

Darwin Plus: Final Report

To be completed with reference to the “Project Reporting Information Note”:
(<https://darwinplus.org.uk/resources/information-notes/>).

It is expected that this report will be a **maximum of 20 pages** in length, excluding annexes.

Submission Deadline: no later than 3 months after agreed end date.

Submit to: BCF-Reports@niras.com including your project ref in the subject line.

Darwin Plus Project Information

Project reference	DPLUS107
Project title	Community supported multispecies invasive vertebrate control on St Helena
Territory(ies)	St. Helena, Ascension and Tristan da Cunha
Lead Partner	Saint Helena National Trust
Project partner(s)	INBIMA, RSPB, Saint Helena Government
Darwin Plus Grant value	£312,019
Start/end date of project	June 2020 - May 2023
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1 Project Summary

St Helena Island is a small remote UK Overseas territory in the South Atlantic Ocean alongside its sister islands Ascension and Tristan Da Cunha. St Helena has a total land mass of 47 square miles with varying habitats types that range from semi-desert to cloud forest, a total resident population of approximately 4,500 and most importantly it houses one-sixth of all British unique wildlife; of which there is only one surviving endemic land bird, The St Helena Plover (*Charadrius sanctaehelene*), locally known as the Wirebird.

The wirebird is the national bird of St Helena, it frequents areas of relatively flat land, with a preference for low growing vegetation and patches of bare ground from pasturelands to semi-desert habitats. An annual census count is carried out in January each year in approximately 30 locations across the island, to monitor population's trends and distribution across the island. In 2016 it was raised from Endangered to Vulnerable on the IUCN's red list.

The island faces significant threats from invasive flora and fauna due to its high-level of endemism as a consequence of its remote location that has become more easily accessed. Invasive vertebrates: Common myna, feral cats, rats and rabbits have posed a significant threat to the islands native ecosystems including the survival of the endemic Wirebird and islands agricultural efforts

The project (DPLUS107) targets five of the current most destructive invasive vertebrate species; The black and brown rat, (*rattus sp.*) feral cats, (*felis catus*) common myna (*Acridotheros tristis*) and the European rabbit (*Oryctolagus cuniculus*) All of which negatively impacts both the islands native ecosystems and agricultural efforts from the spreading of invasive vegetation and erosion to predation and consuming of produce

The project was trying to understand the interactions and distributions of these targeted invasive vertebrate species and to reduce the number of invasive vertebrates present on island through employing previously tested control methods and implementing and investigating control for a newly target species- the myna bird. The effects of reducing the 5 targeted species is assessed through monitoring of the wirebird, changes in vegetation and the population and distribution changes of the specie themselves including the numbers trapped

Environmental and climate change challenge project designed to address is increasing the islands resilience to effects of climate change (drought etc.), protection of native ecosystems and species and improving people's livelihoods for better agricultural productivity which in the long-term will help to improve the local economy.

These challenges are relevant to the local island population and UK government as to improve the people's health and wellbeing, improving the local economy through sustainable agricultural production thus reducing imports is a step in the right direction towards self-sufficiency and sustainability as well as protecting further species from becoming extinct in their native ranges.

These problems have been identified by ongoing conservation works related to the Wirebird whereby a previous predator control project successfully increased the population through trapping of feral cats. Observation of mynas attacking and killing Wirebird chicks for sport and the fast rate in which the landscape has given away to becoming dominated by invasive plant species.

Community buy-in and participation were key to success of this project as these targeted species are located island-wide therefore cannot be controlled by the project team alone. The project provided training and efficient tools, whilst raising awareness and encouraging involvement of the whole island community to increase capacity and promoting sustainability.

Actions undertaken (trapping and monitoring of species) and evidence gathered in this project will lead to improved control methods, exploration of potential eradication and persuade both the local community and UK government to provide support to targeted and collaborative effort as without this controls will remain disjointed and continuous.

2 Project Partnerships

Project partners were selected based on the need for expertise and being instrumental for delivery and integration into common practices on island. These partners are: RSPB, Saint Helena Government (SHG) and Invasive Bird Management (INBIMA) all of whom have provided input to project deliverables throughout the project.

Project partners have been involved primarily with the delivery of the project and analysis of data collected. The, partners involvement in steering the project has been minimal mainly due lack of steering group meetings for which there were 5 steering group meetings held over the lifespan of this project (3years), and not being fully utilised as a group, more interaction was achieved with each partner individually, however it is not to be overlooked that arranging meetings proved difficult due to everyone's busy schedules and other work commitments for such a small island individuals from on-island partners also have commitments to multiple projects.

St Helena Government (SHG): SHG has been instrumental in supporting the projects capacity building with 3 staff members from the Environment and Natural Resources Department (ENRD) attending the myna trap building workshop in February 2022, 1 member attend to the workshop on control methods in July 2022 and 15 staff members attend the control technique workshop held at Kingshurst Community Centre in February 2023 from which 1 staff member attempted to carry out myna trapping at home.

They have provided a reliable and trustworthy connection to syndicates proving to be essential in resolving problems that had arisen with the Deadwood syndicate, whereby a site visit was organised and facilitated by SHG allowing all parties involved to resolve differences and move to providing resolutions.

SHG's Senior Veterinary Officer, Joe Hollins, was originally a part of the project's steering group providing useful advice especially on humane treatment of targeted vertebrate species contributing largely to the production of trapping methodologies. However, following his resignation SHG had a long period of vacancy in this post with a new post holder occupying this role unfortunately for a very short time span and this post is now once again vacant.

The projects myna culling licence has been extended by the ENRP advisory committee beyond the project lifespan until 2025 and the amendments to the Bird Protection Ordinance also currently sits with them for review and approval, this will be received after this project has concluded, however local government has provided much support to tackling invasive species on island, considering they are also limited by capacity and sustainable funding.

The Trusts relationship with SHG is instrumental in ensuring continued control and potential eradication programmes of invasive vertebrates are implemented, maintained and are effective.

Invasive Bird management (INBIMA): Susanna Saavedra has been extremely pleased with the number of mynas trapped in just over the period of a year. It has been a turbulent relationship between the Trust and INBIMA, however following many discussions it has been realised and established that we are both working towards the same goal and the relationship has much improved. Lesson learnt for future reference is to provide a clear overview of the island and to communicate with partners on agreed terms and conditions prior to the starting of the project especially as the Trust the start of this project had a high turn-over of staff with previous Head of Conservation resigning and new person coming into post. Covid-19 restrictions to the island delayed the arrival of Susanna as expected in the first year of the project, this was delayed until end of year 2.

Over the course of this project Susanna has held 4 trap building workshops with 21 people attending, produced a trap building video for the project team, provided materials (i.e. myna trapping guide) and advice on how to go about trapping, getting local community involved and future actions etc. She is leading on the feasibility study for large scale eradication of mynas on island.

Susanna has a wealth of information which has allowed the project to make great strides in myna control; it is a relationship that the Trust is prepared and eager to continue to develop and utilise for future actions, especially as the eradication of mynas looks to be achievable.

Royal society for the protection of birds (RSPB): RSPB has provided much support to the Trust for more than 15 years especially with Wirebird conservation and expanding this remit to wider actions such as invertebrates and habitat restoration. Steffen Opiel represented RSPB on the steering group and provided much needed assistance with the utilising of data collected, refining monitoring and trapping methods. Without the advice and support of RSPB, analysis of data collected would not have been possible on the project especially for the vegetation and rabbit surveys. Steffen Opiel resigned from RSPB in April 2023; fortunately, support has been given by his replacement Harry Marshall for year 3 data.

It has been recognised that data collation and analysis skills within the Trust need to be built upon through training as without the support of RSPB this would not have been possible.

We would like to acknowledge the islands local community whom have supported and participated in advocating for and undertaking the trapping of mynas, with 51 people from local community assisting with trapping of mynas and rabbits, however only 6 persons are comfortable culling mynas, thus providing a very low number of volunteer's trappers whom can continue this effort once project has ended. The community also helped to identify 4 additional myna roost sites and provided feedback and advice on trapping and noticeable changes of targeted species to project staff. The main difference is the changes seen in mindsets of people whereby they have become supportive of trapping mynas which is indicated through the demand for traps. The Trust relationship with the local community is essential and will be continuously maintained across all our workstreams using lessons learnt of how to engage various sectors.

3 Project Achievements

3.1 Outputs

Output 1- Improved ecological knowledge of key introduced vertebrate species to help inform control methods.

There has been an improved ecological knowledge of introduce key vertebrate species. In year 1 myna roost was identified with significant myna roost been mapped (**Evidence 1, Output 1, Myna roost map**)– based on previous 2009 study – and initial roost counts was undertaken (although not as per protocol given as only counted once) with an estimated population of 3254 mynas. In year 2 a more accurate myna census roost count was given as per protocol with each roost surveyed/counted 3 times and an average given (**Evidence 27, Figure 8 and Table 4**). Rabbit surveys protocol was established and undertaken with a baseline report produced estimating a population of 40,000 – 50,000 rabbits on island (**Evidence 2, Output 1, Rabbit survey report**) . No camera traps (cat monitoring) or tracking tunnel stations (rat monitoring) were set up in the first year of the project, however for subsequent years this was undertaken (**Evidence 27, Figure 5 and 6**) for cats within the 3 project key conservation areas and for rats within all project key areas.

Output 2 – Evidence of effective invasive vertebrate control method for St Helena with Best Practice for myna and rabbit control produce.

Rabbit traps are not easy to make on island from scratch therefore there were 2 trap types procured and tested: Rabbit drop traps and cages. The drop traps worked well at the Millennium Forest, no farmers were willing to install these however results from the Millennium Forest proves that these traps work well along fence lines and can catch multiple rabbits at any one time unlike cages (5 recorded in one trap at Millennium Forest). Cages proved to be the most popular and adaptive trap for catching rabbits despite only 1 rabbit is caught at a time. The cages are mobile therefore can be moved around to areas of high rabbit activity.

Two myna cage designs; funnel and drop door, were provided to the project team by Susanna (INBIMA) as well as a trapping video tutorial (**Evidence 18, Output 2, Myna trap effectiveness**) for the team to follow due to Susanna (INBIMA) not being able to get to the island during COVID. Drop door trap type proved to be the most efficient and as the project progressed this design was able to be modified i.e. larger or smaller. The myna cages and rabbit cages were trialled at all the projects key sites and provided to volunteers.

Best practise protocols were developed for feral cats (**Evidence 3, Output 2, Cat trapping best practise**) – only for use of project team, as euthanising cats is not publicly practised due to health and safety precautions and humane disposal requirements.

Rabbit (**Evidence 4, Output 2, Rabbit best practise guidelines**) and myna protocol were provided to the project by Susanna (INBIMA) (**Evidence 5, Output 2, Guide for trapping myna birds on St Helena**). These protocols were provided to all project volunteers and partner on-island.

The project has had great success in trapping mynas despite the late start for trapping which began in February 2022 until end of the project (duration of 15 months) a total of 3254 myna were trapped exceeding target by 254. Rabbit trapping however was a lot harder, and it was difficult to find the right attractant especially in the conservation areas, however the public had a lot more success to start (**Evidence 27, Figure 7**). Seasonality and availability of food and water are major factors when trapping rabbits as during summer when there is less food and water available there is a higher catch rate compared to winter where food and water is in good supply. A total of 596 rabbits were caught during project 304 less than the 900-target set. We were unable to catch 300 per year in years 1 and 2 but in year 3 exceeded this.

Rodent baiting was carried out at all 6 key project sites, however at one of the agricultural sites this was ceased as the landowner was baiting themselves.

Output 3- Increase understanding of interactions between target introduced vertebrates and their combined impacts in native flora and fauna.

Site monitoring protocols for non-target invasive vertebrates were established (**Evidence 6, Output 2, Site monitoring protocols**), although it was not completed by April 2012 (Yr. 1), the knowledge was present but not documented.

Annual vegetation surveys in control and comparable areas were undertaken, there was some confusion on the comparable however this was resolved. A vegetation survey methodology was developed (Evidence) and carried out, which showed that there is an increase in native vegetation at the Millennium Forest from 2020 to 2022 in particularly for Ebony (*Trochetiopsis ebenus*) and Gumwood (*Comidendrum robustum*). This showed a positive correlation between rabbits trapped and excluded to native **vegetation (Evidence 7. Output 2, St Helena_vegetation_data (Steffen))**. However Common salt bush (*Atriplex semibaccata*), tungy (*Opuntia sp.*), and wire grass (*Cynodon dactylon*) also increased, this was due to the exclusion of rabbit from fenced area, bare ground increased then dropped.

The Wirebird population is monitored annually through the census count in January each year. In January 2020 the adult population stood at 537 and in 2023 (end project) the adult population was 592 a 9.7% overall increase, however between these years the population fluctuated, see graph below.

Camera traps (**Evidence 8, Output 3, Camera trap methodology**) and tracking tunnels were deployed to monitor vertebrate activity at some sites rat activity dropped but mouse activity remained high where vegetation was more spaced and shorter (Man and Horse), however at the Millennium Forest where in some area's vegetation is dense and damp underneath, the rat population remained high, fluctuating with bait set but numbers soon climbed again. This is likely also due to the close proximity of the Millennium Forest to residential areas and the landfill as well as the successful trapping of feral cats in this area.

Analysis of data proved difficult due to the inconsistency of some data such as breaks between tracking tunnels active however it has provided a guideline and indication of how control of these invasive vertebrate species affects vegetation and Wirebird populations, refer to graphs presented throughout this report in section 3.

Output 4 – Improved local capacity for control of vertebrate predator and pest species.

A project workshop was delivered to the on-island partner, SHG at Kingshurst Community Centre, providing both instructions and demonstrations on how to trap each species as well as the progress of the project trapping numbers to date (**Evidence 27, Figure 2**). There were also public sessions organised at 2 districts, at end of year 1 – locations selected for travel considerations of farming community – which were poorly attended with only 1 person showing up at each. At this time there were a lot of external influences which led to such poor attendance, mainly in relation to the effects of covid-19 restrictions i.e. social distancing, and knock on effects such as rising fuel prices and import costs which greatly affect people's livelihoods.

There has been an extremely high turnover of staff on the project as outlined under outcome 0.3 below, however despite this the finishing project team: Denis Leo, Mario Green and Nico Benjamin have all received and undertaken vertebrate control of all 5 species, as well as previous staff: Kyle Joshua, Ashley Furniss and James Fantom. Other Trust staff based at the Millennium Forest (x3) also took part especially evident in the huge rabbit and cat trapping numbers from this area.

Susanna (INBIMA) held 7 training trap building workshops (**Evidence 27, Figure 3**) where 11 community members attended, she also did a presentation at the museum with the project team on 13 February 2022 which had a total of 21 community members.

There has been and remains a high demand for rabbit traps, unfortunately due to budget availability there were not 100 of each trap type available for mynas and rabbits, however this has helped the project to maintain some capacity for own trapping works, due to the lack of willingness of community to cull mynas along with the odd request for culling of rabbits. Human guidance/best practise handouts were provided to all volunteers receiving traps and training was done in-person, but low attendance at community events. There was a fair spread of traps for both rabbits and mynas across the island.

Output 5- Greater public awareness of invasive vertebrate species and the need for proactiveness in tackling the challenge they pose.

The project held 10 popup stalls with overall total of 182 people attending (**Evidence 27, Table 1 and Evidence 15, output 5, pop-up stall at Longwood**). This was carried out in various districts across the island so that the project could capture more people as this offered increased exposure and presence in the local community. There has been an overall observation of increased awareness from the public based on conversations held and feedback given to project team during these pop-ups and after.

A questionnaire was carried out in all 3 years of the project to assess the local community's knowledge and understanding of the impacts of invasive vertebrates and the need for control. Questionnaire for yr.1 and 2 are comparable with same questions (**Evidence 9, Output 5, DPLUS107 questionnaire Yr.1 and 2 comparison**) and yr. 3 questionnaire (**Evidence 10, Yr. 3 questionnaire**) was changed to see what people gained from and how they interacted with the project and only targeted the farmers with which the project worked, making Yr. 3 data almost incomparable – except for 1 question. Over the 3 years however there is a steady increase in people knowing about the project (58%-Yr. 1, 67%-Yr. 2 and 86%-Yr. 3), overall 28% increase. However the number of people participating in this questionnaire was not consistent and the small sample size will not have accurately captured the general views of the island resident population (**Evidence 27, Table 2**).

During her visit to St Helena in early 2022 (end Yr. 2) Susanna (INBIMA), myna specialist, took part in a presentation at the museum (**Evidence 27, Evidence**), went on the 2 local radio stations (St FM and SAMS), (**Evidence 11, Output 5, recording on local radio**) and provided very informative information to the community due to her extensive, previous experience of talking to local communities on these issues.

Over the course of this project there has been 18 social media posts posted across various social media platforms, through use of Hootsuite package, provided from 2021/22. All posts were liked numerous time and majority were shared (**Evidence 12, Output 5, Facebook reach screenshots**) The Trust Facebook page has 2K likes and 2.1K followers.

The Bird Protection ordinance is currently in the hands of SHG Attorney Generals chambers at which there are capacity issues therefore no response is expected until long after project has ended. Proposed changes were sent to SHG's advisory committee through the Environment minister (**Evidence 13, Output 5, proposed amendments to BPO**) as advised by the Director of ENRP.

3.2 Outcome

The projects outcome 'The distribution, ecological interactions and appropriate control methods of invasive vertebrates on St Helena are better understood and supported by the public and future actions to sustain control are identified and agreed' has been partly achieved.

0.1 Control methods for five key species have been evaluated by 2022 and measurable reductions in target vertebrates against year 1 baselines and results disseminated by the end of the project.

Control methods have been developed, trialled and implemented for all 5 key invasive vertebrate species within the project's key sites. A total of 104 cats were caught in the project's conservation areas (**Evidence 27, Figure 4**), especially at the Millennium Forest which is adjacent to the land fill in which they have a steady supply of food available in the form of household waste to rats (89 feral cats, 85.5% of total number feral cats caught). In areas surrounding the Millennium Forest the Wirebird population has been observed to be thriving with more birds frequenting the area. The immediate area of Bottom Woods which includes part of the Millennium Forest there has been an increase in the number of adult birds, however in another adjacent area (Horse Point) the population has decreased (**Evidence 27, Table 3**). It is worth noting that changes in populations are affected by factors such as rainfall, vegetation etc. and thus will take a while for effects to occur and be realised.

However overall across all 3 conservation sites the number of cats detected on camera traps has dramatically declined between year 2 and 3 (**Evidence 27, Figure 5**), no camera traps were deployed in Year 1. The number of cats detected at Millennium Forest is almost matched by the number of cats trapped in this site and similarly for Deadwood. Man and Horse however has had little success in trapping cats which can be due to the site being further away from human habitation and the large size of the area provides space for cats to roam that falls outside of this projects range such as neighbouring pastures, trails leading to fishing grounds on coastline which borders this site compared to the other 2 sites which is in close proximity to human dwellings and human waste (landfill).

Rat baiting data does not show any accurate or reliable data as bait uptake not recorded just bait added, the tracking tunnels for measuring index however has provided much better information although not consistent.

Rabbits have proven very hard to trap especially in conservation areas compared to the numbers trapped by the public around their homes or in their gardens, likely due to the bait used not being what was familiar to them within their normal environment. The project tried using various kinds of bait and eventually found that overripe fruit worked best (**Evidence 27, Figure 6 and Evidence 14, Output 2, Guide for Rabbit trapping**)

Millennium Forest once again had the most rabbits trapped (153) likely due to the amount of vegetation cover available, which proved efficient with use of cages that could be concealed amongst it, as well as the drop-traps installed along fence lines. Deadwood and Man and Horse have a lot more open space with low growing vegetation, tallest being patches of dense gorse. Rabbit holes and attempts are visible at these sites, possibly more likely for nocturnal activity, however this was not explored in this project.

Over time the perception of rabbit has shifted from pest to pet, and with enforcement of stricter gun laws deterring people from undertaking the once island tradition of hunting rabbits and other game (i.e. pheasant) for food, has provided the opportunity for the increase in rabbit population. Rabbits are now island wide and are considered pests mainly by the agricultural community, there is also a good number of requests for rabbit traps from the public. Most interesting is the majority of rabbits caught through the project were given away to be used as a food source.

In order to have effective control of rabbit's the employment of many control techniques needed to be carried out from live trapping, shooting and destruction of burrows. It was also considered to encourage rabbit meat back as a local dish, however overcoming hurdle of national law for slaughtering for which appropriate facilities and licences are required needs to be reviewed as it makes this both unaffordable and unprofitable.

Mynas have been a great success on this project despite the late and shaky start, the target (3000) for 3 years trapping was exceeded in just little over 1 year with 3254 caught and culled. Myna roost count protocol was provided by INBIMA and once the initial myna roosting sites were established then counts were carried out twice a year (Years 2 and 3). Trapping of mynas started in February 2022 (Q4 of Yr. 2) and a more accurate baseline was able to be established in yr. 2 – one 1 round of counting instead of 3 rounds in yr. 1 – which has provided the team with the data from trapping of mynas, movements and vegetation preference type for roosting (**Evidence 27, Figure 7 and table 4**)

High concentration of myna population were found within urban area of the island, particularly at the heart of the capital with 3 main roosts (JT playground, Brewery yard and Castle Gardens) with combined total of 977.5 (yr. 3) – 1168 (yr. 2). This has provided easy access to food sources such as restaurants and high residential and business properties, litter and water availability from the moat. Year 3 results show that both brewery yard and the Jamestown playground number have increased following trapping, however there was not a substantial trapping effort from within the Jamestown area from the 5 traps provided to volunteers there was only 105 mynas caught. The most significant effect to the myna population was the pruning of trees within the Castle Gardens which resulted in the myna moving from this roost site – as it no longer supported the population – to the nearby/adjacent roost sites: Brewery Yard and Jamestown playground.

Mulberry gut is the largest roost that has continued to increase and is also surrounded by a large resident population on the eastern side of the island although interspaced and adjacent to an agricultural area, where availability of food comes from both residents and seeds etc present within gardens where produce such as tomatoes, potatoes, broccoli etc are grown as well as where livestock is kept especially around chicken coops or where animals are fed that is exposed. It is found that the locations of myna roost are significantly concentrated near to agricultural farming areas: West lodge, Fishers Valley, Farm Lodge and Briars as well as the Hooper which was a new myna roost identified (**Evidence 27, Table 4, and Evidence 1, Output 1, Myna roost map**).

Vegetation that makes up of myna roost were of invasive plant species that produce a lot of seed or berries on which myna can feed and are assumed responsible for spreading, unfortunately no stomach analysis was able to be conducted however, presence of these species island wide and in myna feeding areas strongly suggests that mynas are a major transport for invasive vegetation that is affecting native and agricultural habitats. Species at myna roost are: Wild mango, Pine, Eucalyptus, Evergreen, Banyan, Cedar, Cypress, Brazilian pepper, Spur, Thorn, Cape yew, Bamboo, Date palm. These species of trees produce berries/fleshy seeds, brightly coloured to attract birds, Wild mango, lantana is especially prevalent island wide. Thorn has cavities as does the Evergreen). Bamboo and Eucalyptus are species that are present but are not used for roosting, just surrounding.

West lodge was an interesting roost site, as the population remained relatively stable but the roost shifted between 2 stands of trees within approx. 100m of each other. This is a relatively exposed site, which is regularly impeded by fog and is very cold especially in winter. It is likely that myna shift roost during winter for increased shelter, warmth. Significant trapping efforts were made within the Sandy bay area (Lower Sandy Bay and Colins Bar), Levelwood (Springbok and Rock Rose) where Colins Bar and Springbok, roosts had the second largest decrease 311 mynas trapped (**Evidence 1, Output 1, Myna roost map**).

0.2 Multispecies vertebrate control has had a positive effect on native and agricultural vegetation with 50% increase in target vegetation survival/seedlings from year 1 baseline, and Wirebird population has yearly 10% increase in nesting success in control areas from year 1 baseline, by end of the project.

The main invasive vertebrate species which affects native (fragments and habitat restoration effort) and agricultural productivity is the rabbit, myna and rat. Rats are known from Peak Dale site of last remaining endemic gumwood forest. Rats ring back branch tips of tree. Rabbits do similar but usually to the base of the tree and bite for branch tips. Mynas spread invasive seed, majority of roosts had Wild Mango and cedar. All of these species damage crops and livestock (chickens, ducklings).

Annual vegetation surveys in control and comparable areas were undertaken, there was some confusion on the comparable however this was resolved. A vegetation survey methodology was developed and carried out. Results for the Millennium Forest was particularly interesting as all invasive vertebrate species were controlled, including having a rabbit proof fenced off area for vegetation monitoring. It showed that there is an increase in native vegetation at the Millennium Forest from 2020 to 2022 (Ebony (*Trochetiopsis ebenus*) and Gumwood (*Comidendrum robustum*)), however with this bush (*Atriplex semibaccata*), tungy (*Opuntia sp.*), and wire grass (*Cynodon dactylon*) also increased (**Evidence 7. Output 2, St Helena_vegetation_data (Steffen)**), due to the active control of rabbits. Outside of these areas' trees are ring barked, tips bitten, scrapings and rabbit pellets. A large number of cats were trapped in this area (**Evidence 27, Figure 5**) and observations by staff have noted the increase in activity of Wirebird within the Millennium Forest, at Bottomwoods, Horse Point and Bradleys – overall Wirebird counts are up since start of project (**Evidence 27, Figure 4**).

Rat baiting is being carried out by both the project team and Millennium Forest staff to maximise site coverage and share workload. Tracking tunnel data has shown the Millennium forest has the highest rat activity mainly within the denser vegetation. The forest is adjacent to the Landfill which is a nursery for rats and feral cats. Cat trapping has also been successful in this area. Bait has an effect, however the presence of farmland and residences nearby, a larger effort needed as more food, water and shelter available.

Refer to 3.1, Output 3.

0.3 By the end of 2022 at least four Trust and SHG staff and 20 members of the local community are well equipped and motivated for invasive vertebrate control through specialist training and trap provision.

There has been a very high staff turnover during the life of this project, with the only consistent staff member being Denis Leo, Senior Project Officer whom has extensive experience of cat, rat and rabbit control, however all project staff (7) throughout the project has received training on some or all forms of invasive vertebrate control.

At the end of Year 2, original project manager, James Fantom resigned in April 2021, recruitment was undertaken and Marjorie Fowler was appointed in late May 2021. In late July 2021, Kyle Joshua Field Officer resigned from his post and Ashley Furniss Field Assistant move up to the role of Field Officer and Nico Benjamin recruited to his vacant position. Unfortunately, Ashley Furniss was dismissed, Nico was promoted to the vacant position and the Field assistant post filled by Mario Green, once again having a full project team.

Susanna (INBIMA) arrived in January 2022 and delivered training to all project staff (4) and held 7 workshops with 3 SHG staff and 18 public volunteers focusing on myna trap building and operation. Project staff also received hands on in the field training from Susanna on setting traps (positioning, timing etc) and culling mynas. SHG's Senior Veterinary Officer, Joe Hollins provided cat euthanising training as well as Senior Project Officer, Dennis Leo whom passed on his knowledge in the field.

The project team held a trapping workshop on 15th July 2022 at which 11 SHG staff. were in attendance this covered what the project has achieved so far, and demonstration on how to set traps and cull each of the different invasive vertebrate species. The workshop was well received and some participants wanted to attempt rabbit and myna trapping and culling at their home to contribute to the project. An end of project presentation was held on 30th May 2023 at the Museum to wrap-up the projects and present our findings (Evidence 26, Output 5, End of project presentation)

It has been unfortunate that volunteers are not keen on myna culling which resulted in the project team having to be available to travel across the island to cull trapped birds. Volunteers are put off by the fact that mynas are not used for anything else and some still see them as useful when it comes to ticks on cattle unlike rabbits which can be eaten.

0.4 Priority control actions identified and feasibility study of large-scale eradication attempt completed by March 2023

The feasibility study for eradication of mynas has not been completed by the end of this project in May 2023, this is due to many factors such as availability of myna specialist and lack of capacity for senior project members (Head of Conservation) as well as lack of expertise residing in main project team for developing such a study without extensive support. This study is being led by INBIMA (myna specialist) with input from the Trust, former project manager, Marjorie Fowler who is still employed by the Trust on a Darwin Local predator control project which has offered continuity to this project. We strongly believe that from trapping success over such a short period and the results from 2009 study by Susanna and Chris Feare investigating use of Starlicide poisoning with a combined approach that eradication of mynas is feasible.

Priority control actions identified:

- Myna – continue trapping and culling, poisoning to achieve eradication providing the feasibility study is finalising. providing traps for the volunteers to trap and continue to monitor for other roost sites inaccessible areas.
- Rat – SHG Environmental Health and Environmental risk management portfolios required to provide material for intense baiting and monitoring within conservation areas to reduce increasing rats and to control in line with the cats.
- Cats – continue with trapping to control feral cats within all conservation sites as well in urban, highly populated areas and continue promote with local government and SPCA animal welfare and licensing.

- Rabbits – Requires more than one control method to control population such as shooting and trapping especially with a huge effort from the community. To advocate humanely from this could be exemption of rabbits in regards to the requirement for slaughtering as at present it is required by law to have all meat process at a licenced premises, which increases cost and no profit made.

3.3 Monitoring of assumptions

The risk register advised and started at beginning of the project (**Evidence 24, Risk register**), however was not regularly updated and reviewed by the Project manager or steering group. The assumptions were monitored based on results and feedback from public. Majority of the assumptions outlined below proved true and remained the same

Outcome assumptions:

- Difference in control methods detected and quantifiable (appropriate methods using previous experience and expert guidance) – difference in trap types and bait type (rabbits) used was detected and quantifiable
- Effectiveness of control methods that allow for detection of changes in vegetation and Wirebird success (controls based on methods shown to be effective elsewhere, vegetation surveying based on established techniques, staff experienced in nest monitoring). – Through Wirebird census counts and vegetation surveys
- Government and public attendance and feedback received (Government supportive of project and problems are also recognised by farmers/other members of the community). – Government has been supportive of project aiding in pushing forward the amendments to the Bird Protection Ordinance (1996) and extending the myna culling license beyond the project lifespan. Local government has also participated in training in control methods. Feedback from farmers has been positive, some resistance in the community especially when eradication is mentioned, still some advocating to be done for mynas.
- Public and media willingness to engage with the project (public awareness campaign will build on public knowledge from previous projects to reinforce) – Difficulties in getting attendance, approach changed to accommodate, refer to section 4.2.

Output 1 assumptions:

- Density of key vertebrates detectable (staff already have experience of tracking tunnels and camera traps and effective monitoring methods)
- All key myna areas can be accessed and mapped (roosts are easily detected at dusk/dawn and can be mapped using landmarks from a distance if required) – not all myna roosts are easily assessed as project team has found evidence of myna roost i.e. noise in less accessible areas that are either unreachable in guts or requires a long trek, which was not feasible under this project to accommodate.
- Sufficient coverage of St Helena can be achieved (suitable locations and methods will be utilised for each species, based on prior experience, expert advice and reports) – traps were modified for mynas, however a wider island coverage of conservation and coastal areas required especially for cats and rats, who also predate on seabirds.
- Landowners and managers are willing to cooperate (strong pre-existing landowner relationships and partnerships can be utilised) – This remained true, with only 1 incident at Deadwood which was resolved, refer to section 2.

Output 2 assumptions:

- High community involvement for trapping and low interference (effective communication will build on previous campaigns and community needs). – good community involvement for trapping however willingness to cull mynas was low, refer to 3.2, 0.3.
- Guidelines approved and adopted by on-island stakeholders including SHG (SHG and stakeholders will be involved in production, guidance will be clear and easy to follow). –

SHG involved in myna trap building workshops and attended control workshop, refer to section 2.

- Traps effective (designs are known to work from previous experience or records, locations are selected using experience and expert advice to maximise effectiveness) – Susanna (INBIMA) advised on modifying traps designs for mynas and project staff utilised previous experience for trapping cats and rabbit in conjunction with monitoring i.e. camera traps.
- Number of cats trapped similar to approximate average yearly catch for previous predator control project (same methods utilised and built upon). - this was close in conservation areas, however if cats caught in public areas this target will have been reached, therefore remains true.
- 300 rabbits represent 1% of 2008 population. We have been conservative to reflect traps being tested and methods honed. – 300 rabbit easily caught however 300 per year proved difficult, especially during winter season, refer to 3.1, output 2.
- 3000 myna represents substantial portion of estimated population (effective methods and expertise used). – held true, target exceeded.

Output 3 assumptions:

- Effectiveness and impacts detectable (robust monitoring building on previous experience and research data).
- Low interference by general public (public awareness campaign will build on public knowledge from previous projects to reinforce). – some rabbit traps were stolen but this number was low due to the project looking for volunteers therefore they received a trap willingly.
- Access granted (strong pre-existing relationships will be utilised). – refer to output 1 assumptions above.
- Interactions and impacts of multiple vertebrates detectable, data available (scientific literature available and will be utilised to inform monitoring). – Desk based research undertaken which helped to inform project of ecology for mynas especially and the spread of invasive vegetation.

Output 4 assumptions:

- Effectiveness detectable (expertise of project staff and external experts will be utilised) – detected, refer to section 3
- Suitable training identified (external expertise will be utilised, as well as existing staff with 'Train the trainer' training) – Susanna (INBIMA) provided training as did the Senior Veterinary Officer, Joe Hollins. Further training requirements for project management and data required.
- Public uptake and engagement is sufficient and can be maintained (will use pre-existing staff knowledge and working relationships, will encourage farmer and landowners known to have vertebrate problems) – Maintenance beyond project life is required and solutions are being looked into to maintain this, however for mynas this is not possible only on a very low basis (2 people).

Output 5 assumptions:

- Public uptake (interest in need to control invasive vertebrates that are problematic on land/crops). We assume this holds true as the project will focus on raising awareness on how invasive species impact on their daily lives. We have been conservative in our expectation on numbers attending to reflect the challenge of engaging people in this subject – huge interest by farming and agricultural community as well as public especially for rabbits and mynas identified around homes and chicken coops. From environmental perspective the control of these 5 species is highly recommended and eradication if possible, especially for mynas.

- Assume no strong opposition to discussing Bird Protection Ordinance (provide evidence-base and discuss best options), and it is still relevant – refer to section 4.1

4 Contribution to Darwin Plus Programme Objectives

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

The project has helped to deliver long-term strategic objectives for the natural environment through improved understanding of 5 invasive vertebrates’ species that negatively affect the islands native habitat and agricultural production and establishing effective control measures and identifying future actions for control and eradication which has contributed to the Convention of biological diversity article 8 (h) and also upholds the continued protection of the endemic Wirebird under the Environmental Protection Ordinance (2016) and in the St Helena Island 10-year plan 2017 – 2027, Goal: Altogether greener – We will protect endemic fauna and flora and our agricultural sector by tackling invasive species however it goes across more than this objective under this goal as invasive vegetation captures less water for supply and also uptakes more leaving ground poor impacting water security for the island and reducing suitable habitat for native flora and fauna. As well as Objective E control, management and restoration in the South Atlantic invasive species strategy and action plan. Invasive invertebrates project DPLUS104 also led by the Trust through discussion they were involved in regarding biocontrol for Wild mango (*Schinus terebinthifolius*) identified control of mynas as one of the first step towards controlling this.

The project has also undertaken extensive awareness raising events and promotion activities including school sessions in order to continue to build awareness of different invasive species and the wider impacts they have on the environment such as mynas are responsible for spreading invasive vegetation through seeds. All contributes to the Convention of biological diversity Article 12 (a) and South Atlantic invasive species strategy and action plan (2010) – Objective A building awareness and support and Objective E.

The project has been recognised as important by the local government who has extended our myna culling licence and the Environment minister has put forward to the advisory committee the amendments (**Evidence 13, Output 5, proposed amendments to BPO**) to the Bird Protection ordinance (1996), which is sitting with Attorney Generals Chambers which due to lack of capacity is likely to take a while before it is legally changed. The trust is looking into myna eradication in the future, waiting on the completed feasibility report led by Susanna (INBIMA).

4.2 Gender equality and social inclusion

Social inclusion to ensure the project had maximum and even reach, idea of pop-up stall was used. This allowed the project to go to various districts around the island to reach the elderly, those lacking transport and living in digital poverty to access and learn about the project. As stated above in section 3 covid-19 restrictions on island and impacts felt from global restriction were felt on island, prices increased (i.e. fuel) and affected how people spent their time and money. The project understood these needs as local staff on project are also affected and was happy to accommodate the pop-up stalls.

During the baseline questionnaires for determining peoples understanding there was an increase in number of females participating with 28% in Yr. 1 and 41% in Yr. 2. It was noted from the questionnaire responses that invasive species control and eradication was perceived as a male role. In addition, the age ranges of participants for Yr. 2 were more evenly distributed especially for categories of 60yrs+ and <18yrs. Please see output 5 and refer to Safeguarding section 11, in relation to apprentices and safeguarding concerns regarding young people.

Please quantify the proportion of women on the Project Board ¹ .	80% of women on the Steering group with Andy Timm, (SHG), Sarah Harvey (RSPB), Helena Bennett, Martina Peters and Marjorie Fowler (Trust)
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¹ A Project Board has overall authority for the project, is accountable for its success or failure, and supports the senior project manager to successfully deliver the project.

<p>Please quantify the proportion of project partners that are led by women, or which have a senior leadership team consisting of at least 50% women².</p>	<p>Trust senior management team is comprised of 100% women, there were four people working on this project from the senior management team.</p> <p>INBIMA is owned by Susanna Saavedra-Cruz.</p> <p>ENRP (SHG) is 50% women oriented</p> <p>RSPB – The new Overseas territories lead is a woman (Sarah Havery) whom will keep regular contact with the Trust (Director) and has regular contact with Head of Conservation on progress of project and development of new project. Representative on steering group is male and is appointed by the territory lead.</p>
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5 Monitoring and evaluation

In the original application it was planned that a M&E plan would be developed with project manager responsible for the plan, oversight by the Project leader and activities undertaken by the project team. This however was not developed and the high staff turnover of the project team (including project manager) and the Trust's Director (project leader). Regular team meetings were established after appointment of second Project Manager Marjorie Fowler, in first year these meetings slipped as project manager was more relaxed.

Steering group meetings lacked organisation and low feedback response, please refer to section 7, Lessons learnt. Finances were kept track of by both the Project Manager and the Trusts Finance Manager, with oversight especially when compiling claims by the Project co-leader (Head of Conservation).

This project was selected for a mid-term review from which the feedback was very useful and project team – although frustrated by the queries and evidence to be provided – began to understand the importance of good admin work.

Output 1 – Maps and survey records worked well to monitor and evaluate this data showing changes in populations and distribution.

Output 2 – Documentation importance by project team not realised, therefore best practise guidelines and trapping guides were exceptionally useful, there was a long delay in having this documented instead of just in people's heads. Records for deployment of traps became messy after a while as volunteers began lending out traps to others and project staff at certain time forgot to enter some deployments, especially at a time when trapping rates was high. Feasibility report is underway by Susanna (INBIMA, TA), however capacity from other contracts has delayed this, refer to 3.2, 0.4.

Output 3 – Nesting record data was stored on a staff members phone on an app provided by RSPB, this app is not to be widely shared it made accessing the data more difficult as staff member lacked skills to have it transferred onto another mobile as approval to be had from RSPB to do so. Project manage and staff member was working on this but not completed before end of the project. Planting of crops in agricultural areas was not something that farmers recorded or were willing to share therefore the only way in which to monitor this was through verbal feedback from farmers, profit/income was even more difficult. Again, turnover of staff in the Project Manage role and lacking knowledge and skills on how to get this done meant lack of data obtained and communication with farmer to resolve.

Output 4 – Trapping numbers and skills displayed by staff were good. SHG received training but no control actions were implemented within their workplans on any of their sites. Volunteer

² Partners that have formal governance role in the project, and a formal relationship with the project that may involve staff costs and/or budget management responsibilities.

trapper numbers were good for rabbit however mynas were not, refer to 3.2, 0.4. Site monitoring worked well especially for roost counts, vegetation survey and rabbit surveys etc. showing changes.

Output 5 – refer to above output 4. Social media posts are great for raising awareness, however to monitor this across multiple platforms is difficult, Facebook at present is more frequently used and the Trust has recently subscribed to Hootsuite.

The Trust website is out of date and overall organisation capacity to manage this is lacking along with the skills in website design to do so, which means responsibility not easily shared between staff. Director currently undertake this but only when time available and broadband is available to do so, refer to section 7, lessons Learnt.

6 Actions taken in response to Annual Report reviews

The project has received feedback from previous annual reports and was selected for a mid-term review (MTR), a lot of issue were raised and discussed during this MTR, however the project did not respond or address all of the issues raised. For example, some were never addressed and some were but unable to be maintained. Project steering group meetings were few and far between and lack of capacity of members that not all feedback received on reports was provided from the group members.

Some feedback provided in year 1 was rolled over to year 2 as not addressed, here is feedback from yr. 2 report:

No.	Comment	Comment on issue
1	As recommended by AR1R. some of the indicators need to be 'SMARTened' [3.2, 3.4 and 5.4], and others e.g. 0.1 need clarification (does a measurable reduction' mean a significant reduction? – and if so, how will this be assessed?)	Lack of capacity in Head of Conservation and lack of knowledge by project manager
2	Ensure that reporting is made against stated indicator metrics; provide baselines, if appropriate. Provide evidence for each Output 9and Outcome) indicator.	Lack of good data collection, storage and analysis meant that each time reporting period came that finding the information proved very difficult. The Trust has a shared drive system, on which all employees (from all projects) can access meaning that some data was missing and high turnover of staff meant some data was on a staff members computer and not uploaded to the drive. The team is great at doing the practical but does not fully understand importance of the data, reporting and documentation.
3	Ensure consistency of reported results 9e.g. of feral cats or rabbits trapped)	
4	Populate the 'Indicator tracker and Activity tracker' worksheet	This was setup by the project co-leader but unable to be maintained by the project team (Evidence 24, DPLUS107 project tracker 2022)
5	Provide a key for use with the updated project timeframe (i.e. what do the different colours represent?)	To be addressed in this report (Evidence 24, DPLUS107 project tracker 2022)
6	Please comment on the sustainability of the volunteer trapper network. What incentives are available to keep them involved?	The trapper network is not going to be fully sustainable especially when it came to mynas as majority of volunteers refuse to cull them. In regards to rabbits' cages are highly sought after for them however cages alone are not effective for control and shots for guns are expensive (project has been queried as to

		<p>whether we can purchase these for people) and a gun licence is hard to come by - the process deters people from applying. In addition, there needs to be a central organisation and/or person who can collect the data and communicate between different parties and individuals to report on progress, help share techniques etc. The Trust is looking to create a service i.e. hiring traps and culling however as a charity to have a permanent person employed this will not cover the cost of salary and transport.</p>
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7 Lessons learnt

The project has had many ups and downs over its lifespan. One of the most major success is that there was good support from the local community towards control of the targeted vertebrate species, unfortunately in regards to mynas there was a lack of people willing to cull and there is still some resistance to full scale eradication. Should eradication be proposed this will need to go through public consultation and knowledge and understanding improved further especially in terms of wider effect on the island's environment.

The disagreement between the Project and the partner, IMBIMA had a significant impact on the project, resulting in the myna specialist arriving on island in late Q4 of Yr2, however to note that Covid-19 restrictions also delayed this trip further. The disagreement revolved around finances for INBIMA consulting and trips whereby the amount was reduced due to reasoning that original cost provided was full time for mynas whereas the project is looking at 5 species in total. The previous Head of Conservation (Amy-Jayne Dutton) wrote and submitted the project application in consultation with Susanna, myna specialist (INBIMA). Training and trap building, procurement of materials to construct the traps etc. were all on the hold at the beginning of the project, further enhanced by the Covid-19 pandemic worldwide causing the delay on procurement of all project equipment and materials. In future a meeting prior to the start date of the project reviewing the application and finances allocated with project partners should have been carried out and actions determined. It was a long and frustrating time for both parties until agreement reached.

There was a significant staff turnover which meant numerous times the recruitment process had to be carried out and time spent training new staff. In addition the pool of applicants for senior position of Project Manager was very limited on island resulting in lack of specific skills to effectively deliver this role The Trust prides itself on providing training to all employees and building local capacity however capacity issues with senior management (Head of Conservation) meant not enough time available to provide the increased 1:1 support required, lack of uptake of training by post holder in project management courses likely due to the mode of online/distance learning, in-person learning preferred. Internet also hindered courses taken online as broadband package frequently exceeded The Director post – also project lead on applications - within the organisation was also frequently vacant.

Data collection and analysis was inconsistent and required stricter control and oversight to ensure data was recorded and stored appropriately as frequent reporting of missing and inconsistent data putting strain on project staff relationships when project reporting was due. There are no relevant data analysis course available on island except for via online/distance learning which does not go well with staff whom needs an in-person tutor. There have been frequent talks to project staff on why and how data is collected and stored is important however with such high turnover of staff this has been difficult. Computer skills also contributed to this and needs improvement especially within the junior posts (Field assistant).

The myna traps are proving effective and although a late start to the project, we have reached and exceeded target numbers. Cat and rabbit trapping had received great support from the community, there has been suggestions of local food establishments putting rabbit back on the menu. Rabbit trapping proved difficult starting off however in the third year the right bait identified and trapping numbers increased, however the right season for trapping needs

targeting which is during summer (warm, dry) months and a variety of methods need to be used collectively to ensure maximum efficiency for control of this species.

The Project steering group was useful to the project however due to lack of capacity of individuals sitting on this board there was a lack of prompt feedback between meetings which were few and far between both due to conflicting schedules and organisation.

If this project had to be done again there are a few things that we would have done differently:

- Meeting with project partners prior to start of the project to confirm roles in project and the resources and finances allocate to them from the funding received as well as what services and resource they were to provide to the project for a successful outcome. This would have been difficult to do for this project due to the late notice of the project being awarded and receiving of funds, nevertheless it is something that should have been carried out in the first year.
- The Trust aims to support local communities through local employment, therefore in future training and capacity building of successful project staff should be identified and booked in the first year of the project to ensure that project staff receive appropriate training to deliver their job role. Especially as some staff can do the practical but it is the office administration part of the job which falls back. In regards to the Project manager – taking into account capacity of senior management to provide extra support – there should be extra budget allocated to this role and add succession planning another in the event that a suitable candidate is not identified on island whereby the successful person – if not local – will provide support to a local trainee project manager role. Thus, increasing on-island capacity and ensuring effective project management. Also, to build the capacity of the team when it comes to data storage, recording and analysis as well as assistance for Project manager (i.e. minute taking) funds for an extra (part-time) post of project support should be considered.
- The Project steering group should be chaired by someone other than the project manager possibly a partner or stakeholder or someone else from within the organisation. This will provide objectiveness and reduce pressure of the project manager. In addition, the head of a section is not always the best person to represent partners and stakeholders on the steering group especially in terms of capacity, therefore when selecting members this is worth considering depending upon the type of support that is desired.

For those delivering similar projects it is essential to know your local community and to show them that you are willing to go the extra mile to help them, this in turn then gives them better feelings about helping your project succeed and sustainability for those efforts. This also relates to the project team whom should be multi-skilled and shows dedication and care to the work being delivered as if there is resistance within the team to these controls, how do you expect the community to fully buy-in?

From this project, we learnt that all staff should be well trained in field and administration work, and that roles and responsibilities should be regularly reminded of the post holders. Monitoring and evaluation is critically important to the success of such a project and that when this is not in order then it causes significant problems.

8 Risk Management

The project established a risk register in its first year (Evidence 24, Risk register) which would have allowed the Steering group to monitor the assumptions and risks closely, however due to frequency of meetings and staff turnover, this was not maintained.

One new risk arose in the last 12-months related to availability of another position for which x2 project staff were successful for, this meant that data analysis, sorting etc had to be undertaken and time split, allowing these staff to completed unfinished tasks on this project as well as start new role.

9 Sustainability and Legacy

This project has had a high-profile in St Helena, as there has been much effort by the trust and project team to promote, raise awareness of and undertake invasive vertebrate control advocating for an improved island future for our native habitats and species and our local economy through agricultural production.

Each year of the project the profile has risen with more volunteer trapper coming on board and increased feedback (verbally) to members of the project team. Lack of attendance was recognised as was the rising costs (refer to section 3.1, output 4), therefore our approach to this changed to having pop-up stalls at which new information and a wide range of views has been obtained. It is especially useful for integrating in to the local community especially for visiting myna specialist.

Training of stakeholders, project staff and partners have yielded a large group able to carry out these vertebrate controls - although myna culling has proven more difficult (refer to section 3.2, 0.3) – beyond the life of this project those who have been undertaking controls or would like to undertake controls are permitted to have use of the trap free of charge, however those who require service of setting trap and/or culling of trapped vertebrate/s will be charged a fee. The Trust is a charity who values its employees aiming to keep trained staff employed to continue works and pass along skills until such a time that the community can actively lead and/or the problem posed has been resolved. At this time all 4 staff have been employed by the Trust on other projects DPLUS190 and DPL00036, both of which further the objectives of this project (DPLUS107). However, maintenance of the trapper network is something that needs attention at this time.

The success with myna trapping has revealed the feasibility of the potential eradication of this species from the island using traps utilised in this project and based on 2009 study the use of Starlicide poison. The feasibility study once completed will form the basis of this, a consultation held for public opinion and based on outcome funding sought.

10 Darwin Plus Identity

We have used the Darwin logo on all advertising, informational and promotional material ranging from the projects specially designed t-shirts, bags and pens and newspaper contributions (articles and advertising) as well as on any informational materials (pop-up stall, presentations and brochures). It is highly visible and recognised within the local community. Darwin and BCF is tagged and mentioned in our social media posts with contributions also to the Darwin quarterly newsletter for more international recognition. In addition, Darwin was verbally mentioned in project radio interviews and any film material produced for projects including showing logo.

Darwin Plus is frequently recommended across territories and locally for project funding. The Trust has received several projects funded to undertake significant conservation works as well as other organisations on island. At the time of this project the Trust had received x2 projects (includes this project) and Connect St Helena Ltd and St Helena Government had also been awarded project funding.

The UK government contribution to our project work has been recognised through best practises, protocols and reports. UK government is known to provide the Darwin Plus funding.

The Darwin project was recognised as part of a larger programme linked to the conservation of the islands last surviving endemic land bird, the St Helena Plover aka wirebird. Predators and invasive species are a hinderance to their survival. The project did allow the Trust to explore new concepts on vertebrate control, providing any ideas for future works and their achievability.

Darwin plus funding on island is relatively understood, particularly among certain communities i.e. farming/agricultural community, education (schools, youth groups etc.) especially those regularly engaged. On all of the Trusts social media platforms (Facebook, Instagram, Twitter and Linked-in) the Darwin/BCF is tagged, however not all tags work across platforms, when posting in Hootsuite programme the same text appears, no tags. Internet is expensive which is why Hootsuite is being subscribed to.

11 Safeguarding

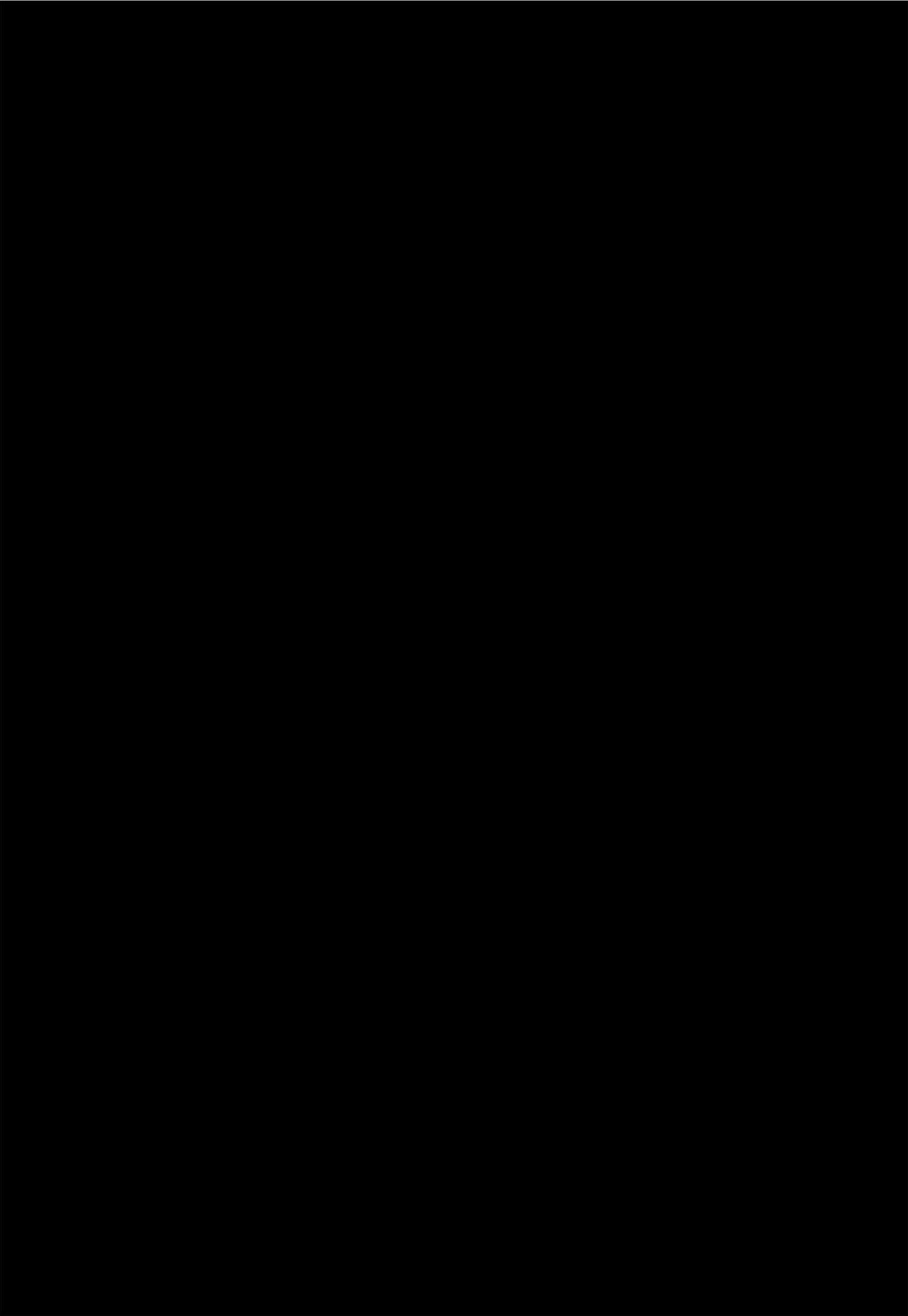
The Trust has a safeguarding policy, whistle-blowing policy and a code of conduct. Upon introduction to the Trust all staff and volunteers must read and agree to these policies before commencing work and any partners/visiting specialist will be provided with these policies to read and agree to. All staff are provided with opportunity to undertake safeguarding training although not as frequently as the Trust would like based upon availability and applicability of courses.

Has your Safeguarding Policy been updated in the past 12 months?	No
Have any concerns been investigated in the past 12 months	No
Does your project have a Safeguarding focal point?	Yes Helena Bennett, Director, ████████████████████
Has the focal point attended any formal training in the last 12 months?	No
What proportion (and number) of project staff have received formal training on Safeguarding?	Past: 25% [1] Planned: 100% [4]
<p>Has there been any lessons learnt or challenges on Safeguarding in the past 12 months? Please ensure no sensitive data is included within responses.</p> <p>A challenge and future reference are that Safeguarding has become a very stigmatised topic on the island, whereby some people (including staff members) do not feel comfortable having young persons (girls) alone in work environment due to potential of being accused. This has made it difficult to accommodate work experience students whereby the Trust does not discriminate based on gender and at times where working 1-to-1 with an apprentice is required. Safeguarding policy is under review.</p>	

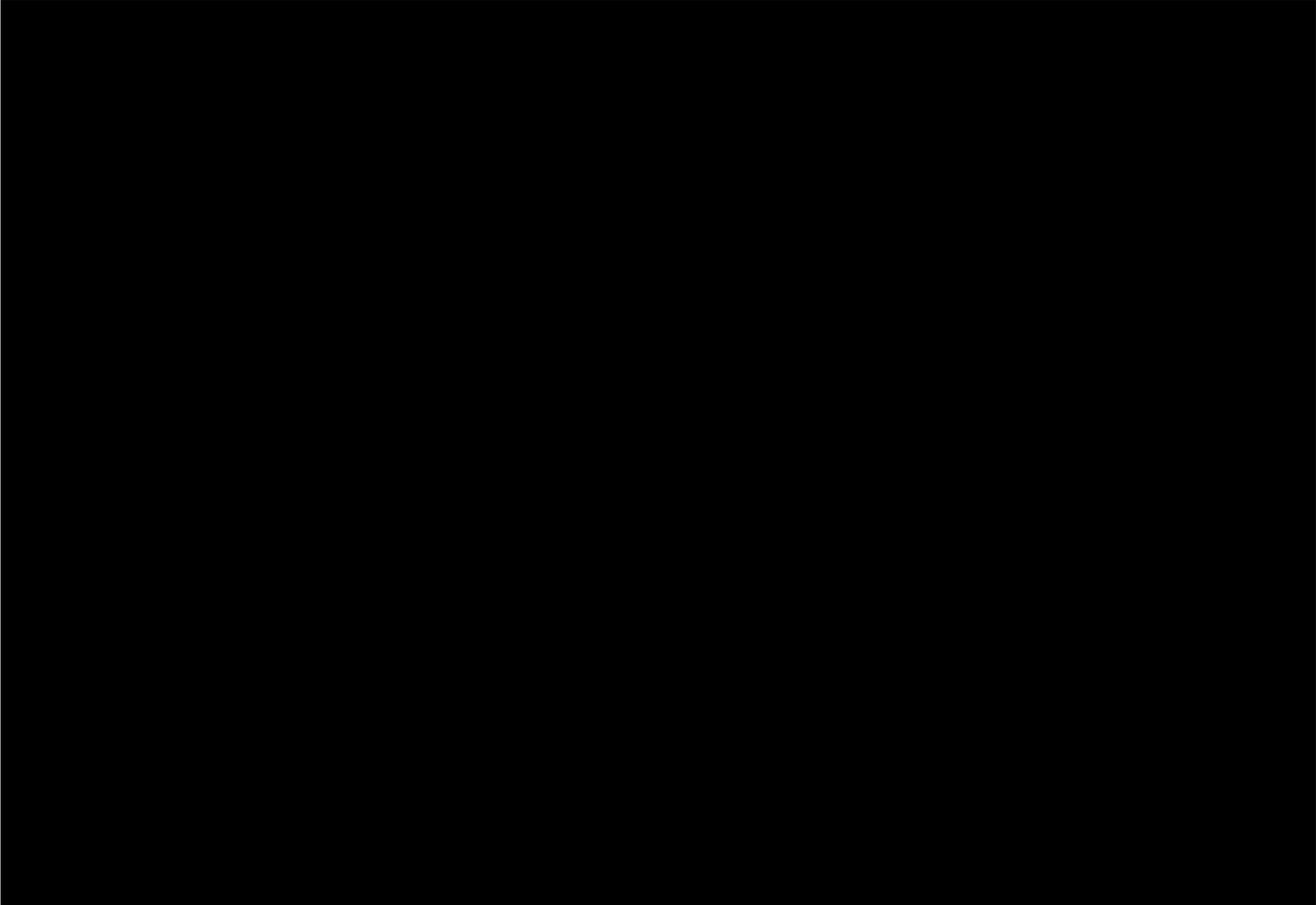
12 Finance and administration

12.1 Project expenditure

Project spend (indicative) since last Annual Report	2022/23 Grant (£)	2022/23 Total actual Darwin Plus Costs (£)	2023/24	Variance %	Comments (please explain significant variances)
Staff costs					
Consultancy costs					
Overhead Costs					
Travel and subsistence					
Operating Costs					
Capital items					
Others					
TOTAL	119623.44	91,838.02	9794.20		



12.2 Additional funds or in-kind contributions secured



12.3 Value for Money

This project has provided value for money through the provision of increased understanding of the ecology, behaviour, habitat and distribution of the 5 key invasive vertebrates species as well as the effective methods for their control and eradication especially for mynas. This knowledge will be utilised in future management plans and projects. There has been an increase in the Wirebird population for the duration of this project for which the benefits will continue to be realised beyond the life-span of this project.

A substantial amount has been spent in territory contributing to the local economy including having all local staff employed on the project to continue to build capacity in territory through training of multiple people.

All of this is supported by the surveys that have taken place to monitor the invasive vertebrate species, vegetation and Wirebird as well as the trapping numbers.

Processes on island are slow and a small number of people from organisations and local government are involved in multiple projects so in terms of the project steering group the efficiency and effectiveness of this was minimal, a better selection required taking into account capacity in future.

13 OPTIONAL: Outstanding achievements of your project (300-400 words maximum). This section may be used for publicity purposes.

I agree for the Biodiversity Challenge Funds Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here).

Myna trapping target of 3000 birds in 3 years has been exceeded with a total of 3254 using cages in just over 1 year (15 months). Providing a viable solution to the control and eradication of this species from the island. A feasibility study on myna eradication is being carried out.

Myna have been proven to spread invasive vegetation such as wild mango, cedar and lantana that is taking over a range of habitats. Control and/or eradication will be a huge step towards preventing spread of invasive vegetation this needs to be in conjunction with reclaiming land (i.e. land clearance).

File Type (Image / Video / Graphic)	File Name or File Location	Caption, country and credit	Online accounts to be tagged (leave blank if none)	Consent of subjects received (delete as necessary)
Video	Evidence 28, Myna clip			Yes
				Yes / No
				Yes / No
				Yes / No
				Yes / No

Annex 1 Project's full current logframe as presented in the application form (unless changes have been agreed)

Please insert your project's logframe (if your project has a logframe), including indicators, means of verification and assumptions. 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 BCF-Reports@niras.com if you have any questions regarding this.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Impact: St Helena's key invasive vertebrates are controlled with community engagement, good native plant regeneration and colony expansion as well as increased abundance of Wirebirds, native invertebrates and increased agricultural productivity.</p>			
<p>Outcome: The distribution, ecological interactions and appropriate control methods of invasive vertebrates on St Helena are better understood and supported by the public and future actions to sustain control are identified and agreed.</p>	<p>0.1 Control methods for five key species have been evaluated by 2022 and measurable reductions in target vertebrates against year 1 baselines and results disseminated by the end of the project</p> <p>0.2 Multispecies vertebrate control has had a positive effect on native and agricultural vegetation with 50% increase in target vegetation survival/seedlings from year 1 baseline, and Wirebird population has yearly 10% increase in nesting success in control areas from year 1 baseline, by end of the project</p> <p>0.3 By the end of 2022 at least four Trust and SHG staff and 20 members of the local community are well equipped and motivated for</p>	<p>0.1 Guidelines produced. Monitoring and trap data, analysis of results, reports, news articles, presentation/publicity of vertebrate data.</p> <p>0.2 Monitoring data, report on management of target invasive species. Articles drafted for publication</p> <p>0.3 Training attendance records, certificates of attendance, records of</p>	<p>Difference in control methods detected and quantifiable (appropriate methods using previous experience and expert guidance).</p> <p>Effectiveness of control methods that allow for detection of changes in vegetation and Wirebird success (controls based on methods shown to be effective elsewhere, vegetation surveying based on established techniques, staff experienced in nest monitoring).</p> <p>Government and public attendance and feedback received (Government supportive of project and problems are also recognised by farmers/other members of the community).</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>invasive vertebrate control through specialist training and trap provision</p> <p>0.4 Priority control actions identified and feasibility study of large-scale eradication attempt completed by March 2023</p>	<p>traps distributed, control records, pre and post surveys with participants of training days.</p> <p>0.4 Action plan produced. Feasibility report produced and shared.</p>	<p>Public and media willingness to engage with the project (public awareness campaign will build on public knowledge from previous projects to reinforce)</p>
<p>Outputs:</p> <p>1. Improved ecological knowledge of key introduced vertebrate species to help inform control methods</p>	<p>1.1 1.1 Distribution and density of five key Vertebrates regularly monitored by end 2021.</p> <p>1.2 Map of significant myna roosts (20+ individuals) by April 2021</p> <p>1.3 Myna population census undertaken by March 2021</p> <p>1.4 Rabbit distribution and abundance estimated by March 2021</p> <p>1.5 Baseline estimate of black and brown rat densities in at least 3 key areas by end of 2020</p> <p>1.6 Baseline estimate of cat abundance in at least 3 key areas by end 2020</p> <p>.</p>	<p>1.1 Monitoring data, report</p> <p>1.2 Map produced</p> <p>1.3 Census data</p> <p>1.4 Survey data</p> <p>1.5 Records of monitoring, including tracking tunnels and camera trap data.</p> <p>1.6 Camera trap records, survey records</p>	<p>Density of key vertebrates detectable (staff already have experience of tracking tunnels and camera traps and effective monitoring methods)</p> <p>All key myna areas can be accessed and mapped (roosts are easily detected at dusk/dawn and can be mapped using landmarks from a distance if required)</p> <p>Sufficient coverage of St Helena can be achieved (suitable locations and methods will be utilised for each species, based on prior experience, expert advice and reports)</p> <p>Landowners and managers are willing to cooperate (strong pre-existing landowner relationships and partnerships can be utilised)</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>2. Evidence of effective invasive vertebrate control methods for St Helena, with Best Practice for myna and rabbit control produced</p>	<p>2.1 Two trap types tested for rabbit and myna trapping effectiveness in at least 3 conservation and 3 agricultural locations by end 2022</p> <p>2.2 Best practice control guidelines, including humane disposal, produced before 2022</p> <p>2.3 3000 myna trapped and humanely destroyed by the end of the project</p> <p>2.4 At least 300 rabbits and 50 cats caught and humanely destroyed per year by end of the project</p> <p>2.5 Regular baiting for black and brown rats in at least 3 key conservation areas by mid-2021.</p>	<p>2.1 Traps constructed/purchased, trapping locations and records.</p> <p>2.2 Control documentation available.</p> <p>2.3 Trap records, data analysis, report produced.</p> <p>2.4 Trap records</p> <p>2.5 Bait location and rebaiting records</p>	<p>High community involvement for trapping and low interference (effective communication will build on previous campaigns and community needs).</p> <p>Guidelines approved and adopted by on-island stakeholders including SHG (SHG and stakeholders will be involved in production; guidance will be clear and easy to follow).</p> <p>Traps effective (designs are known to work from previous experience or records, locations are selected using experience and expert advice to maximise effectiveness)</p> <p>Number of cats trapped similar to approximate average yearly catch for previous predator control project (same methods utilised and built upon).</p> <p>300 rabbits represents 1% of 2008 population. We have been conservative to reflect traps being tested and methods honed.</p> <p>3000 myna represents substantial portion of estimated population</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
			(effective methods and expertise used).
<p>3. Increased understanding of interactions between targeted introduced vertebrates, and their combined impacts on native flora and fauna</p>	<p>3.1 Established monitoring protocol for target non-native vertebrates in at least 3 conservation and 3 agricultural areas by April 2021</p> <p>3.2 Annual vegetation surveys in control areas and comparable areas of no control</p> <p>3.3 Wirebird population census undertaken annually and at least 50% of detected nests monitored in at least 3 locations November-December each year</p> <p>3.4 Annual monitoring of vertebrate activity in areas of control and selected comparable areas of no control</p> <p>3.5 Analysis of changes in monitored variables, as well as desk-based research, to increase understanding of, and identify actions for multiple control efforts to maximise benefits by March 2023.</p>	<p>3.1 Monitoring protocols documented, record and map of locations.</p> <p>3.2 Vegetation survey records, analysis.</p> <p>3.3 Census records, nest records and camera trap evidence.</p> <p>3.4 Camera trap, tracking tunnel evidence, record database, analysis</p> <p>3.5 Data analysis, literature review, report, recommendations and actions, Action plan</p>	<p>Effectiveness and impacts detectable (robust monitoring building on previous experience and research data).</p> <p>Low interference by general public (public awareness campaign will build on public knowledge from previous projects to reinforce).</p> <p>Access granted (strong pre-existing relationships will be utilised).</p> <p>Interactions and impacts of multiple vertebrates detectable, data available (scientific literature available and will be utilised to inform monitoring).</p>
<p>4. Improved local capacity for control of vertebrate predator and pest species</p>	<p>4.1 Effectiveness of techniques identified and shared with project partners by end of 2022</p> <p>4.2 At least four staff with increased skills and knowledge of vertebrate</p>	<p>4.1 Analysis of impact/effectiveness of different techniques, communications with project partners</p>	<p>Effectiveness detectable (expertise of project staff and external experts will be utilised)</p> <p>Suitable training identified (external expertise will be utilised, as well as</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>control (Trust and SHG) by December 2020</p> <p>4.3 20 community members attending at least two training events/workshops on trapping methods by end of Year 3</p> <p>4.4 100 myna and rabbit traps available to volunteers following training, to be distributed island wide, including trapping and humane disposal guidance by end 2021</p>	<p>4.2 Feedback from training and certification, work programme</p> <p>4.3 Attendance records, certificates, feedback from workshops</p> <p>4.4 Number of volunteers, trap distribution records, trap records from participants, Guidance documentation, analysis of records.</p>	<p>existing staff with 'Train the trainer' training)</p> <p>Public uptake and engagement is sufficient and can be maintained (will use pre-existing staff knowledge and working relationships, will encourage farmer and landowners known to have vertebrate problems)</p>
<p>5 Greater public awareness of invasive vertebrate species and the need for proactiveness in tackling the challenge they pose.</p>	<p>50 people attending each of at least 3 awareness events by the end of the project and at least 50% demonstrating increased understanding of the need for control in last event compared to baseline of first event.</p> <p>5.2 Promotion by myna specialist during each visit to St Helena, targeting local media</p> <p>5.3 Posts on social media followed by at least 20 people and each post shared at least once.</p> <p>5.4 Advocate for changes to Bird Protection Ordinance</p>	<p>5.1 Feedback from event participants, record of numbers attending.</p> <p>5.2 Newspaper articles and radio show appearances</p> <p>5.3 Social media posts and social media analytics data.</p> <p>5.4 Notes on discussions for amendments to Bird Protection Ordinance with relevant Legislative Council committee/ENRC</p>	<p>Public uptake (interest in need to control</p> <p>invasive vertebrates that are problematic on land/crops)</p> <p>We assume this holds true as the project will focus on raising awareness on how invasive species impact on their daily lives.</p> <p>We have been conservative in our expectation on numbers attending to reflect the challenge of engaging people in this subject.</p> <p>Assume no strong opposition to discussing Bird Protection Ordinance (provide evidence-base</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
			and discuss best options), and it is still relevant

Annex 2 Report of progress and achievements against final project logframe for the life of the project (if your project has a logframe)

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
<p>Impact:</p> <p>St Helena's key invasive vertebrate are controlled with community engagement, good native plant regeneration and colony expansion as well as increased abundance of wirebirds, native invertebrates and increased agricultural productivity.</p>		<p>The project has successfully developed and updated Invasive vertebrate control techniques whereby 146 cats, 596 rabbits and 3395 mynas were trapped and humanely destroyed. Supported by the 14.12% increase of the Wirebird population.</p> <p>The project has also increased both staff capacity within the Trust and among partners and the local community through pop-up stall, workshop and participation in trapping schemes. There is a demand for invasive vertebrate control especially rabbits, rats and mynas.</p>
<p>Outcome</p> <p>The distribution, ecological interactions and appropriate control methods of invasive vertebrates on St Helena are better understood and supported by the public and future actions to sustain control are identified and agreed.</p>	<p>0.1 Control methods for five key species have been evaluated by 2022 and measurable reductions in target vertebrates against year 1 baselines and results disseminated by the end of the project</p> <p>0.2 Multispecies vertebrate control has had a positive effect on native and agricultural vegetation with 50% increase in target vegetation survival/seedlings from year 1 baseline, and Wirebird population has yearly 10% increase in nesting success in control areas from year 1 baseline, by end of the project</p> <p>0.3 By the end of 2022 at least four Trust and SHG staff and 20</p>	<p>0.1 Control methods for all 5 key invasive vertebrates' species have been developed and updated with protocols produced which have been trialled and implemented with positive results. Mynas trapped exceeded target of 3000 in less than 3 years</p> <p>0.2 Vegetation survey methodology was developed and carried out. Results have showed a positive correlation between invasive vertebrate controls and vegetation survival and growth. Wirebird population has increased by 9.7% over project lifetime, to be noted that effects may be felt post project.</p> <p>0.3 Currently there are 6 members of staff, 11 SHG staff members and 51 volunteers of the community that have the training on vertebrate control. The training video has been produced and training workshop with the Myna specialist and Senior Veterinary Officer was undertaken. However, only 6 volunteers would like to continue with trapping and culling of mynas and the others would just like to trap.</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	<p>members of the local community are well equipped and motivated for invasive vertebrate control through specialist training and trap provision</p> <p>0.4 Priority control actions identified and feasibility study of large-scale eradication attempt completed by March 2023</p>	<p>0.4 Feasibility study has not been completed by the end of this project and is currently ongoing being led by INBIMA and inputted into by the Trust.</p>
<p>Output 1. Improved ecological knowledge of key introduced vertebrate species to help inform control methods</p>	<p>1.1 Distribution and density of five key Vertebrates regularly monitored by end 2021.</p> <p>1.2 Map of significant myna roosts (20+ individuals) by April 2021</p> <p>1.3 Myna population census undertaken by March 2021</p> <p>1.4 Rabbit distribution and abundance estimated by March 2021</p>	<p>1.1 Distribution and densities of mynas, rats, rabbits, and wirebirds have been monitored throughout lifespan of this project.</p> <p>1.2 Maps produced of significant myna roost and have been continuously updated as new myna roost have been identified.(Evidence 1, Output 1, Myna roost map</p> <p>1.3 Myna census is completed, refer to Evidence 27, figure 8 and table 4.</p> <p>1.4 Rabbit distribution and abundance has been found, and mapped, with a report completed. (Evidence 2, Output 1, Rabbit survey report)</p> <p>1.5 baseline estimates of rat densities have been finalized (without a report) in 3 conservation sites and 3 agriculture sites. (Evidence 17, Tracking tunnel data)</p> <p>1.6 Refer to Evidence 27, figure 6)</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	<p>1.5 Baseline estimate of black and brown rat densities in at least 3 key areas by end of 2020</p> <p>1.6 Baseline estimate of cat abundance in at least 3 key areas by end 2020</p>	
Activity 1.1 Identify and survey myna roosts and undertake counts		<p>Myna roost survey sites were identified from previous projects and were surveyed twice a year. This has been built upon through community involvement through “pop-up” stalls that were organised around the island allowing for public feedback to the project team that there have been more possible roost sites around the island. These locations were investigated and 4 more sites has been added making a total of 17 roost sites.</p> <p>There are more roost sites across the island that are harder to access and monitor, considering St Helena’s rugged, steep terrain. It is likely that mynas have moved roosts when numbers in a roost have decreased to a low number.</p>
Activity 1.2. Map key myna locations		<p>A map has been produced and regularly updated to include additional identified myna roosts. The project found that the key myna locations is where there is a thick canopy of foliage. Areas such as Mulberry Gut and Springbok has a very thick canopy, whereby the Castle Gardens used to have the same type of cover area, but over the past year, tree tops has been lopped and therefore some of the mynas has migrated to another roost.</p>
Activity 1.3. Undertake population estimate of mynas on St Helena from roost counts		<p>Population of Myna (Yr1 - 3413, Yr2, - 4834 and Yr3 - 3586) Over the past project years, it was noted that in Year 1, the team was just checking for locations where it was most possible for myna roost therefore only 1 visit to the roost was undertaken. The myna methodology stated to get a correct average of mynas in roost in that you must visit the roost 3 times to be able to get an average. This was undertaken in Year 2 which then saw a higher population, but in Year 3 there is a drop-in number likely due to the myna trapping and culling with over 3000 mynas humanely destroyed. In</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
		February/March was the best time of the year to trap and cull which after the breeding season.
Activity 1.4. Survey for rabbits, building on previous work		Rabbit surveys were completed through pellet counts using same methodology as in 2008. This was carried out in each year of the project to monitor any changes from trapping, unfortunately majority of rabbit were caught by the local community around their homes or in gardens that were not one of the projects key sites.
Activity 1.5 Deployed tracking tunnels and camera traps at key locations for detecting rats, cats and rabbits		<p>Tracking tunnels have been deployed in 6 main sites to establish a better registry of rat abundance. A tunnel tracking methodology for monitoring rats has been produced. (Evidence 16, Output 1, Rat methodology)</p> <p>Camera traps have been deployed in the projects 3 key conservation areas. (Deadwood, Millennium Forest and Man & Horse) to detect cats but also useful for the other targeted species. This provided the team with possible locations for setting traps and gives indication as to whether they are still present in these areas as well as identifying when a cat that has been spotted has been captured. The camera trap methodology was updated which specific rotation etc. (Evidence 8, Output 3, camera trap methodology)</p>
Activity 1.6. Estimate rabbit distribution and density and monitor		Distribution has been estimated using various survey methods. This activity was first undertaken and reported on where the baseline population of rabbits were estimated to be in the range of 45,000-52,000. This has been carried out again in Yr. 2 and 3 where the rabbit survey from both years shows that there is a big population increase of this species. (Evidence 2, Output 1, Rabbit survey report)
Activity 1.7. Establish rat density estimate in key sites		<p>Tracking tunnels and camera traps have been deployed in some of the project areas. This activity requires changing as unable to get a baseline density for our monitoring. This should be change to rat baseline activity index which will show periods of high and low activity to give an indication of the population size. The average index for each site for year 2 is:-</p> <p>Deadwood – 0.1</p> <p>Man & Horse – 0196</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
		<p>Millennium Forest _ 0.608 Total combined average = 0.417 Man & Horse – 0196 Millennium Forest _ 0.608 Total combined average = 0.417 (Evidence 17, tracking tunnel data)</p>
<p>Activity 1.8. Establish cat density estimate in key sites</p>		<p>The motion sensor camera traps were used to establish cat numbers in the project's key conservation sites such as Millennium Forest, Deadwood and Man & Horse Point. From most of the viewing of the cat identification, almost all cats that was seen on the cameras has been caught and humanely destroyed.</p>
<p>Output 2. Evidence of effective invasive vertebrate control methods for St Helena, with Best Practice for myna and rabbit control produced</p>	<p>2.1 Two trap types tested for rabbit and myna trapping effectiveness in at least 3 conservation and 3 agricultural locations by end 2022</p> <p>2.2 Best practice control guidelines, including humane disposal, produced before 2022</p>	<p>2.1 Two types of myna traps have been built, and their effectiveness has been tested. These were the funnel and drop door traps. However, due to time consuming the project staff had concentrate on one type of trap which is better manage by both the project staff and the community. Larger traps were built for bigger areas such as Horse Point and smaller traps were built for the community use. Two types of traps (drop door trap and the cage) for rabbits have been available, these were ordered from abroad not built on island and are deployed in the field, as well loan to the community. The drop door traps mostly at the Millennium Forest which caught most rabbits than the cages in the field.</p> <p>2.2 Best practice control guidelines including humane disposal have been produced and share with volunteers. (Evidence 3, Output 2, Cat trapping best practise; Evidence 4, Output 2, rabbit best practice guidelines; Evidence 5, Output 2, Guide for trapping myna birds on St Helena)</p> <p>2.3 3254 myna were trapped and humanely destroyed by the end of the project, exceeding the project target. This was a huge success as delays</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	<p>2.3 3000 myna trapped and humanely destroyed by the end of the project</p> <p>2.4 At least 300 rabbits and 50 cats caught and humanely destroyed per year by end of the project</p> <p>2.5 Regular baiting for black and brown rats in at least 3 key conservation areas by mid-2021.</p>	<p>caused by Covid-19 pandemic and disagreements with partner this activity did not start until February 2022. (Evidence 19, Output 2, Myna records)</p> <p>2.4 A total of 146 feral cats were trapped over the duration of the project in conservation areas The project was not as successful in trapping rabbits which proved the most difficult species to trap, a total of 596 rabbit were trapped – 304 less than target – the majority were trapped by the public outside of the project key sites.</p> <p>2.5 Regular baiting in the 3 key Conservation and agricultural areas has been undertaken during the project year.</p>
Activity 2.1. Order equipment		45 rabbit, 14 cat traps and 6 rolls mesh wire were ordered from overseas to undertake a wider trapping schedule in the agricultural and conservation areas.
Activity 2.2. Build specialist myna/rabbit traps		Building of myna traps was taught by the myna specialist via a produced video tutorial and then by her in-person. SHG prison inmates and volunteers were trained by the project staff to build 34 of these fit for purpose traps. Due to being time consuming the project staff concentrated on one type of traps that works very effective by the project staff and

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
		<p>volunteers. Larger traps were built for bigger areas such as Horse Point and the smaller traps were built for the community use.</p> <p>Rabbit traps were ordered from overseas as these could not be purchased on island. These were the drop door traps and cages in which both types were deployed in field. The drop door traps were used mostly at the Millennium Forest in which 153 rabbits were caught and humanely destroyed, persons taking the rabbits used them as a food source. The cages were deployed in the field as well as loaned to the community where 443 was caught and humanely destroyed, again used as a food source. (Evidence 20, Output 2, Rabbit caught in trap)</p>
Activity 2.3 Identify and agree control sites with Steering group		<p>Undertaken in Yr. 1 of the project whereby Man & Horse, Deadwood and Millennium Forest are the agreed conservation sites. ADA fields, Ropery field and Horse Ridge farm are the agreed agricultural sites. These sites were agreed with the Steering group.</p>
Activity 2.4 Agree trapping density, use and recording procedures within sites with Steering group, ensuring humane treatment		<p>Trapping density was determined by the numbers of traps available and where the most of the targeted species will be caught. All trapped species are recorded. Our trapping density (number of traps deployed for each species in each site) was not discussed and agreed with the steering group, instead it was a based on the availability of traps and where we would catch the most of our target species within the project's key sites.</p> <p>Joe Hollins, the then Senior Veterinary Officer was a member of the Steering group, and has given valuable advice and input to the project on humane controls and treatment of the targeted vertebrate species.</p>
Activity 2.5 Produce guidance for trap use and humane disposal guidance		<p>INBIMA has produced a training video and a guide leaflet on trapping mynas and caring for the decoy bird. The myna Specialist trained Trust, SHG staff and Volunteers on humane disposal of the mynas.</p> <p>Trust project staff produced a trapping guide and humane disposal leaflet for cats and rabbits, Training was provided by SHG senior veterinary officer to the Trust and SHG staff on humane disposal of cats and rabbits. This guidance is explained and given to volunteer trappers when given a trap for mynas and rabbits (Evidence 4, Output 2, rabbit best practise guidelines)</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 2.6 Visit by myna specialist and intense trapping in agreed sites		<p>The myna specialist visited the Island in late January 2022 (end year 2) after a delay due to Covid -19 island restrictions in force, therefore she was in quarantine for 10 days. 13 days she undertook outreach and training events to the Trust staff and volunteers. There was insufficient time to carry out intense trapping in agreed sites but managed to trap and cull 90 mynas. The project thereafter has carried out intense trapping in the project's key sites, such as Horse Point landfill and the Millennium Forest. These areas were not only wirebird habitat but also very close proximity to the Airport.</p>
Activity 2.7 Deploy myna, rabbit and cat traps in agreed sites		<p>Rabbit traps deployed in both agricultural and conservation project sites in addition to traps being supplied to the community for assistance on this project. Majority of rabbits caught were used as a food source by the community. It proved difficult to attract rabbits to traps in conservation areas compared to areas in residential areas or in agricultural sites there is a lot of natural vegetation growing within their habitat for the rabbits to eat and enjoyed therefore finding the correct baiting material to bait traps was not very forthcoming. Very ripe fruits such as apples, pears and guava were mainly used to actual caught most of the rabbits.</p> <p>Myna traps were deployed island wide, with trap supplied to the community and project staff manned the traps in conservation and agricultural sites. It was found that, within a year the target (3000) was exceeding to 3395 had been trapped and culled.</p> <p>Cat traps was deployed in both agricultural and conservation areas throughout the project period. In Yr. 1 only 2 cats were caught, due to the inconsistent of other project activities. In Yr. 2 67 cats were caught mainly in the conservation area. Camera traps had detected cats in the Wirebird nest areas. In Yr. 3 only 35 cats were caught.</p>
Activity 2.8 Install rat bait stations and regularly rebait, recording bait used/replenished		<p>No rat baiting activity took place in Yr. 1. However, the project started the programme of baiting in Yr. 2 with deploying bait stations in the agreed agricultural and conservation areas. Farmers within the agricultural area has commented that there has been a significant decrease in rats whereby they can notice the success in the crops harvested.</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 2.9 Install rabbit fencing where necessary		A fencing contract had been awarded to a private contractor in Yr. 1. Fencing has been completed in an area at the Millennium Forest that vegetation surveys have been carried out in. Rabbit trapping has been used in conjunction with this fence to establish and monitor vegetation changes within the fence and compare them to vegetation outside the fence. This shows that the fence area has got better regeneration of gumwood seedling.
Activity 2.10 Maintain records of locations date and number of target vertebrates trapped and humanely destroyed.		All targeted species trapped are been recorded by the project team and volunteers. Volunteers provide the team with their trap data at the end of each month which is enter into a central spread sheet. Those species which are humanely destroyed are also recorded. (Evidence 19, Output 2, Myna records; Evidence 20, output 2, records of cat; Evidence 27, Figure 5; Evidence 21, Output 2, records of rabbits; Evidence 27Figure 7)
Activity 2.11 Produce report on trap effectiveness		Trap effectiveness has been produced on cat, rabbit and myna traps. On the method of the trapping for rabbits it was very clear that the drop door traps were more efficient than the rabbit cages. However due to the building of myna cages and the quantity of them it was more convenient to build the funnel traps which works perfectly and more convenient for the small holders. (Evidence 18, Output 2, Trap effectiveness)
Activity 2.12 Produce Best Practice guidelines for effective vertebrate control for St Helena		A best practice guideline has been produced for each of the methods for trapping and humanely disposal of the targeted vertebrate species on St Helena. These guidelines are shared with partners and volunteers. (Evidence 4, Output 2, rabbit best practise guidelines; Evidence 5, Output 2, Guide for trapping myna birds on St Helena; Evidence 3, Output 2, Cat trapping best practise)
Activity 2.13 Feasibility study for large-scale eradication		Feasibility study was not completed within the duration of the project or during the extension applied for. Susanna (INBIMA) is leading on the feasibility study with input from the Trust, It will be circulated to partners once in final draft stage for review and feedback.
Output 3. Increased understanding of interactions between target	3.1 Established monitoring protocol for target non-native vertebrates in	3.1 Site monitoring protocols have been produced by the project (Evidence 6, output 2, Site monitoring protocols)

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
introduced vertebrates and their combined impacts on native flora and fauna	<p>at least 3 conservation and 3 agricultural areas by April 2021</p> <p>3.2 Annual vegetation surveys in control areas and comparable areas of no control</p> <p>3.3 Wirebird population census undertaken annually and at least 50% of detected nests monitored in at least 3 locations November-December each year</p> <p>3.4 Annual monitoring of vertebrate activity in areas of control and selected comparable areas of no control</p> <p>3.5 Analysis of changes in monitored variables, as well as desk-based research, to increase understanding of, and identify actions for multiple control efforts to maximise benefits by March 2023.</p>	<p>3.2 Annual vegetation survey to be undertaken to compare the control and comparable site</p> <p>3.3 Annual Wirebird population census undertaken with a 9.7% increase in population from 2020 - 2023 and nests monitored (Evidence 27, Figure 4)</p> <p>3.4 Annual monitoring of targeted invasive vertebrate species undertaken annually across sites, this was not done in control and comparable areas.</p> <p>3.5 Desk based research undertaken with scientific papers collated to inform works and increase understanding of targeted species</p>
Activity 3.1 Establish site monitoring protocols		Site monitoring protocols completed. These protocols were only established in Yr3; however, the protocols were implemented prior to this. This lack of efficiency was due to high turnover of project staff including project manager and relevant experience or the manager as St Helena is a small community with limited persons applying for these positions with the right skill. Training is required to enhance this

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 3.2 Undertake annual Wirebird population census		<p>Wirebird census was undertaken annually in January. (Evidence 27, Figure 4)</p> <p>Year 1 (2021) – 510 adults, 595 adults, juveniles, chicks and nests combined</p> <p>Year 2 (2022) – 582 adults, 626 adults, juveniles, chicks and nests combined</p> <p>Year 3 (2023) – 592 adults, 691 adults, juveniles, chicks and nests combined</p>
Activity 3.3 Monitor Wirebird nest for at least November and December each year		<p>Wirebird adult numbers in Deadwood have fluctuated over the course of this project, whilst this can be linked to predator control and habitat availability, it also can be linked to migration as well with the birds migrating between Deadwood and Prosperous Bay, Man and Horse numbers have averaged 26 over the last four years, whilst at the Millennium Forest the numbers has oscillated from 20 in 2020 to 71 in 2023. With the Adult numbers rising across the board island wide, the above graphs show that nesting, chick rearing and juveniles are still not up to par in Man and Horse and Millennium Forest, but like previous projects the benefits from this project might be seen in the next year or two</p>
Activity 3.4 Baseline site assessment before vertebrate controls undertaken, including presence and vegetation surveys, on control and comparable sites.		Refer to section 3.
Activity 3.5 Regular check and analysis of tracking tunnels and camera traps recordings		<p>Data is recorded regularly and there has not any significant change in rat activity detected in tracking tunnels in the conservation areas. Cat detections have decreased with the majority of the cats been detected have since been caught and humanely destroyed with 2 kittens been rehomed</p>
Activity 3.6 Monitor vertebrate presence/abundance on control and comparable sites		Conduct rabbit survey to monitor if trapping protocol, field camera traps
Activity 3.7 Monitor vegetation changes annually on control and comparable sites		Monitoring of the changes with the vegetation has been completed in the vegetation survey. There was an increase in the growth of endemic

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
		vegetation i.e. Gumwoods and other vegetation (Evidence 7, output 3, St Helena vegetation data, STEFFEN). Refer to section 3.
Activity 3.8 Analyse differences in monitored variables		Refer to section 3
Activity 3.9 Undertake desk-study of research articles on invasive vertebrate interactions and impacts of multispecies management		Desk study has been undertaken through scientific journals being accessed.
Activity 3.10 Report results of vertebrate control		Refer to section 3
Activity 3.11 Identify priority actions for multiple control efforts to maximise benefits		Refere to section 3
Output 4. Improved local capacity for control of vertebrate predator and pest species	<p>4.1 Effectiveness of techniques identified and shared with project partners by end of 2022</p> <p>4.2 At least four staff with increased skills and knowledge of vertebrate control (Trust and SHG) by December 2020</p> <p>4.3 20 community members attending at least two training events/workshops on trapping methods by end of Year 3</p> <p>4.4 100 myna and rabbit traps available</p>	<p>4.1 Trap effectiveness report produced for myna traps; control workshop held as well as regular outreach activities. Refer to section 3</p> <p>4.2 There has been a high turnover of staff on this project in all position except for the Senior Project Officer (Denis Leo), however by the end of the project all roles were filled and all received training in control techniques. Trust staff have had on-site training by Senior Veterinary Officer in cat trapping, cat euthanasia and euthanasia methods for rabbits. The Myna Specialist has trained a total of 21 people (SHG, Trust and community volunteers). The project staff has trained over 30 volunteers on trapping and culling of Myna.</p> <p>4.3 Susanna held 7 workshops at which a total of 21 community members attended and outreach event held including pop-ups. Refer to section 3.</p> <p>A total of 34 myna traps and 50 rabbit traps were available for volunteers to use. Due to not being able to procure sufficient materials required or</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	to volunteers following training, to be distributed island wide, including trapping and humane disposal guidance by end 2021	individual traps there was not 100 of each available for volunteers to use. Refer to section 3.
Activity 4.1 Train Trust and SHG staff in control techniques		<p>Training for the Trust staff and SHG staff for the trapping and culling of myna's was undertaken by the Myna specialist in February 2022. However, the SHG staffs are very reluctantly to undertake the culling process but the Trust staff continues all processing. 3 Trust staff still would like to continue the process after the project completion.</p> <p>Trust staff also had training/refresher by Joe Hollins, Senior Veterinary Officer in cat euthanising.</p>
Activity 4.2 Recruit trapping volunteers from community, including farmers, syndicate members and land owners/managers		<p>51 volunteers from the community, including farmers has sign up with the vertebrate control programme. It was disappointing that some of the volunteers would trap myna but were very reluctantly to cull which the project staff had to carry out and proved to be very difficult to co-ordinate. In the future working hours/way of working will need to be reviewed as it is not a job fit for normal strict working hours as culling needs to be carried out at dawn or dusk.</p> <p>Out of the volunteers only 6 still willingly like to continue the process of trapping and culling. The 6 volunteers that would like to continue are seeking permission for the use of the myna traps and still like to give the Trust data of the numbers that are caught and culled.</p>
Activity 4.3 Run community trapping information sessions and workshops		<p>Pop-up stalls and workshops were held over the project period with the myna specialist and well as the project staff. These information sections were on building traps, trapping and caring for the decoy birds. However, invites were sent to invited guest and the community. The Public workshops was poorly attended with just one member of the community attending in the western side of the island and one attending in the eastern as it inconvenient as most of the farmers and syndicate members was busy at most of the times and no interest came from them.</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 4.4 Train volunteers' trappers		<p>This was carried out during the workshops. Refer to activity 4.3.</p> <p>The team have been undertaking training with 51 community volunteers during the myna trapping and culling of mynas. Evidence 22, Output 4, Community volunteers)</p>
Activity 4.5 Ensure trap use and humane disposal guidance is provided and abided by all volunteers (following training)		<p>51 guideline leaflets were provided to the public. All volunteers that are provided with traps are provided with the traps data sheets and humane disposal guidance. There was difficulty with getting (some/few) volunteers to abide by guidelines, e.g. ensuring that the bait was set regularly. The team on repeat visit worked with and encourage volunteers to become more proactive. The team supported volunteers who were unable to cull after training was given.</p>
Activity 4.6 Provide traps to volunteers (following Training)		<p>Myna traps (34) are provided to the volunteers after training is conducted. Training was provided at the workshops to 15 volunteers, other volunteers were offered support on site by the team due to the limited number of people attending workshops</p>
Activity 4.7 Share techniques and lessons with partners and wider stakeholders		<p>Control techniques have been shared with Volunteers and SHG and training for myna trapping and culling undertaken whilst the myna specialist was on island included participants from SHG and the community volunteers.</p> <p>All partners have a representative in the steering group</p>
Activity 4.8 Participate in international conference or workshop		<p>One staff member from the project left St Helena in July/August 2022 to have an exposure visit to the UK. This visit was more of a pasture management which beneficial the protection of habitat for the Wirebird. The staff member did a presentation to the RSPB.</p>
<p>Output 5</p> <p>Greater public awareness of invasive vertebrate species and the need for proactiveness in tackling the challenge they pose.</p>	<p>5.1 50 people attending each of at least 3 awareness events by the end of the project and at least 50% demonstrating increased understanding of the need for control in last event compared to baseline of first event.</p>	<p>5.1 Due to insufficient awareness and poor attendance in year 1 of the project, progress into year 2 were carried out with “pop-up” sessions around the island, several radio interviews on both radio stations, local newspaper articles and each month a topic on social media to be able to inform the community of this Project.</p> <p>Whilst having this kind of information circulating the island, it informs the community that this project helps all on the Island to control vertebrates. These were very exciting on the feedback from the “pop-up sessions” and</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
	<p>5.2 Promotion by myna specialist during each visit to St Helena, targeting local media</p> <p>5.3 Posts on social media followed by at least 20 people and each post shared at least once.</p> <p>5.4 Advocate for changes to Bird Protection Ordinance</p>	<p>media services as the community filters in with their feedback. From this communication we, the project team learnt more of possible myna roosting sites, requests from the community for the borrowing of rabbit traps and myna traps.</p> <p>5.2 Myna specialist did 2 radio shows (Evidence 11, Output 5, recording on local media) and a presentation at the museum with 12 people attending (Evidence 23, Output 5, Recording of museum presentation)</p> <p>5.3 There have been 18 social media posts across the Trust social media platforms. (Evidence 12, Output 5, Facebook screenshots)</p> <p>5.4 The Bird Protection Ordinance had been sent to the Minister for Environmental & Natural Resources for comments. These have now been coordinated and are in the Legal process, no further response received from minister at end of this project.</p>
<p>Activity 5.1 Undertake public awareness events, including getting feedback</p>		<p>Only one event attended by 50 people was the Trust stall at Plantation. Majority of other events have only been attended by less than 20 people at any one time. The workshops were poorly attended with the target audience not been reached, after reviewing these events we moved to going to the people, one of 3 methods was the pop-up sessions that went to the community in the different areas at peak times. The less formal method worked better. (Evidence 15, output 5, popup stall at Longwood)</p> <p>There were a variety of public awareness events throughout the project. Baseline questionnaires provided information about starting points and feedback from sessions through the feedback forms allowed the team to further amend programs and training.</p> <p>The community of St Helena is not always co-operative, especially with this type of works that this project is undertaken. Feedback from the community is at times very negative until the community see the works been carried out and how it benefits the farmers and community as a whole.</p>

Project summary	Measurable Indicators	Progress and Achievements for the life of the project
Activity 5.2 Promotion by myna specialist, including local media articles and appearances		<p>During the short visit of the myna specialist, together with the project team, she hosted “pop-up” sessions in Jamestown, Longwood and Levelwood, to inform the community about Myna trapping, culling of the birds and seeking volunteers. 2 radio interviews and a Public Information section at the Museum were conducted on her visit to St Helena.</p> <p>The myna specialist shared what she wanted to achieve in person events that include pop-ups, workshops and formal presentations. There were radio interviews and newspaper articles with both of St Helena’s media services, information shown on posters and leaflets. The myna specialist provided 8 volunteers with the skills to build traps, guidelines (reference) for the humane trapping and culling of myna as well as support on ‘tweaking’ traps and baits to suit St Helena.</p>
Activity 5.3 Undertake monthly social media posts		Regular social media posts, there was a lapse of post when there were difficulties with loading the social media page. In Year 3 of the project the Trust added a LinkedIn, Instagram and Twitter account which has increased Trust following by 95 across all social platforms. Post are receiving engagement from an international audience.
Activity 5.4 Seek endorsement from relevant Legislative Council committee for legislation amendment to Bird Protection Ordinance		Bird protection Ordinance has been commented on as above.

Annex 3 Standard Indicators

Table 1 Project Standard Indicators

DPLUS Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DPLUS Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
DPLUS-A01	No. of people from key national and local stakeholders completing structured and relevant training	Number of officials from St Helena government and St Helena National Trust who attended workshops on control methods and trap building.	People	Men and women	20			20	60
DPLUS-B02	No. of new/improved species management plans produced	Number of control management techniques for invasive vertebrates produced.	Number	None	3	1		5	5
DPLUS-C01	Number of best practise guides and knowledge products published and endorsed	Number of best practise guides and knowledge products produced	Number	None (Language – English)	3	1		4	5
DPLUS-C12	Social media presence	Social media presence	Number posts	All platforms, mainly Facebook in years 1 and 2				18	34
DPLUS-D02	Number of people whose disaster/climate resilience has been improved	Number of people with control capabilities	People	Men and Women					

In addition to reporting any information on publications under relevant standard indicators, in Table 2, provide full details of all publications and material produced over the last year that can be publicly accessed, e.g. title, name of publisher, contact details, cost. Mark with an asterisk (*) all publications and other material that you have included with this report.

Table 2 Publications

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to BCF-Reports@niras.com putting the project number in the Subject line.	
Is your report more than 10MB? If so, please discuss with BCF-Reports@niras.com about the best way to deliver the report, putting the project number in the Subject line.	
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 10)?	
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	
Do you have hard copies of material you need to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 13)?	
Have you involved your partners in preparation of the report and named the main contributors	
Have you completed the Project Expenditure table fully?	
Do not include claim forms or other communications with this report.	