

Darwin Plus: Overseas Territories Environment and Climate Fund Annual Report

Important note *To be completed with reference to the Reporting Guidance Notes for Project Leaders:
it is expected that this report will be about 10 pages in length, excluding annexes*

Submission Deadline: 30th April 2019

Darwin Plus Project Information

Project reference	DPLUS059
Project title	Establishment of the national framework for invasive plant management
Territory(ies)	St. Helena, South Atlantic Ocean
Lead organisation	Environment and Natural Resources Directorate, St Helena Government
Partner institutions	St Helena National Trust
Grant value	£ 228 175.00
Start/end date of project	April 2017
Reporting period (e.g., Apr 2018-Mar 2019) and number (e.g., AR 1,2)	April 2018 to September 2019 AR 2
Project leader name	Derek Henry & Darren Duncan
Project website/blog/Twitter	SHG: http://www.sainthelena.gov.sh/the-weed-page/ facebook: https://www.facebook.com/WeedbustersStHelena/?view_public_for=772940983037161
Report author(s) and date	Ludi Kern & James Fantom 30 April 2019

1. Project overview

The project addresses the St Helena Island Government priorities of invasive plant species management, adaptation to climate change, and building local capacity.

Invasive plant species are one of the biggest challenges for the management of National Conservation Areas (NCAs) and the conservation of endemic species in St Helena. They affect all sectors and an overall lack of coordination of effort between sectors results in rapid reinvasion from untreated neighbouring areas, with further expenditure of limited resources; SHG and SHNT together currently spend around £ a year on frequently inefficient invasive plant management activities. Climate change will exacerbate the problem, as new invasive plant species establish, existing species change range, and new species initiate population explosions. The small scale

of the island indicates that an innovative landscape scale management approach should form the basis of an invasive plant management strategy.

The project aims to build local capacity among all stakeholders, fill knowledge gaps through adaptive management trials, and engage the local community in order to develop and implement this strategy. A national coordination framework with a local position will be established, and long term monitoring programme initiated. Lessons learned will be shared regionally, as many of the priority species are problems in other South Atlantic UKOTS.



Fig 1: Location of St Helena Island.

2. Project stakeholders/partners

Stakeholder engagement and support development over the past year include;

Agricultural and natural Resources Division (ANRD) Agriculture sector: Several site visits and consultations have taken place with staff from the agricultural section. One of the on-going trials being conducted under the project in collaboration with pasture syndicates and the agriculture sector is testing control option for the management of bullgrass (*Juncus capillaceus*). During initial consultations and site visits the syndicate agreed to make one pasture segment available for the project to conduct trials. The latest trials in collaboration with the St Helena National Trust (SHNT) wirebird conservation officers and Pest Control Services (ANRD) examined the possibility of using quad bikes fitted with herbicide spraying equipment, a weed wiper trailer and also a topper-mower (see Annex A).

In addition site visits and consultations with the newly arrived Agronomist have taken place regarding potential restoration options of a site where trials on wild mango (*Schinus terebinthifolius*) have been tested. One of the suggestions were to utilise the cleared area as a new agricultural site to conduct test on different fruit trees and exploring the suitability for new species to be grown. The first steps have already been taken by taking samples to test the quality of the soil and the results appear promising. This proposal will be put together once the agronomist is back on island.

Environmental Management Division (EMD): Collaboration and support between the project and Terrestrial Conservation continues to form a major part of the project. In the past year trials have been on-going testing control options for the removal of pheasant tail fern (*Nephrolepis cordifolia*) and creeping fuchsia (*Fuchsia coccinea*) in National Conservation Areas (NCA) as (see section 3.1. Activity 3.4., 3.5. and Annex 3B). Project staff, the Invasive Plant Specialist (IPS) and Support Officer (SO) contributed to the three day Peak's Management Plan workshop hosted by RSPB in December 2018 on St Helena. The three day workshop was attended by 30 local and international representatives (see Annex 3 C for the agenda).

Roads Section, Environment and Natural Resources Directorate (ENRD): This past year has shown a number of challenges concerning vegetation management along road verges. With very limited resources, the roads maintenance sector of SHG has been trialing different methods to ensure the roads still kept safe and clear from invasive plants. One of the methods tested raised a number of concerns (see section 3.1. Activity 4.2. and Annex 3 D). On the 17th of May ANRD, EMD and Roads section met to address the comments and discuss the way forward. During the

meeting it was proposed that it is crucial to develop guidelines/protocols to ensure the effective management of road verges. As Roads cover a substantial area across the island (approx. 107 km) and are maintained by the Roads section. The verges along the roads tend to be ideal habitats for invasive plant species due to the frequent disturbance and contribute significantly to their spread by acting as dispersal corridors/pathways. In addition, several threatened or endangered species occur along roads that are crucial to protect. The project arranged and facilitated several site visits with the Roads section and Terrestrial Conservation to gain insight into the challenges faced. To initiate the process of developing management guidelines the IPS and SO hosted a workshop to address these issues and get input from all relevant stakeholders (see Annex 3 D). The workshop was hosted on Friday the 8th of June with 20 participants including representatives from EMD, ANRD, SHNT, Landscape and Ecological Mitigation Project (LEMP), Waste Management Services (WMS) and ENRD.

Waste Management Services (WMS): Safe removal, transport and disposal of green waste are crucial for effective invasive plant management. To better understand the current methods of green waste management, we conducted site visits to the landfill and discussed current and potential future challenges. The manager from Waste Management will be involved in developing best practice guidelines for green waste management. During consultations the option of using invasive plants as composting material was discussed and will be further investigated. One of the major concerns from Invasive Plant Management (IPM) point of view is if the transport and composting is not done correctly it might contribute to the spread of invasive plants.

ANRD Biosecurity: Collaborative working relationship continues between Biosecurity and Darwin Plus-059. The project assists in identification of potential new introductions. Once a species has been identified, we do a basic risk assessment and suggest appropriate actions including increasing awareness (see section 3.1. Activity 2.1. and Annex 3 E). Occurrence of any potential new incursions are shared. Since May 2018 the project has been involved with another Darwin Plus Project (074) named 'Improving biosecurity in the SAUKOTs through Pest Risk Assessments'. The IPS has attended three Skype conference calls with representatives from CABI, Ascension, Falklands, Tristan and UK. During the week of March 18th to 22nd Norbert Maczey and Pablo Gonzalez Moreno (CABI) hosted a workshop focussing on building and improving risk assessments for non-native species. The IPS and SO took part in the workshop and contributed to aspects regarding non-native plants. This was a valuable experience and all present learnt and shared their experience both local and international. (see Annex 3 F).

Airport: On 21st of September 2018 the project staff hosted an on-site plant surveying/sample collection workshop at the airport and surrounding grounds. The results of this workshop were used to develop a simple survey protocol document as required in activity 1.8. Following concerns were raised regarding the continual spread of the newly introduced Namibian ice-plant (*Galenia papulosa*), it was decided that management protocols should be developed to minimize the spread and to prevent such introduction in the future. The species was reportedly introduced to St Helena through river sand from Namibia used in the construction of the airport. To better understand the problem and scale of the invasion we arranged a site visit to the airport. Ten people took part in the visit including LEMP, SHNT, EMD, Biosecurity and IPM. During the visit we surveyed the whole runway and surrounding area for the invasive Namibian ice-plant. Over 150 plants were found. In addition to surveying and destroying any ice-plants the aim of the visit was to show people how to take the correct photos of plants to help with identification. Lourens Malan (Terrestrial Conservation Officer) also gave a demonstration on how to collect herbarium specimens. We are currently developing airport invasive plant management protocols. Once the first draft is complete we will host a workshop to discuss the protocols and get feedback and input from all the stakeholders (see Annex 3 G)

3. Project Progress

3.1 Progress in carrying out project Activities

Activity 1.1: Recruit invasive plant management officers. Completed Year 1 (2017-2018) of the project.

Activity 1.2: Recruit a Weed Busters team. Completed March 2018.

Activity 1.3: Establish multi-sector steering group for national invasive plant management oversight. Steering group not established. We aim to establish this steering group in May 2019.

Activity 1.4: Hold a stakeholder workshop to develop the strategic invasive plant management framework. Once first draft of the framework has been completed, a workshop with all relevant stakeholders will be held. This activity is planned for June 2019. The backbone structure has been developed by the IPS based on the past two years' on island experience, background knowledge, research and local and international collaborations (see Annex 3 H).

Activity 1.5: Review existing invasive plant related legislation. Since the 15th of January 2019 the IPS has been actively involved with the FCO/DEFRA BIOSECURITY PROJECT FOR OVERSEAS TERRITORIES in the drafting of the new Biosecurity Bill for St Helena Island (see Annex 3 I).

Activity 1.6: Undertake a global review of all aspects of invasive plant management for significant species. A global review of the priority species is in progress. We continually check for any new research and/findings on these significant species. Reviewing these key species is an important part of the risk assessment process. Based on the data available, current occurrence in areas climatically similar to St Helena, distribution on the island and the introduction history (usually obtained from local knowledge or Plants of St Helena book by Phill Lambdon), we can assess the risk a species poses and whether it should become a priority species or that it does not pose an immediate threat.

Activity 1.7: Identify major pathways of spread of nationally significant invasive plant species and appropriate management actions for associated pathways.

The analysis of spread pathway on St Helena Island is currently being developed. The results from the analysis will link into the national invasive plant management strategy, framework and risk assessment procedures. More specifically this document will examine the five key species' most likely pathways and suggest action accordingly. Additionally, the document will also determine other spread pathways i.e. wind, water, green waste and develop approaches to minimise the spread or high risk invasive plants where possible.

Activity 1.8: Develop simple and practical survey protocols to monitor priority invasive plant species. General survey protocols have been developed for monitoring occurrence; abundance and distribution of targeted species, new introductions and potential emerging invaders from the start of the project. In addition to these general survey protocols we've conducted an on-site airport survey protocol workshop in September 2018 (refer to section 2. and Annex 3 G).

Activity 1.9: Develop national Invasive Plant Management Strategy, based on the results of Activities 1.4 to 1.8.

This activity is currently being worked on and will form part of the Framework and annual work plans (see Annex 3 H).

Activity 2.1: Design and implement a public awareness and education programme (See Annex 3 J).

Awareness activities the past year include:

- EMD open day presentation
- Weeds Watch Posters
- Newspaper articles
- Radio interviews
- Facebook page launched
- Governmental press releases
- Awareness material and staff uniforms
- We have begun giving lessons in schools about invasive plant management. Also, there is a weekly Radio show on SAMS Radio (local station) where invasive plant management is discussed and the public is engaged to call in and take part in

competitions. The National Trust is involved in making the work of the project publicly available and a part of their public outreach programmes.

- A Weeds Awareness Week is planned for 13th to 17th May 2019 where we will have activities, discussions, workshops and volunteer opportunities. These activities will mostly be managed by our partner organisation (NT and project support officer).

Activity 2.2: Deliver invasive plant workshops on identification and area wide management for conservationists, land managers, farmers and forestry workers, and the general public. A workshop is scheduled for May 2018 aimed at discussing the suggested Best Practice Guidelines for the safe removal, transport and disposal of green waste. Stakeholders invited to contribute include the Roads sector, Waste Management, Forestry and Agriculture.

During the Weeds Awareness Week we will host several invasive plant workshops. These workshops will be looking at what to plant instead of invasive plants ('Plant me instead'), utilisation of weeds (i.e. making rodent traps out of bamboo), and how the public can help fight weeds.

Activity 2.3: Deliver training courses on safe use of pesticides.

Upcoming training courses are being planned with a South African herbicide trainer for the week of the 18th of May. Local staff have been given basic teacher training and are expected to be able to deliver these courses locally post project.

Activity 2.4: Run invasive plant awareness week.

Weeds Awareness Week scheduled for June 2018. Planning in progress and workshop will be held to get input and suggestions from stakeholders, educators and public on a suitable date and any other suggestions for activities or materials.

Activity 3.1 to 3.5: Control trials for five key species (see Annex 3 K)

Two sites have been selected for white weed (*Austroeuatorium inulifolium*) control trials and the first trials have been completed. Follow-up control and monitoring will take place over the next 6 months. Different methods are tested to determine the most cost-effective options. Results will be analysed after the 6 month period.

On the 1st of October 2018 the first round of control trials started to test different control methods for the control of wild mango (*Schinus terebinthifolius*). We selected a test site that is heavily invaded by a large population. The site is situated in a valley where the wild mango has out-competed the majority of other species. The dense thickets formed by the trees restrict access to the area and can be challenging to work in. It is clear to see even after just one month's work that this is a very challenging and costly species to manage. Additional methods have been tested and results will be analysed to determine the most cost-effective control options.

A trial has been ongoing since May 2018, although not in the area described. The area described was not easily accessible and seemingly arbitrary. Trials were completed with one method, but due to weather constraints, time was used to carry out trials on other species. Other methods are planned for trial in May. This will give enough time to report on the findings and recommend cost effective control methods to relevant sectors as in Output 3.1

Targeted removal of African fountain grass (*Pennisetum setaceum*) in the upper Sandy Bay area proved challenging due to weather conditions that limited safe access. To ensure that the trials continue an additional isolated satellite population was identified through consultation with EMD and LEMP. The site selected is an area where several endemic plant and invertebrate species occur. First round of removal and follow up monitoring has been completed. The selected sites will be revisited in December 2018.

Fuchsia (*Fuchsia coccinea*). After consultations and site visits with the Terrestrial Conservation Officer and SHNT, High Peak Conservation area was selected to test control options for Fuchsia. The first round of trials and follow up has been completed. The third follow-up is planned for November 2019.

Many trials have been undertaken in various land use areas and using many different methods on this species, including: Diana's Peak National Park (CONSERVATION), Pouncey's gut

(public), and plantation forest (forestry). Different methods have been tested and their effectiveness is still being observed and analysed.

Pheasant tail fern (*Nephrolepis cordifolia*). Control trials in Plantation forest was conducted on 8 February 2018. Methods tested included manual digging and turning over the plant material as well as removing bulbs from the soil. Follow up monitoring was done on 14 March 2018. Pheasant tailed fern occurrence was surveyed in Diana's Peak conservation area and targeted manual removal by pulling out the plants, putting the material in bags and taken to the landfill site for disposal. The two trials areas were selected to represent at least two different land use types. An additional site was selected in the Pouncey's area where a very dense population of Pheasant tail fern occurs where the first round of contrails have been tested. Four different options of herbicide use, dilution and adjuvants are being tested. Based on the current results manual removal thus far has yielded the best die-off. However, this method is also the most costly and time consuming. Results will be analysed after the third round of follow-up treatments.

Activity 4.1: Review and refine the Weed Control Manual for managing nationally significant invasive plants. Review and refinement of the Weed Control manual is progress. Based on results and data from control trials, final refinements will be completed and sent to relevant stakeholders for their input.

Activity 4.2 and 4.3: Establish and implement best practice guidelines for minimising invasive plant spread including: First draft is currently being developed. A workshop focussing on green waste is scheduled for the first week in June 2019.

Collaboration with the road's department of St. Helena aimed at establishing and implanting best practice codes for their control of roadside weeds has been undertaken. A map was created highlighting all the major invasive pathways and populations on the roadsides, while also highlighting areas with native plants and documents were handed over identifying the species (which was created by another department for a previous road's manager. They will also be involved in the herbicide training course that planned in May. This action has increased the road's department's awareness of good control practices and the problems surrounding invasive plant species, as specified in output 4.

Meetings have been undertaken with the St Helena Waste Management team on multiple occasions, regarding this. Action has yet to be taken but many ideas have been discussed. The most likely outcome is that there will be a centrally located dedicated disposal bin for invasive plant disposal, which will be removed to the Horse Point landfill site once every two months. This would be considered a trial period, so we can identify an issues that may arise and evaluate effectiveness. This will increase the public's awareness of one of the biggest pathways for invasive plant spread which is irresponsible transport disposal and dumping, as in output 4

Activity 4.4: Share lessons learned across other SA UKOTs and the wider invasive plant management community. Correspondence with conservationists on Ascension Island regarding key invasive species and their challenges faced. An informal meeting with RSPB representatives where we gave an overview of the project and discussed potential information and experience sharing between different UKOTs.

Activities 5.1 to 5.4 are on-going and planned for this year.

3.2 Progress towards project Outputs

Refer to section 3 and Annexes.

Output 1. Dedicated invasive plant management team operational, and steering group appointed and operational, by June 2017.

A Steering group will be formed for next period as a small management function now in place (see section 3.1 and Activity 1.1).

Output 2. Community, industry, Government and land managers engaged in invasive plant management.

As part of Weeds Awareness Week several workshops will be held. Topics include: Safe removal, storage, transport and disposal of green waste resulting from invasive plant removal, utilising invasive plants and 'How can you help'. Articles have been published in newspapers and radio interviews on invasive plants done. Weeds Awareness Week will be held in May 2019. There has

been on-going consultation and coordination between sectors and SHNT in developing invasive plan management plans.

Output 3: Strengthened local capacity to manage priority invasive plants.

Due to the previously mentioned delays in staff recruitment, resulted in delays in trials testing different control methods for the selected priority species. Additional high priority species were identified (bull grass) and work conducted in areas where it is a serious problem to aid in restoring pasture land and help farmers effectively manage their pasture land. Control trials have been initiated on 3 of the five priority species (*Pennisetum setaceum*, *Nephrolepis cordifolia*, *Fuchsia coccinea*) and additional trials. Trials are on-going. Assisted with Diana's Peak invasive plant removal (flax and pheasant tailed fern). Priority areas to target for trials on Fuchsia have been identified. Site visit scheduled for 4 May 2018 (see Annex 3C).

Output 4: Improved knowledge for invasive plant management strategies and tactics.

Once we have tangible results from trials and workshops, the information will be available on the Invasive plant webpage on the SHG website. Best practice guidelines will be distributed as well as information leaflets on key topics and priority species.

Output 5: Nationally significant invasive plant species under innovative and cost-effective management.

Planned for this year.

3.3 Progress towards the project Outcome

Outcome: Island capacity to manage invasive plants at the landscape level improved, enabling restoration of endemic habitats to safeguard the endemic wildlife of St Helena, and to support food security.

- All major invasive plant stakeholders actively involved in planning for, monitoring and reviewing national invasive plant management initiatives by September 2019. Continual engagement with all relevant stakeholders to identify priority species, priority areas for work, share past experience and highlight key issues.
- Continue building collaborative working relationships through information sharing, workshops, reviewing project implementation progress and participation in the management decision process.
- Standardised monitoring survey methods are being developed. Collaborative information sharing is in place with ENRD-led Darwin Plus project "Mapping St Helena's Biodiversity and Natural Environment" to utilise vegetation maps and remote sensing to monitor invasive plant occurrence, abundance and distribution.
- Continue to improve and update monitoring tools maps with data and results. Utilise maps to identify which species have increased, where to identify key species and areas to target as well as make future predictions based on spread to aid management decisions

3.4 Monitoring of assumptions

Government support for invasive plant management remains strong and impacts community support for the project:

Support from all sectors and stakeholders are essential to the success of the project.

Cooperation remains good within stakeholder sectors:

Despite delays in staff recruiting, our partner organisation (St Helena National Trust) and other stakeholders have continued to assist with local knowledge, arranging meetings and sharing lessons learnt.

Suitable staff available for recruitment at the start of the project:

This has probably been the biggest challenge we've faced with this project.

Appropriate stakeholder representation on Project Steering Group:

Selecting appropriate Steering Group representation has been carefully considered and we are confident that the group will cover all relevant sectors and stakeholders.

Early engagement with key sector stakeholders demonstrates linkage with WAP and achieves buy-in for project:

From the start of the project, sector stakeholders have played a crucial part in the process of developing management plans.

Early design plan established for chemical invasive plant trials inform required herbicides and quantities so that stocks are on Island prior to trials beginning:

The majority of herbicide selected for chemical trials are available on island and the herbicide not available was purchased and arrived in time for trials.

Invasive plant management teams on the island work cooperatively together:

Cooperation between the invasive plant management teams has been very positive and will continue to greatly benefit the project and achieving its outcomes.

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

- Refer to section 3 activity 4.4. and Annexes

The global threat posed by invasive species is continual and growing threat. Islands like St Helena and other UKOTs are particularly vulnerable to the devastating impacts. Any work, data and progress towards management of invasive plant species is vital not only to St Helena, but anywhere in the world. Sharing the knowledge between UKOTs is crucial and can contribute to the management of invasive plants.

The project will contribute substantially to global, regional and national strategic objectives. Outputs will:

- Support Convention on Biological Diversity Aichi target Strategic Goal B targets 5, 7, 9 and 10, Strategic Goal C targets 11 and 12, Strategic Goal D target 14, and Strategic Goal E target 19.
- Build on the South Atlantic Invasive Species Regional Invasive Alien Species Strategy 2010.
- Contribute to the St Helena Island 10 Year Plan 2017 – 2027 national goal “Altogether Greener”
- Support the St Helena Government Sustainable Management Plan 2014-2017 strategic, objective 8.1
- Support the National Environmental Management Plan 2012-2022, objective D
- Support the St Helena Invertebrate Conservation Strategy 2016 to 2021, Goal 2
- Support the National Pesticide Policy
- Support the St Helena Environment Charters 2001, Commitment 2
- Implement the Weed Management Action Plan endorsed in August 2016

4. Monitoring and evaluation

The responsibility for M&E lies with ANRD, and specifically in the post of Invasive Plant Specialist. Once the steering group has been established we will report on a monthly basis on the progress, challenges and planning. The steering group will have both technical and financial oversight of the project activities, and will be able to react and respond to the results of project activities, as well as to any other developments on the island, and feed it back into planning for each phase of the project. Iterative learning and adaptive management will be achieved through close working of the project team with other invasive plant managers on the island and a policy of open communication. Now that the Invasive Plant Team has been established, a detailed work plan will be developed, and milestones checked against progress.

All project products and materials will be placed on-line on the invasive plant webpage where they are available for external verification as well as for sharing lessons learned as widely as possible. Sector and area-specific techniques for management developed under output 3 will be incorporated in the workshop schedules, as well as summarised in a series of practical best practice guidelines. This will include not only lessons learned in what works best, but also what

is less effective, so that both positive and negative impacts are reported and taking into account in designing the area-wide invasive plant control trial in output 5 (also see section 3.1).

Invasive plant distribution surveys designed and initiated in year 1 will increasingly yield data which will inform and guide the progress of the project. The simple surveying protocols developed to monitor and evaluate the efficacy of invasive plant management programme, also allow early identification of new emerging invasive species. The survey database will provide objective data which can be used to underpin environmental management decision making. This activity links to the ENRD-led Darwin Plus project "Mapping St Helena's Biodiversity and Natural Environment" 2016 - 2018 by filling in gaps at a finer scale than possible using satellite imagery, and by establishing a programme of routine surveying of key species which will contribute to updating the "living map" post-project under the direction of the Weed Officer.

5. Lessons learnt

One of the biggest lessons learnt is to have flexibility built into the project, particularly in relation to timescales. The delays in staff recruitment had a snowball effect influencing the many of the project outputs. The amendments to the Weeds Officer job profile impacted on the management team's ability to achieve the project outcomes on time. Without staff, we could not conduct the field trials and as a result we do not yet have the necessary data to develop a sound management plan.

Based on the outcome of the change request submitted, we will adapt our strategy to ensure the project still delivers its outcomes. Without the extension of the project by the proposed nine months, these crucial outcomes may not be achievable. If the request is unsuccessful we face the risk of compromising the integrity and outcomes of the project. The success of the project is vital for the effective management of invasive plants that has already had severe impacts on the island and will continue to if not confronted and managed.

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

N/A

7. Other comments on progress not covered elsewhere

During November 2018 the IPS was involved in the Horizon Scanning Workshop led by CEH on St Helena. Over 30 people took part in the workshop to develop a list of potential high risk species using research and local knowledge. The workshop was attended by representatives from Great Britain Non-Native Species Secretariat, CABI, several experts in field of invertebrates, vertebrates, marine and plant invaders. As part of the workshop the IPS together with staff from EMD and SHNT led several fieldtrips. One in particular was focussed on the DPLUS059 Invasive Plant Project where the IPS and SHNT staff led a fieldtrip to several of our management sites across the island. Spending time with the experts and also sharing our work has been a wonderful opportunity that has already initiated continual collaboration. These kind of workshops, visit whether on St Helena or elsewhere are crucial to keep the staff and the project in touch with the wider invasive plant community.

<https://www.ceh.ac.uk/news-and-media/blogs/predicting-threat-invasive-non-native-species-british-overseas-territories>

8. Sustainability and legacy

The project continues to build institutional capacity through providing workshops and training opportunities for the staff and stakeholders (see Annex M), fill knowledge gaps, identify priorities, run adaptive management trials, develop protocols and procedures, strengthen partnerships and promote community engagement to initiate invasive plant management at a landscape level. Post-project, the aim is to have a Weed Officer position within ANRD, and the Weed Busters will continue on the SHNT as the first island Conservation Rangers. However, after many consultations with relevant stakeholders and councillors we have not been successful in identifying or sourcing sufficient funds from St Helena Government to cover the cost of a dedicated team. We are still and will continue to advocate for an invasive species team for the remainder of the project.

One of the outcomes of the project is to train people to safely use pesticides. On approximately a yearly basis ANRD would have a trainer off-island come to St Helena to provide training. In May 2019 a trainer will once again visit St Helena to provide the basic certification for the safe use of pesticides, however in addition 5 staff members will have the opportunity to be trained to become trainers themselves therefor reducing the reliance on external trainers and building local capacity.

In addition DPLUS059 contributed to the development future Darwin projects that increases the sustainability of the project. Refer to DPLUS099 and see extracts below:

In the application under **Institutional Capacity** it reads: *“ANRD are running the current project DPLUS059 ‘Establishment of the national framework for invasive plant management in St Helena’ which has highlighted the urgent need to capitalise on the advancements made through DPLUS029 and ensure establishment of effective methods which can safeguard the most important native diversity hotspot fragments.”*

In the **Support Letter** from Derek Henry (Director of ENRD) it states: *“It will help promote water capture resources that are reliant on endemic cloud forest habitats. It will support the DPLUS059 invasive plant species management project that identified the rare endemic cloud forest as a key priority area for better targeted invasive plant species control.”*

In the **Background Section** it reads: *“Conserving the 1% of natural habitat is undoubtedly crucial to ensure the survival of the remaining endemic species. This has been corroborated by the currently running DPLUS059 invasive plant species management project that identified the rare endemic cloud forest as a key priority area for better targeted invasive plant species control.”*

9. Darwin identity

This project has always been recognised as a distinct project funded by Darwin Initiative. The t-shirts the project staff wears and are given to the public as part of the project awareness and education all have the Darwin logo on them. In every publication, whether it be radio, online, or print, the project is always presented as a Darwin Plus project. The territory is not a stranger to Darwin plus, as it has been completing Darwin Funded projects for many years, and most people here know what Darwin is, especially in the conservation sector.

Internal documentation and presentations carry the Darwin logo and logos of partner organisations. When opportunities have arisen, we have promoted the project, including, local newspaper articles, radio segments, local presentations (see Annex 3 J).

10. Project Expenditure

Table 1: Project expenditure during the reporting period (1 April 2018 – 31 March 2019)

A change request form was submitted in April 2018 and accepted in August 2018.

Continual rainy and windy weather over the year months have caused some delays. Certain sites cannot be safely accessed when it is raining due to the terrain and high risk of injury. To account for the unpredictable weather we adopted a *“assess the weather and then decide where it would be safe to work”* approach. Luckily our sites are well distributed over the island (i.e. different weather zones) and work still continued with only slight changes to scheduling.

Project spend (indicative) in this financial year	2018/19 D+ Grant (£)	2018/19 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others (Please specify)				
TOTAL				

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2018-2019 – if appropriate

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
Impact: Invasive plant species are cost-effectively managed across the island with reduced threats to endemic flora and fauna, and other sectors.			
Outcome: Island capacity to manage invasive plants at the landscape level improved, enabling restoration of endemic habitats to safeguard the endemic wildlife of St Helena, and to support food security.	0.1 All major invasive plant stakeholders actively involved in planning for, monitoring and reviewing national invasive plant management initiatives by January 2019	0.1 Consultations and site visits with all relevant stakeholders to identify priority species, priority areas for work, share past experience and highlight key issues have taken place.	Continue building collaborative working relationships through information sharing, workshops, reviewing project implementation progress and participation in the management decision process.
	0.2 Monitoring programme database developed by February 2019.	0.2 Standardized monitoring survey methods are being developed. Collaborative information sharing with ENRD and Darwin Plus 052 (Mapping St Helena's Biodiversity and Natural Environment) to utilise vegetation maps and remote sensing to monitor invasive plant occurrence, abundance and distribution.	Continue to improve and update monitoring tools maps with data and results. Utilise maps to identify which species have increased, where to identify key species and areas to target as well as make future predictions based on spread to aid management decisions.
	0.3 New staff capacity in place to implement the invasive plant management strategy by June 2018	0.3 Completed in Year one	
	0.4 Experienced Conservation rangers in place with the SHNT by February 2019	0.4 Two SHNT weed busters have been working on the project from March 2018.	Continue to build Invasive Plant Project team's capacity and abilities through training opportunities (see Activity 2.3. and Annex M).
	0.5 At least 5 problem invasive plant species being tackled through area-wide initiatives by December 2018.	0.5 Control trials have been initiated on all of the five priority species and additional trials on a problem species bull grass (<i>Juncus capillaceus</i>) have been done.	Continue current trials follow up and monitoring. Analyse data, identify most cost-effective control options and integrate these suggestion into the IP Framework and Annual work plans.

Outputs:	1.1. Dedicated invasive plant management team operational, and steering group appointed and operational, by June 2019	1.1 Full invasive plant management team from February 2018. A Steering group to be formed for next period as a small management function now in place.
1. Strategic leadership for invasive plant management is evident at the national level	1.2. Medium-long term national Invasive Plant Management Strategy implemented by April 2018	1.2 Due to delays in staff recruitment this is still on-going. Indicators still valid.
	1.3 National strategic invasive plant management function fully operational under SHG's ENRD structure by March 2019	1.3 Indicator is still valid however following several discussions and meeting with relevant stakeholders and councillors it does not seem likely that there will be funding available for an invasive plant management team under SHG. We will continue to advocate for this and investigate alternatives for the rest of the period (see section 8).
Activity 1.1: Recruit invasive plant management officers		Completed January 2018.
Activity 1.2: Recruit a Weed Busters team		Completed March 2018
Activity 1.3: Establish multi-sector steering group for national invasive plant management oversight		Steering group not established. Aiming to establish in May 2018.
Activity 1.4: Hold a stakeholder workshop to develop the strategic invasive plant management framework		Once first draft of the framework has been developed, a workshop with all relevant stakeholders will be held (See section 3.1. and Annex H).
Activity 1.5: Review existing invasive plant related legislation		Biosecurity Bill drafting contribution (see section 2 and Annex I).
Activity 1.6: Undertake a global review of all aspects of invasive plant management for significant species		Review of key species has been completed. However this is an on-going process and additional species posing potential risk will also be assessed.
Activity 1.7: Identify major pathways of spread of nationally significant invasive plant species and appropriate management actions for associated pathways		Pathway Analysis for St Helena was completed in October 2017 by Dr. Jill Key (Overseas Territories Project Manager APHA), with contributions from (ANRD) Darren Duncan invasive Plants Specialist (Ludi Kern), Biosecurity Officer (Julie Balchin). On-island invasive spread pathway analysis is currently being developed (see section 3.1.)
Activity 1.8: Develop simple and practical survey protocols to monitor priority invasive plant species.		General survey forms have been developed and used in field work. Additional protocols for airport surveys (See Annex 3 G).

Activity 1.9: Develop national Invasive Plant Management Strategy, based on the results of Activities 1.4 to 1.8.		On-going but not expected to be completed until year 3 when further information through recurrent work programmes and the project is known.
2. Community, industry, Government and land managers engaged in invasive plant management	2.1. At least 50 people participate in training workshops over the 2 years.	2.1. As part of Weeds Awareness Week in May 2019 several workshops will be held. Road verge management workshop hosted 20 people (see Annex D). Pesticide spraying course will host 20 people (See section 3.1)
	2.2. Increase in 10% of people holding a certificate in the safe use of pesticides over the baseline as at 2016	2.2. Herbicide trainer scheduled to arrive in May and provide 'Safe Use of Pesticides' training and additionally train 5 staff members to become trainers themselves.
	2.3 Newspaper article on invasive plant management at least 4 times a year	2.3. 1 Article published in newspapers and 3 radio segments on invasive plants. Indicators still valid. See Annex 3B
	2.4 At least one invasive plant awareness week run by the end of December 2018	2.4. Weeds Awareness Week schedule for the week of 13 th May 2019. Planning in progress and workshop will be held to get input and suggestions from stakeholders, educators and public. Indicators still valid.
Activity 2.1: Design and implement a public awareness and education programme.		Attended and presented at Careers Fair day. Contributed to awareness material for Biosecurity awareness week, create displays for farmers day, presented an introduction and overview of the project for St Helena Nature Conservation Group and Farmers association. Project update presented for Chamber of Commerce meeting.
Activity 2.2: Deliver invasive plant workshops on identification and area wide management for conservationists, land managers, farmers and forestry workers, and the general public.		Workshops for roads and waste management arranged for early May 2018. As part of Weeds Awareness Week several workshops will be held. Topics include: 'Safe removal, storage, transport and disposal of green waste', 'Plant me instead', 'utilising invasive plants' and 'How can you help'.
Activity 2.3: Deliver training courses on safe use of pesticides.		A trainer is scheduled to visit St Helena in May 2019. See section 8.
Activity 2.4: Run invasive plant awareness week.		Weeds Awareness Week schedule for the week of 13 th May 2019. Planning in progress and workshop will be held to get input and suggestions from stakeholders, educators and public.
3. Strengthened local capacity to manage priority invasive plants	3.1. Cost effective methods for five problem invasive plants developed for environment, agriculture, forestry, roads and landowners by November 2018.	3.1. Control trials have been initiated on all the five priority species (see section 3.1. and Annex K).

Activity 3.1: Carry out trial area-wide annual whiteweed (<i>Austro eupatorium inulifolium</i>) control campaign, coordinated across all relevant sectors.		
Activity 3.2: Design and carry out trials for the cost-effective management of wild mango (<i>Schinus terebinthifolius</i>).		
Activity 3.3: Carry out targeted removal of African fountain grass (<i>Pennisetum setaceum</i>) in the upper Sandy Bay area.		
Activity 3.4: Design and carry out trials for the cost-effective management of pheasant tail fern (<i>Nephrolepis cordifolia</i>).		
Activity 3.5: Design and carry out trials for the cost-effective management of creeping fuchsia (<i>Fuchsia coccinea</i>).		
4. Improved knowledge for invasive plant management strategies and tactics.	4.1 Invasive plant webpage in place with practical information by October 2017; all technical outputs of the project placed on the website within 1 month of finalisation	Facebook page launched and government website being updated (see Annex J).
	4.2 At least 20 best-practice guidelines/procedures/standards/codes of practice for invasive plant management (10 in year 1 and 10 in year 2)	On-going. See section 3.1. and Annex D. Indicators still valid.
	4.3 Best practice guidelines for disposal of green waste by October 2018	In progress. First draft ready for input from stakeholders (see section 3.1. and Annex D). Indicators still valid.
Activity 4.1: Review and refine the Weed Control Manual for managing nationally significant invasive plants		Review and refinement of the Weed Control manual is progress. Based on results and data from control trials, final refinements will be completed and sent to relevant stakeholders for their input.
Activity 4.2: Establish and implement best practice guidelines for minimising invasive plant spread including:		First draft is currently being developed. A workshop with relevant stakeholders is scheduled for the first week in May 2018. These guidelines will provide an overview of all methods and relevant to urban, agriculture, industry and focus on high risk species (see Annex D).
A model code of best practice		

Sector/industry-specific guidelines		
Activity 4.3: Develop and implement best practice guidelines for the safe disposal and processing of invasive plants, contaminated material and green waste.		
Activity 4.4: Share lessons learned across other SA UKOTs and the wider invasive plant management community.		Correspondence with conservationists on Ascension, Falkland, Tristan da Cunha, UK and other OT's regarding key invasive species and their challenges faced. Met with RSPB representatives and gave an overview of the project and discussed potential information and experience sharing between different UKOTs. Contributions to UKOTs workshops on invasive species (see section 2, Annex C, E, F and L).
5. Nationally significant invasive plant species under innovative and cost-effective management.	5.1 Relevant SHG Divisions, SHNT and key private sectors include Invasive Plant Management Strategy actions in their annual work/operational plans from 2018/2019 financial year onwards.	Indicators still valid.
	5.2 Report of initial area-wide trial of invasive plant management,	Indicators still valid.
	5.3 At least 5 priority invasive plant species being routinely mapped as part of the monitoring programme by February 2019.	Indicators still valid.
Activity 5.1: Design and cost restoration initiatives in appropriate areas where major invasive plant management intervention recommended		Wild mango trial sites potentially identified as restoration project with agriculture section (see section 2)
Activity 5.2: Mainstream invasive plant management actions into annual work plans.		On-going
Activity 5.3: Coordinate landowners to carry to a trial of area-wide control of priority invasive plant species, using methods developed in Output 4 where appropriate.		On-going
Activity 5.4: Long-term monitoring programme established for priority invasive plant species across key sectors, based on protocols developed in Activity 1.8.		On-going

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

N.B. if your application's logframe is presented in a different format in your application, please transpose into the below template. Please feel free to contact Darwin-Projects@ltsi.co.uk if you have any questions regarding this.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: Invasive plant species are cost-effectively managed across the island with reduced threats to endemic flora and fauna, and other sectors.			
Outcome: Island capacity to manage invasive plants at the landscape level improved, enabling restoration of endemic habitats to safeguard the endemic wildlife of St Helena, and to support food security.	0.1 All major invasive plant stakeholders actively involved in planning for, monitoring and reviewing national invasive plant management initiatives by January 2019 0. 2 Monitoring programme database developed by February 2019. 0.3 New staff capacity in place to implement the invasive plant management strategy by June 2018 0.4 Experienced Conservation rangers in place with the SHNT by February 2019 0.5 At least 5 problem invasive plant species being tackled through area-wide initiatives by December 2018.	0.1 SHG Natural Resources, Housing and Properties Planning, Waste Management, Biosecurity Annual Operational Plans via SHG website/ SHNT annual operational plans via SHNT website/ Graziers pasture management plans each year via ANRD page on the SHG website/ Landowners Operational Plans each year via ANRD. 0.2 Invasive plant monitoring database 0.3 ANRD recurrent budget and annual work plan 0.4 SHNT Annual work plan 0.5 Publications and other documents on the invasive plant webpage	Government support for invasive plant management remains strong and impacts community support for the project. Cooperation remains good within stakeholder sectors. Cost-effective methods are successfully developed for the management of problem species.
Outputs: 1. Strategic leadership for invasive plant management is evident at the national level	1.1. Dedicated invasive plant management team operational, and steering group appointed and operational, by June 2017 1.2. Medium-long term national Invasive Plant Management Strategy implemented by April 2018 1.3 National strategic invasive plant management function fully operational under SHG's ENRD structure by March 2019	1.1. Steering group meeting minutes 1.2. Publications and other documents on the invasive plant webpage 1.3. SHG Organogram via Government website	Suitable staff available for recruitment at the start of the project. Appropriate stakeholder representation on Project Steering Group.
2. Community, industry, Government and land managers engaged in invasive plant management	2.1. At least 50 people participate in training workshops over the 2 years.	2.1 Training course attendance certificates 2.2 ANRD list of certified sprayers	Early engagement with key sector stakeholders demonstrates linkage

	<p>2.2. Increase in 10% of people holding a certificate in the safe use of pesticides over the baseline as at 2016</p> <p>2.3 Newspaper article on invasive plant management at least 4 times a year</p> <p>2.4 At least one invasive plant awareness week run by the end of December 2018</p>	<p>2.3 On-line editions of the Independent and Sentinel newspapers</p> <p>2.4 Publications and other documents on the invasive plant webpage</p>	<p>with WAP and achieves buy-in for project.</p> <p>Interest in training workshops is high.</p>
<p>3. Strengthened local capacity to manage priority invasive plants</p>	<p>3.1 Cost effective methods for five problem invasive plants developed for environment, agriculture, forestry, roads and landowners by November 2018.</p>	<p>3.1 Report on trials on the invasive plant page on the SHG website</p>	<p>Early design plan established for chemical invasive plant trials inform required herbicides and quantities so that stocks are on Island prior to trials beginning.</p> <p>Invasive plant management teams on the island work cooperatively together.</p>
<p>4. Improved knowledge for invasive plant management strategies and tactics.</p>	<p>4.1 Invasive plant webpage in place with practical information by October 2017; all technical outputs of the project placed on the website within 1 month of finalisation</p> <p>4.2 At least 20 best-practice guidelines/procedures/standards/codes of practice for invasive plant management (10 in year 1 and 10 in year 2)</p> <p>4.3 Best practice guidelines for disposal of green waste by October 2018</p>	<p>4.1 Publications and other documents on the invasive plant webpage</p> <p>4.2 Publications and other documents on the invasive plant webpage</p> <p>4.3 Publications and other documents on the invasive plant webpage</p>	<p>Clear early messages disseminated on how project actions and results will be integrated into Government, industry and community activities during and post - project to demonstrate project benefits and legacy.</p> <p>Successful control methods developed by end of project for problem invasive plants.</p>
<p>5. Nationally significant invasive plant species under innovative and cost-effective management.</p>	<p>5.1 Relevant SHG Divisions, SHNT and key private sectors include Invasive Plant Management Strategy actions in their annual work/operational plans from 2018/2019 financial year onwards.</p> <p>5.2 Report of initial area-wide trial of invasive plant management,</p> <p>5.3 At least 5 priority invasive plant species being routinely mapped as part</p>	<p>5.1 SHG Natural Resources, Housing and Properties Planning, Waste Management, Biosecurity Annual Operational Plans via SHG website/ SHNT annual operational plans via SHNT website/ Graziers pasture management plans each year via ANRD page on the SHG website/ Landowners Operational Plans each year via ANRD.</p>	<p>Government support for invasive plant management remains strong and impacts community support for the project.</p> <p>Cooperation is good within stakeholder sectors.</p>

	of the monitoring programme by February 2019.	5.2 Publications and other documents on the invasive plant webpage 5.3 Invasive plant monitoring database	
<p>Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <p>Activity 1.1: Recruit invasive plant management officers</p> <p>Activity 1.2: Recruit a Weed Busters team</p> <p>Activity 1.3: Establish multi-sector steering group for national invasive plant management oversight</p> <p>Activity 1.4: Hold a stakeholder workshop to develop the strategic invasive plant management framework</p> <p>Activity 1.5: Review existing invasive plant related legislation</p> <p>Activity 1.6: Undertake a global review of all aspects of invasive plant management for significant species</p> <p>Activity 1.7: Identify major pathways of spread of nationally significant invasive plant species and appropriate management actions for associated pathways</p> <p>Activity 1.8: Develop simple and practical survey protocols to monitor priority invasive plant species.</p> <p>Activity 1.9: Develop national Invasive Plant Management Strategy, based on the results of Activities 1.4 to 1.8.</p> <p>Activity 2.1: Design and implement a public awareness and education programme.</p> <p>Activity 2.2: Deliver invasive plant workshops on identification and area wide management for conservationists, land managers, farmers and forestry workers, and the general public.</p> <p>Activity 2.3: Deliver training courses on safe use of pesticides.</p> <p>Activity 2.4: Run invasive plant awareness week.</p> <p>Activity 3.1: Carry out trial area-wide annual whiteweed (<i>Austro eupatorium inulifolium</i>) control campaign, coordinated across all relevant sectors.</p> <p>Activity 3.2: Design and carry out trials for the cost-effective management of wild mango (<i>Schinus terebinthifolius</i>).</p> <p>Activity 3.3: Carry out targeted removal of African fountain grass (<i>Pennisetum setaceum</i>) in the upper Sandy Bay area.</p> <p>Activity 3.4: Design and carry out trials for the cost-effective management of pheasant tail fern (<i>Nephrolepis cordifolia</i>).</p> <p>Activity 3.5: Design and carry out trials for the cost-effective management of creeping fuchsia (<i>Fuchsia coccinea</i>).</p> <p>Activity 4.1: Review and refine the Weed Control Manual for managing nationally significant invasive plants</p> <p>Activity 4.2: Establish and implement best practice guidelines for minimising invasive plant spread including:</p> <ul style="list-style-type: none"> ▪ A model code of best practice ▪ Sector/industry-specific guidelines <p>Activity 4.3: Develop and implement best practice guidelines for the safe disposal and processing of invasive plants, contaminated material and green waste, through addressing requirements for:</p> <ul style="list-style-type: none"> ▪ Urban areas ▪ Agricultural areas ▪ Industry ▪ High-risk invasive plant species <p>Activity 4.4: Share lessons learned across other SA UKOTs and the wider invasive plant management community.</p> <p>Activity 5.1: Design and cost restoration initiatives in appropriate areas where major invasive plant management intervention recommended</p> <p>Activity 5.2: Mainstream invasive plant management actions into annual work plans.</p> <p>Activity 5.3: Coordinate landowners to carry to a trial of area-wide control of priority invasive plant species, using methods developed in Output 4 where appropriate.</p> <p>Activity 5.4: Long-term monitoring programme established for priority invasive plant species across key sectors, based on protocols developed in Activity 1.8.</p>			

