and under various Darwin Plus projects the total funding value was £2.5 million for the first two years.

In year three, the project spent £844,946 of grant funding from the FCDO, with an additional spend of £100,762 matched funding from partners and the Darwin Initiative.

Proportion of grant funding (£844,946) allocated to core partners is outlined in Figure 1 below and categories for total budget spend, including match (£945,708), are illustrated in Figure 2. Figure 3 shows grant spend across the four project pillars.





Key achievements

There were some exciting achievements for St Helena in year three of the project.

The water security and climate change pillar

completed hydrogeological and geophysics surveys (a first for St Helena), and developed capacity on island to continue these. The data from these surveys is being used with the on-going monitoring of mist, rainfall, ground and surface water to refine the island's water balance model and hydrogeological concept model.

Data being collected from the monitoring networks is actively informing water management decisions on island. Investment is also being made in upgrading the monitoring networks to telemetry-based systems, to reduce footfall frequency within sensitive areas and provide earlier detection of faults.

The socio-economic pillar saw local and international promotion and advocacy of the cloud forest to build ownership and engagement, particularly in the island's youth. As there were access restrictions to the cloud forest, the priority for this pillar continued to be the development of resources and innovative activities to enable the local community, schools and the wider public to engage with the cloud forest remotely. Particular highlights included the launch of the Primary school Cloud Forest Education Pack and development of a Storymap for the project: https://rb.gy/d5uti.



NB: Funding allocated to the RSPB included spend of approximately £100,000 on equipment, consumables and external consultancy (procured for partners on island).

Overheads

SHNT



Under the Biodiversity pillar, invertebrate research and surveys resulted in a complete overhaul of spider taxonomy on St Helena, focusing on the Peaks species. Two species of pirate spiders new to science were discovered in the cloud forest and formally described this project year. They are called pirate spiders as they hunt and feed on other spiders. These two species are named after two Saints who have been central to invertebrate conservation work on St Helena: Ero lizae for Liza Fowler and Ero natashae for Natasha Stevens. The team also commenced drafting 106 cloud forest invertebrate species assessments for the IUCN Red List, these will be finalised and published in early 2025.

The project demonstrated a big conservation success as the annual invertebrate survey (year two report) detected the Critically Endangered and iconic Spiky Yellow Woodlouse *Pseudolaureola atlantica* present in restoration areas. A year-long study on the Diana's Peak Grass moth, *Elachista trifasciata* is now helping to inform planting of endemic sedges to support the moth's recovery. Plant association of endemic invertebrates were identified by the invertebrate

survey and will be used to inform conservation planting; as well as invasive plant removal techniques – as some endemic invertebrates are utilising invasive plants.

The invasive invertebrate team worked with FERA Science to analyse stomach contents of the Common Wasp *Vespula vulgaris*, an invasive invertebrate. This identified through DNA analysis that they were predating 9 endemic invertebrate species, including three threatened endemic spider species and the very threatened endemic bush cricket *Phaneracra bartletti*.

Cloud forest habitat restoration continued to be impacted by the presence of plant pathogens within the cloud forest and the resulting research and mitigation activities to address these. 1.45ha of existing restored area was maintained and 0.54ha of new area cleared ready for restoration. In addition, 250m of buffer zones alongside paths within the National Park were created.

The endemic plant nurseries prioritised improving nursery infrastructure and procedures to comply with newly implemented phytosanitary protocols, to produce pathogen free plants. A larger capacity soil steriliser was procured to support this goal and will arrive on island in year four. Nursery improvements involved refining biosecurity practices, and retrofitting shade houses to comply with new phytosanitary protocols. 8,239 plants from 14 Peaks

species were propagated [of the target 20,000], and 1,747 seedlings from Peaks species planted [in 0.01ha].

There was also a continued focus on developing endemic gene banks and seed storage to safeguard genetic material to mitigate the considerable threat from plant pathogens. Two new living gene bank areas were identified, outside of the main cloud forest area and in sites that are pathogen free.



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Training and capacity building

There were 16 full time and four part-time posts covered on island in year three of the project.

A variety of training, and knowledge-exchange opportunities were offered to St Helena staff including three UK visits, an exchange visit with the Taita Hills Cloud Forest Project in Kenya and attendance at the IWA Conference in Kigali for a member of the Connect Saint Helena Team, as well as bespoke Invertebrate Identification and QGIS training offered on island.

International partners also contributed to on-island training during fieldwork and capacity-building trips to St Helena. Over 70 people from partners and other organisations had the opportunity to work alongside experts to build capacity in hydrogeological field surveys, invertebrate and habitat assessments, and plant/fern production and pathogen management.





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Key challenges

The presence of plant pathogens affecting endemic tree species on the Peaks continues to be the most significant challenge to the project. Throughout the year work continued under a separate Darwin Plus project to understand more about the pathogens, how widespread they are, and their known impacts. For the Cloud Forest Project there was a key focus on the longer-term implication for both the project and conservation of the Peaks cloud forest habitat.

A precautionary approach was taken until the full extent of issue is known and access to the Peaks was therefore restricted from April 2023. Access restrictions to areas of sensitive cloud forest habitat meant considerable contingency planning and programme modification for year three activities. This impacted some areas of work such as invasive invertebrate control surveys, and endemic plant production.

The project focused on developing propagation and planting protocols, with a focus on ground cover species, and identifying 'clean' sites for planting and gene banks. Propagation numbers were therefore impacted by this, and germination challenges throughout the year. An initial draft conservation action plan was produced to guide restoration in response to pathogen mitigation activities. Extensive testing and cleaning of the plant nurseries was done, and significantly increased priority and focus was placed on phytosanitary actions and seed collecting to secure seed from impacted species, particularly mature trees.

Biosecurity protocols were reinforced across project work streams.





Advocacy and communications

The project was presented to HRH Duke of Edinburgh during his visit to St Helena in January 2024.

There were more than 800 positive engagements with people on St Helena throughout the year in a variety of schools presentations, launch of the primary education pack, children's clubs, youth group outreach including a Water Pillar outreach day, conservation careers talk, and Women in Conservation careers focus group. Engagement was also through local training, radio interviews and promotion in the island's two newspapers.

Various public talks were given by visiting researchers and project partners, including how the project fits with RSPB's wider landscape restoration

work; the water resource and geophysics of St Helena or 'The journey of a rain drop from cloud forest to ocean' (available online: https://youtu.be/RZsr6RsgBO4); St Helena's invertebrates and other UKOT invertebrate work; tree disease research (available online: https://youtu.be/z_b-gxrg17Q); and native forest restoration in Brackenhurst, Kenya.

Online, the total reach for posts on the project through the project's website and social media pages in year three was 119,382 (target was 50,000); this figure excludes totals from project partner-run social media pages.

Reports and project updates were also added to the project webpage throughout the year, including the year two annual report.





Project promotion

- The CFP was represented at a **Parliamentary** reception held by St Helena Government on 17 May to celebrate St Helena Government's Blue/ Green Agenda.
- A story map for the project was published: https://storymaps.arcgis.com/ stories/426fd3e280d1401d8136ba22a6f89ef6
- The final article in a series written for Getaway Magazine was published: Nature-based solutions: water from the forest (getaway.co.za)
- The project was promoted by St Helena Tourism at various international travel trade shows
- RSPB blogs and news stories:
- https://community.rspb.org.uk/ourwork/b/ actionfornature/posts/sharing-knowledgeacross-the-waves-how-knowledge-exchangevisits-are-helping-the-st-helena-cloud-forestproject-to-protect-rare-and-special-species
- https://community.rspb.org.uk/ourwork/b/ science/posts/new-spider-species-discoveredon-saint-helena-the-jewel-of-the-southatlantic-ocean

- Carrying out conservation on a global scale - celebrating our team on International Women's Day (rspb.org.uk)
- How cloud forest restoration on St Helena is bringing back wildlife and boosting water security (rspb.org.uk)
- Public talks promoting the project and the spider research were made at the Friends of St Helena AGM in London, and Birdlife South Africa in Johannesburg.

Press and publicity on new species discovered under the project:

- The Guardian Wolf spider discovered on St Helena already endangered | Spiders | The Guardian
- The-Sentinel-Vol-12-Issue-24.pdf (sams.sh)
- As It Happens with Nil Köksal, Chris Howden | Live Radio | CBC Listen



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

- (associated with the IUCN Mid-Atlantic Islands Invertebrate Specialist Group)
- UK Met Office
- Natural History Museum
- Centre for Agriculture and Bioscience International (CABI)
- Birmingham Institute of Forestry Research (BIFoR)

Website: St Helena's Cloud Forest Project (sthelenatourism.com)

Facebook: St Helena Peaks National Park

Core partners





















- Species Recovery Trust

Twitter: StHelenaPeaksNP

