

## Darwin Plus: Overseas Territories Environment and Climate Fund Annual Report

To be completed with reference to the “Writing a Darwin/IWT Report” Information Note: (<https://dplus.darwininitiative.org.uk/resources/reporting-forms-change-request-forms-and-terms-and-conditions/>). It is expected that this report will be a maximum of 20 pages in length, excluding annexes)

**Submission Deadline: 30<sup>th</sup> April 2021**

### Darwin Plus Project Information

Project reference	DPLUS105
Project title	Building capacity to make Montserrat a mountain chicken refuge
Territory(ies)	Montserrat
Lead organisation	Durrell Wildlife Conservation Trust
Partner institutions	Montserrat Department of Environment (DoE), Montserrat National Trust (MNT), Montserrat Ministry of Education, Youth Affairs and Sports (MoEYAS), WildDominique, ZSL, NordensArk, Chester Zoo & Bristol Zoo
Grant value	£265,923.00
Start/end dates of project	01/07/2020 – 31/03/2023
Reporting period (e.g. Apr 2020-Mar 2021) and number (e.g. Annual Report 1, 2)	Jul 2020 – Mar 2021 Annual Report 1
Project Leader name	Mike Hudson
Project website/blog/social media	Mountainchicken.org Twitter.com/rewildcaribbean Facebook.com/ReWildCaribbean/
Report author(s) and date	Mike Hudson, Luke Jones and Stephen Mendes. 24/04/2021

### 1. Project summary

This project aims to re-establish a semi-wild, breeding population of mountain chickens on Montserrat and enable long-term protection of the species. The project combines ground-breaking habitat manipulation initiatives with in-country conservation capacity building and public/schools engagement activities. Knowledge of the efficacy of habitat manipulation in mitigating chytridiomycosis will be improved and disseminated to conservation practitioners globally. In the absence of native land mammals, the mountain chicken is the top terrestrial predator in Montserrat and its presence is vital to ecosystem functioning and crop-pest control. *Batrachochytrium dendrobatidis* (Bd) arrived in Dominica in 2002 and Montserrat in 2009, decimating both islands’ mountain chicken populations. Bd persists in reservoir amphibian species on both islands rendering eradication impossible. Mechanisms are therefore required to enable the reintroduction of mountain chickens in the presence of Bd. The Mountain Chicken Recovery Programme (MCRP) aims to recover a species from the brink of extinction and, in doing so, act as a globally important case study in the fight against a disease threatening amphibian survival globally. Once a familiar sound – a generation have grown up without hearing a mountain chicken calling. Local connection to, and sense of responsibility for, nature has decreased as a result. Public / schools outreach and capacity-building components will contribute to the Government of Montserrat’s 2020-2030 Youth Development Policy – focusing on employment and social development through provision of teaching/careers advice in priority

areas including biology, veterinary medicine and environmental science. The project will also support a forthcoming national curriculum review (between 2020-2023), focusing on incorporating local environmental issues under four key areas: environment, sustainability, climate change and cultural identity. This project will enhance environmental and scientific understanding among all students, not only encouraging take up of these subjects at the tertiary education level but also embedding sensitivity towards, and knowledge of, the local environment at all levels within the future workforce.

## **2. Project stakeholders/partners**

The project is a formal partnership with three on-island partners, as well as several international Zoos. The on-island partners work in an integrated fashion so that all work is delivered by Durrell, DoE and MNT staff at all times, with outreach also in collaboration with the Ministry of Education, Youth Affairs and Sports. It can be assumed, therefore, that any progress in this report is the result of the collaborative efforts of all partners. Durrell's relationship with DoE is longstanding, and so this partnership has been borne out of collaborative working and understanding of each other's goals. MNT are a more recent joiner to the partnership but have objectives which are very closely aligned with that of Durrell and DoE, and so the partnership is of mutual benefit. All partners were involved in the project planning.

During November 2020, all partners actively contributed to the Darwin funded outreach engagement workshop associated with this grant, the aim of which was to develop a unified engagement strategy, increasing scope, consistency, and quality of youth and community engagement in the field of wildlife conservation on island (Evidence in Annex 3). All partners went to great efforts to ensure almost all staff were able to attend and engage with the three-day workshop sessions (including several remote virtual attendees). The workshop has culminated in the production of a 2.5 year strategy plan that the four partners have agreed to actively work on over the course of the grant (Summary of strategy in Annex 4). This will be regularly reviewed and updated by a committee of representatives from each institute as well as ambassadors from target groups such as teachers and youth.

The Mountain Chicken Project has seconded a member of staff, Tavis Weekes, from DoE as a Senior Project Officer on this project. Mr Weekes will receive formal and on the job training from Durrell and DoE throughout the project. At the end of the project, Mr Weekes will continue to be employed within DoE, with his skills boosted and formal certified training received through Durrell's Endangered Species Recovery and DESMAN courses (one remote, one residential), we will ensure he is eligible for promotion to replace retiring senior department members. Whilst acting in the Senior Project Officer role Mr Weekes will, under supervision of the MCRP coordinator, take a leading role in the management, development and delivery of DoE training opportunities for the other project officers. This provides an excellent opportunity for Mr Weekes to develop the skill sets necessary to progress from a competent field worker into a management/leadership position.

MNT have also seconded a staff member to the MCRP project. Alphonsus Baron, who was identified as a strong candidate for one of the Darwin supported Project Officer roles during interviews, has since been recruited on a full-time basis by MNT. Since December alterations to funding allocation, Darwin are supporting Mr Baron three days a week, as such during these days he is training and working alongside the team. It is hoped that upon completion of the grant Mr Baron and his developed skill set will be retained within MNT. As an ex-teacher and youth club organiser in Dominica, Mr Baron will be contributing in particular to the development of outreach and curriculum engagement initiatives, including the training of other Project Officers in this area.

The project continues to work very closely with both DoE and MNT in the maintenance and management of both the live food breeding facility and the mountain chicken safe haven. Project Officer, Kaysie Ryan, has taken naturally to the work, showing a keen intuition and attention to detail; as such she has taken on more management and training responsibilities of other staff and team members at the live food breeding facility (Photos in Annex 5). Through the COVID lockdowns in Montserrat, this partnership has proved invaluable with members of different institutions based in different areas of the island covering the work in those locations reducing the need for cross island transport permits (though the government of Montserrat has

been very supportive in providing these where necessary). Alongside the formal partnerships, informal relationships with the Ministry of Health, and local technical specialists, such as Calvin “Blacka” Fenton, have ensured that vital species centric work hasn’t been hindered by the impacts of the COVID lockdown. The public engagement we have been able to conduct this year has boosted the profile of the project, and the importance of the project has therefore been recognised when applying for exemptions to restrictions.

### **3. Project progress**

#### **3.1 Progress in carrying out project Activities.**

##### **Output 1: Enhanced capacity exists within Montserrat DoE to implement effective conservation actions through newly recruited and highly trained Project Officers.**

This year we have successfully advertised for, interviewed, and employed three mountain chicken project officers. This process was carried out collaboratively with DoE and MNT and resulted in the employment of Tavis Weekes, Kaysie Ryan and Alphonsus Baron. Miss Ryan has now gone through the training planning process, identifying skills on the Durrell / IUCN draft Conservation Practitioner Competency Register (soon to be published) which she aims to develop within the coming year (Annex 6). Mr Weekes will now undertake the same process, with the finalised version of the framework (caused by delays in this employment as stated in a previous change request). Mr Baron is a part-time addition to the project – focussed on the outreach elements, and so will undertake a streamlined version of this process soon.

To date, Miss Ryan and Mr Weekes have been trained in mountain chicken project relevant skills by the Project Coordinator, including handling and health checking the mountain chickens, feeds, skin swabbing to test for the fungal agent Bd, insect husbandry and reservoir species surveys (see training section of monthly reports in Annexes 7-12 and photos of training in Annex 13). They have also received formal training including in Excel and data collection (Annexes 7-12). We have bumped the training needs assessment to the second year of the project (as per a previous change request), due to the inability to travel from the UK to conduct this in person. The Durrell training department have, however, made contact to begin formal training of Mr Weekes on the Durrell Endangered Species Recovery Online course in Y2 Q1 of the project. They have also begun identifying opportunities for broader training of DoE and MNT staff online in lieu of being able to travel to Montserrat to deliver training.

No exchange trips have taken place between Dominica and Montserrat due to COVID. We hope these will start in 2021, and until then, we have established monthly virtual meetings which will start in April 2021.

##### **Output 2: Mountain chicken population established and surviving in a semi-wild managed environment with signs of breeding and carrying capacity of enclosures is increased to 50.**

The population of mountain chickens in Montserrat is doing well, with 24 animals of the 27 introduced in 2019 surviving at the time of writing. There were plentiful breeding attempts since the project start, with 37 nests recorded, two of which were confirmed fertile with active tadpoles – these were the first mountain chicken nests known in Montserrat since the 2009 near-extinction of the species, a real success (see Annexes 7-12). Unfortunately, none of these nests were successful, and work is ongoing to determine what the cause of nest failure is (though this is very common in European captive settings).

We have carried out monthly health checks of the animals in the enclosure including skin swabs for Bd and morphometric measurements to determine condition. In March 2021, we achieved a first for the project – all animals reaching new weight maximums – an indication they are well settled and feeding well. We continue to feed the mountain chickens three times a week with visual health checks and presence confirmed and change the pond water once per week (All Annexes 7-12). We have also collected all environmental and monitoring data at least once per month, though a recent equipment failure means PIT tag monitoring is currently down – we have sent the unit for repairs (it was damaged during flash flooding in late 2020) and are using camera traps to try and plug the data gap.

Finally, the project veterinarians and keepers from the European Zoos have been sent the data and photos from the monthly health checks and continue to advise on the welfare of the animals / interventions required which since the start of the Darwin project have been minimal.

**Output 3: 5-year conservation management plan for mountain chickens in Montserrat is created based on the results of the trials in the semi-wild enclosure.**

No activities scheduled in Y1.

**Output 4: Increased public engagement with nature in Montserrat using the mountain chicken as an ambassador through outreach events and schools engagement.**

In October 2020, we held an outreach workshop with all on-island stakeholders, along with specialist staff from Durrell remotely. The workshop was an in-person / remote hybrid which presented some challenges, but we received excellent feedback from our local partners that they felt heard and their ideas were represented. A draft outreach strategy was then completed, with drafts being sent to partners for final sign on in Q4. We have now ordered a series of outreach materials to begin implementation of this strategy, though COVID related transport delays mean these have not yet arrived.

During this meeting (a screenshot of the recording is provided as evidence – in Annex 3), the group discussed the potential for involvement in the curriculum review process and flagged the time points at which this will be possible.

We have now designed our nature connectedness signage in collaboration with Durrell's learning team and experts in Nature Connectedness, and Montserrat-based partners, with all signs ordered and ready for deployment (two sign designs attached as evidence in Annex 14). A recent meeting with the Montserrat Tourism Department revealed an alignment of our goals around signage and the promise to expand the signage deployment across all tourism trails in Montserrat – far greater than our original plan for four trails. We have also created a series of mountain chickens cast from concrete, and painted by our team and local artists, which have been placed along these trails as an extra activity for children and other interested users to search for, and post on social media to encourage others to do the same (Annex 15).

Baseline nature connectedness surveys have been conducted amongst local hiking trail users, there were designed to highlight the four most utilised trails for our signage campaign and included the Nature Connection Index. As a result, we have feedback from ~1% of the population and baseline nature connection levels for these individuals prior to the roll out of the new nature connection signage (See Annex 9 for monthly report containing this activity). We plan to conduct a follow up survey of the trails to receive results on changes in NC and trail engagement after new signage and activities have been deployed.

Outreach sessions at each educational facility in Montserrat have not been possible due to the impacts of multiple COVID lockdowns and the resulting pressure for children and teachers to “catch up” on missed work for assessments. Emergency protocols in schools prevented large gatherings or drastically reduced time availability for outreach. We aim to conduct baseline nature connectedness surveys at schools as soon as this is possible.

We were unable to deliver face-to-face outreach this year, which included the hosting of college students, and projects. Mountain chicken day events on Montserrat were also cancelled due to a lockdown and UK partner institutions were impacted by furlough.

Project staff have been interviewed by ZJB radio three times this year (see monthly reports – Annexes 7-12). Average audience of these interviews is thought to be 5000 for a peak show, with an additional 2000-5000 when including website replays accessed by diaspora and non-residents on Montserrat Echo. In addition, project staff have featured on 664 connect – a leading local website, with a large viewership of especially younger people on Montserrat, one of our key targets for outreach activities (See Annexes 7-12).

Project staff have also posted very regular social media content including photos, blogs and competitions. This year there were an average of 808 unique monthly engagements with our social media channels (and website) and 1460 followers across our three social media channels. This remains a useful indicator (Evidence in monthly reports – see Annexes 7-12).

## 3.2 Progress towards project Outputs

Indicator numbers in brackets refer to log frame.

### **Output 1: Enhanced capacity exists within Montserrat DoE to implement effective conservation actions through newly recruited and highly trained Project Officers.**

At the start of the project, DoE had spoken to us about succession planning, and training a new generation of forestry officers to fill the gaps left by their retiring staff, who are extremely skilled and difficult to replace. We have recruited two full time and one part-time Project Officer(s) (1.2) who have begun receiving training and are already gaining skills which make them more effective conservationists (See Annexes 7-12). We are on track to deliver well trained staff for employment by project partners at project end basing their training on the Conservation Practitioner Competency Register developed by Durrell / IUCN (See Annex 6 for one Project Officer's review against this framework) (1.3). The second and third Project Officers will undergo their initial review at the beginning of Y2. We will also undertake a training needs assessment for DoE, initially planned for Y1 but delayed to facilitate face to face delivery in Y2 (1.1).

The Project Officers have received training in skills listed in Section 3.1. (1.4) (See Annexes 7-12). For Y2, we are asking the Project Officers to start a 'training record' as a stand-alone document to better record this information. There has been less time than expected for training by DoE in forestry skills due to COVID restrictions, but we hope to ramp this up in Y2 (1.5). Finally, there have been no inter-island exchange trips due to COVID and staff absence in Dominica, but we are starting these in April 2021 via a virtual platform (1.6).

### **Output 2: Mountain chicken population established and surviving in a semi-wild managed environment with signs of breeding and carrying capacity of enclosures is increased to 50.**

At the start of the project, we had populated our enclosure with 27 mountain chickens, of which 24 are still alive (one mortality occurred since the start of the Darwin project) (2.4). This compares to a baseline state of no known wild animals since 2016. There had been no recorded breeding of the species on the island since the near-extinction event in 2009. The single mortality was not due to chytridiomycosis, a key indicator of success for this output.

Since project start, there have been 37 nests recorded (see Annexes 7-12 – Indicator 2.4), with two producing tadpoles, though these did not survive to metamorphosis as is common in captivity. Despite this minor negative, this is a very positive result and represents the first known mountain chicken tadpoles in Montserrat since 2009.

At the start of the project, we had no data on the likely impact of environmental manipulation on the mitigation of the fungal disease chytridiomycosis in a field setting. Since the start of the Darwin project, we have collected nine months of continuous monthly skin swab (infection status) data (245 swabs – Indicator 2.2 - see Annexes 7-12), with movement, health, and environmental data alongside it (2.1). Whilst not yet sufficient to determine whether the intervention has been successful, these data are a strong foundation on which to make this assessment.

Veterinary and husbandry advisors to the project have reviewed data throughout the project and are happy with the progress, including all animals reaching a maximum body condition in March 2021 (2.3. see Annexes 7-12).

### **Output 3: 5-year conservation management plan for mountain chickens in Montserrat is created based on the results of the trials in the semi-wild enclosure.**

At the start of the project, there was no practical plan for the immediate conservation activities required to restore the mountain chicken across its range in Montserrat. This project delivers on this key objective, which is part of the longer-term Species Action Plan of which all project partners (except MNT – a new partners) are signatories.

Progress has been made through the collection of data on the efficacy of the enclosure and interventions that will be the basis for this management plan. In addition, the training and capacity building we are delivering is ensuring that our partners are strong enough to deliver long-term conservation action for Montserrat's endemic species.

No specific progress was expected against any of the indicators for this output in Y1.

#### **Output 4: Increased public engagement with nature in Montserrat using the mountain chicken as an ambassador through outreach events and schools engagement.**

At the start of the project, there was relatively limited knowledge of the mountain chicken in Montserrat's school children who had grown up with this species missing from the night-time soundscape. Older generations remember the species, which was hunted as a food source which drew food tourists from around the world. We did not have a baseline for nature connectedness levels of Montserrat and have started to collect baseline survey data to understand this. This is made interesting by the main measures of nature connectedness e.g. the Nature Connection Index, being relatively European-centric and having not being trialled in other cultures. We are pioneering this research in both Montserrat and other Durrell sites.

In November, we held our outreach workshop with all local partners, and agreed the outreach plan for the first 2.5 years of the project (Annex 4, Indicator 4.1.) and an MOU should be signed for the delivery of this in the next few weeks. Delivery of activities planned in this outreach document have been limited due to COVID, but we have focussed on virtual engagement.

COVID restrictions (including regular school closures) have prevented us from carrying out school engagement activities in Y1 (4.2) as well as preventing us from hosting student internships (4.3) or student projects this, but we hope to resume these as soon as COVID restrictions allow. We have however boosted our online engagements with the high number of engagements detailed two paragraphs below.

Mountain chicken day events in Montserrat could not be carried out in Y1 due to COVID restrictions on group meetings, and the cancellation of community events which we could use to promote the project in-person (4.4). UK partner institutions were impacted by furlough and so could not commit the resources to generating specific content for this day.

Project staff have been interviewed by ZJB radio three times this year (4.5) (see monthly reports – Annexes 7-12). Average audience of these interviews is thought to be 5000 for a peak show, with an additional 2000-5000 when including website replays accessed by diaspora and non-residents on Montserrat Echo. In addition, project staff have featured on 664 connect – a leading local website, with a large viewership of especially younger people on Montserrat, one of our key targets for outreach activities (See Annexes 7-12).

Project staff have also posted very regular social media content including photos, blogs and competitions (4.6). This year there were an average of 808 unique monthly engagements with our social media channels (and website) and 1460 followers across our three social media channels. This remains a useful indicator (Evidence in monthly reports – see Annexes 7-12).

Nature focussed signage has been designed (See Annex 14) and ordered and is waiting to be erected on the four trails (4.7). In addition, Montserrat Tourism has agreed to fund signage on the remaining six tourist hiking trails on island (well used by local hikers), which is an excellent improvement for this indicator. We could reflect this by increasing the target in this indicator, though we would prefer to wait until discussions have been finalised. Finally, concrete mountain chickens painted by the team and local artists have been placed on trails as an extra activity – which can be searched for and posted on social media to encourage others to join in.

With regards to the project involvement in the national curriculum review (4.8), we have engaged with the Ministry of Education, Youth and Social Affairs to ensure we are able to engage in the curriculum planning sessions when they occur. They have likely been delayed due to COVID, but we expect these to be conducted within the project timeframe. This remains a useful indicator and will be made more specific as we gain greater understanding of this process.

### **3.3 Progress towards the project Outcome**

Project Outcome: Montserratian conservation capacity is developed enabling the delivery of a 5-year conservation plan for mountain chickens using intensive management strategies and supported by an increased local connectedness with the species.

Progress: Indicator 0.1 - Two Officers have been appointed and have started training including in key project specific skills including handling and health checking the mountain chickens, feeds, skin swabbing to test for the fungal agent Bd, insect husbandry and reservoir species surveys (See Annexes 7-12). We have begun to establish training programmes for them based on the Durrell / IUCN Conservation Practitioner Competency Framework to be published soon (e.g. Annex 6), to ensure this training fulfils all requirements for an effective species conservation practitioner. These staff will then be of the required experience level to be employed in our in-country partners and replace existing staff as they require, filling the current experience gap.

Indicator 0.2 - In the enclosure, chytridiomycosis mitigation strategies have been implemented successfully to date (Annexes 7-12), with one mortality of a mountain chicken since the project start, though this animal did not test positive for Bd post-mortem and so is not believed to have died from chytridiomycosis. We continue to collect data on the impact of these interventions to inform the potential for environmental manipulation to enable the survival of mountain chickens in the face of endemic chytridiomycosis.

This will feed into the decision-making process required for the planned five-year action plan for the species to be delivered in Y3 (Indicator 0.4).

Indicator 0.3 - There have been 37 nests since the project start including two with tadpoles, but none resulted in successful young (as is common in captivity). These are thought to be the first fertile mountain chicken nests in Montserrat in over a decade, a wonderful achievement (Annexes 7-12). We are now focussed on improving the chances of tadpole survival and metamorphosis in Y2 and 3.

Indicator 0.5 – To determine whether our project is successful in increasing connectedness of the public with the mountain chicken and nature, we have completed baseline surveys of hikers using trails, prior to deploying our nature connectedness signage on the main trails. We had planned to deploy these on four trails, but in partnership with the Tourism Department, we are now able to deploy them on all 10 tourism hiking trails on island (widely used by locals). We aim to carry out more extensive baseline surveys to be completed when COVID allows, from which any change in connectedness because of the signage and outreach methods, can be determined. Finally, concrete mountain chickens painted by the team and local artists have been placed on trails as an extra activity – which can be searched for and posted on social media to encourage others to join in.

In summary, we are making good progress towards most aspects of our Project Outcome and expect to deliver it within the project timeframe. We aim to catch up on the aspects of the project which have been challenging due to COVID as restrictions lift. We have boosted virtual outreach efforts in place of in-person outreach, but know that nature connectedness requires interaction with nature, which you cannot have over Zoom.

### **3.4 Monitoring of assumptions**

All assumptions in the original logframe remain valid except for the following list which concern activities already completed:

- 0.1a. Suitable candidates have been identified and employed.
- 1.2. Suitable candidates have been identified and employed.

There are several additions which we would like to add in the face of the ongoing COVID pandemic, as defined below.

- 0.5.a - Schools are able engage with external organisations in the face of COVID restrictions.
- 4.2.a. Schools are able engage with external organisations in the face of COVID restrictions.

There are several additions which we would like to add in the face of the ongoing COVID pandemic, as defined below.



1.6. There are no political, **disease** or climatic issues that prevent travel between the islands for the duration of the project.

Where COVID is concerned, we have conducted much of what we intended through virtual platforms, but some elements of the project will either not be exactly as planned if COVID continues to restrict activities (e.g. virtual island exchanges vs. physical), or will not happen at the expected rate (i.e. number of educational facilities visited through the project lifetime). We hope that during the lifetime of the project, restrictions will lift to a sufficient extent that we can deliver the project as planned, but any changes will not markedly impact on the delivery of our planned outcome.

#### **4. Project support to environmental and/or climate outcomes in the UKOTs**

With respect to UKOT government priorities our project has contributed to:

- # 7 of the UK/Montserrat Charter – (UK commitment) - Use the UK, regional and local expertise to give advice and improve knowledge of technical and scientific issues. This includes regular consultation with interested non-governmental organisations and networks.
- #2 (Montserrat commitment) – Ensure the protection and restoration of key habitats, species and landscape features through legislation and appropriate management structures and mechanisms, including a protected areas policy, and attempt the control and eradication of invasive species.

Ministry of Health, Education, Youth Affairs and Sport (MoHEYAS) have outlined the following criteria: wildlife conservation, climate change, sustainability and culture in their new youth development policy and curriculum review. Although still in the development and review phase, Durrell have already engaged MoHEYAS in consultations over this, and have jointly incorporated aspects of these strategies into the projects outreach strategy plan.

This project strives to support and achieve three core long-term outcomes that will facilitate the recovery and preservation of Montserrat's unique natural environment, heritage and associated cultural identity.

These are:

- The reintroduction and survival of a population of recently extinct in the wild, culturally significant, charismatic apex predators - *Leptodactylus fallax*, that can be utilised to develop successful conservation initiatives for the species in-situ, and in time support the re-colonisation of the species across its historic range. The Montserrat government supported the development of the Mountain Chicken Species Action Plan towards which this project is a major contributor with the aim of restoring the species across its historical range.
- The development of novel conservation initiatives, and thus also local capacity, to counteract the impact of deadly amphibian chytrid fungus on species and ecological symptoms.
- The development and institutionalisation of cross-organisational environmental engagement initiatives and training/development strategies for youth. Focused on raising and establishing national knowledge of local natural ecosystems, heritage and conservation initiatives and exposure of youth to environmental career/training opportunities from such initiatives and hopefully also increase opportunities for succession of youth into environmental careers on island.

In reference to bullet point one and two, above, the project has, this year, successfully maintained a semi-wild population of mountain chickens in Montserrat despite the presence of the chytrid fungus in reservoir species and an outbreak in the facility. This marks what we believe to be a world first for an in-situ, semi-wild population, previously driven to extinction by the impacts of chytrid fungus. The modified treatment techniques utilised across this period and proven efficacy, now mean that we can potentially ensure the survival of a population in Montserrat for the future as we work towards developing other long-term strategies of resilience



development. The population have now survived one full disease season since initial reintroduction, this marks a first for reintroduction attempts of the species.

In addition, the project has also recruited three local staff of different age demographics (20s,30s & 40s) all of whom are currently receiving training in all aspects of the project, from the implementation of the novel conservation methods, through to husbandry management, needs assessment, fundraising/grant management, stakeholder collaboration and importantly outreach and engagement initiatives to both the local community and targeted youth groups. Through this the project has built local capacity especially within the youth which lends itself to continuity.

In reference to bullet point three, above, the MCRP hosted a series of workshops engaging the Ministry of Education, Youth and Sport and all terrestrial environmental conservation agencies based permanently on Montserrat (Department of Environment, Montserrat National Trust & Durrell Wildlife Conservation Trust). Through this we developed a unified 2.5-year environmental engagement outreach strategy that targets the establishment of long-term institutionalised initiatives through the established partners, such as; the inclusion of natural heritage and ecosystems in holistic aspects of the schooling curriculum, Environmental youth camps & ambassador programmes, celebration of unique environmental heritage through social events (festival, beach cleans, community hikes), and the creation of internship training opportunities & mentoring for youth interested in progressing into the environmental sector. It is hoped that this will not only establish a minimum knowledge level of unique natural heritage and important conservation issues throughout the community, but also “facilitate the development of a generation of wildlife conservation minded professionals on island”. We hope that this increased collaboration, engagement and provision of training opportunities will improve succession routes for local youth into environmental careers and continue to be implemented beyond the scope of the grant.

There is an overall increase in appreciation of the species and the habitat requirements in the public on island. Aligned with the Montserrat ‘Give Nature a Home’ initiative, run by the UK Overseas Territories Conservation Forum, this would encourage landowners to leave areas of their property in their natural state, or co-managed with the Department of Environment and local NGOs to encourage and promote biodiversity conservation. One of the members of this initiative has volunteered their land to be used for the enclosure for this project and for any future expansions that may be necessary.

## **5. OPTIONAL: Consideration of gender equality issues**

During our interviews for the Mountain Chicken Project Officer roles, we interviewed a near equal number of men and women (60/40) and selected one male and one female for the roles. We had no disabled applicants and no question was asked about the religion of the applicants. The interviews were conducted by the project lead (Mike Hudson), the Project Coordinator (Luke Jones), the Director of DoE (Ernestine Corbett) and the CEO of MNT (Sarita Francis). As our two local partners are run by two influential women, we hoped that candidates saw that the opportunity was open to all, despite forestry and environment roles traditionally being the reserve of males in much of the Caribbean.

The outreach workshop involved an approximately equal number of both genders, biased slightly to females which resulted from the relatively large number of female teachers on the island. We believe all individuals had their voice heard and reflected in this strategy no matter of the gender, age, ethnicity, religion or disability status.

All project engagement activities are equal opportunity to all island residents, and school outreach sessions are designed to ensure they engage all genders / ages / religions and disability statuses equally.

## **6. Monitoring and evaluation**

Throughout the first nine months of this project, the Project Lead has held fortnightly meetings with the in-country project coordinator to ensure project activities are on schedule, and outputs being delivered. In addition, every quarter, progress against each of the ‘Measures of Success’

within the project logframe have been reviewed to ensure they are either being achieved or are expected to be achieved on schedule. The Project Coordinator also hold in-person weekly meetings with each of our partners to discuss both logistics and progress towards each of the three priority outputs in our logframe (the 5-year management plan does not require direct activities until the final year of the project). These are progress in data collection within the enclosure (Output 2), progress in training the Project Officers – and any training activities the staff will be attending that week (Output 1), and any planned outreach activities (Output 4).

For Output 1, enhancing capacity of Montserrat DoE to deliver effective biodiversity conservation, our indicators relate to the hiring and training of Project Officers who will be suitable to replace retiring staff in DoE at the end of the project. Beyond the indicators around hiring the staff, the indicators focus on training. The first Project Officer has completed review against the Durrell / IUCN Conservation Practitioner Competency Framework (Annex 6) which list all competencies required to be an effective conservationist at each level of seniority. The progress in training (both specialist skills relating to this project, and skills against the broader competency framework) has to date been recorded within monthly reports (Annexes 7-12). This section is completed by the Project Officers each month and ensures they are aware of remaining requirements. The second Project Officer will complete this process in early Y2. This delay was caused by a delay in finalising the competency register, and our use of the first Project Officer to pilot this for Durrell. The third Project Officer will also complete this review, but in a streamlined manner, with their focus being on outreach activities. The training needs assessment (delayed to Y2 due to COVID), will help to identify broader training requirements within the department which will inform a longer-term training plan for its staff. This investment in the training of younger staff is in-line with a focus from DoE on succession planning for their workforce with many individuals close to retirement. As such, this output is contributing to the project outcome through the building of capacity.

With reference to Output 2, within the enclosure, weekly feed data and monthly health check data are reported to our European Zoo partners for feedback on condition of individuals and any interventions required. Data from these reports are collected in Durrell's Sharepoint, with regular checks by the Project Lead to ensure they are being collected consistently and are up to date. A local landowner now also collects rainfall data from the site, in the absence of a government run weather station in the area. These additional environment data will be essential for understanding the timing of outbreaks of chytridiomycosis and its impact. Monthly skin swabs are sent to the Institute of Zoology, processed, and reported in a shared database to ensure rapid diagnostic turnaround. We know that these data will be essential in understanding the disease dynamics within the enclosure and the impact of our interventions. These were planned based on four previous releases of mountain chickens (funded by the Darwin Initiative) and studies of wild animals. All measures of success for this output relate to the survival and health of the mountain chickens (as dictated by our veterinarians), and to the data required to assess the quality of the intervention. As such, we are sure they contribute to the project outcome through increasing the likelihood of restoring the species to Montserrat.

Progress towards Output 4, increased engagement with the mountain chicken and nature, is captured in monthly reports, detailing online engagement with the project and in-person engagement events delivered or attended. We have begun the process of establishing a baseline of nature connection from which our impact can be measured though this is relatively experimental as it was developed in Europe and may be sensitive to cultural variation. The main measure of nature connectedness (the Nature Connection Index), which has been used to date, is not particularly sensitive to short-term changes (though it should detect changes over the lifetime of the project) and so we are going to be trialling of the ENACT framework developed by the RSPB, which is designed to detect changes in nature connectedness resulting from short-term engagement activities, such as hiking on the trails or interaction with project staff during a school visit or outreach event. Increasing nature connection, will increase people's willingness to engage in pro-environmental behaviours and so delivers on the planned Outcome of this project.

## **7. Lessons learnt**

One of the most challenging factors this year has been the need to continue working towards achieving target goals, in particular the completion of basic, yet essential, husbandry requirements over the course of the COVID-19 pandemic and the multitude of associated

national lockdowns, curfews and working restrictions that not only impacted our project directly, but also indirectly through the closure of essential partners, schools and community spaces/events. Communication and flexibility have been essential in ensuring core work was able to continue during this time, fortunately we have a very strong relationship with our government partners in DoE. Over the years DoE have become fully incorporated into our long-term vision, and as such have aggressively sponsored the continuation of our essential work at a cabinet level, facilitating the continuation of our work across this period. During this period, we also established firm relationships with the ministry of health, although DoE were a good foot in the door in gaining passes and work permits, it was through this additional relationship, that normally wouldn't be involved in the work of the MCRP, that we were able to gain increased freedom of movement to ensure our essential tasks were delivered. Because of these factors we would recommend that all Darwin projects maintain a close relationship with their government sponsors and engage with as many departments certainly at the Minister or P.S level in case their sponsorship is also required during periods of unforeseen circumstance or crisis.

During November 2020 Montserrat experienced unprecedented flash flooding in the South of the island. This particularly affected the Belham Valley where entire roads were washed away, sandmining pits were levelled and a whole new reiver delta system established. The mountain chicken field site lies in this region and the Belham Valley must be crossed to access the site. The enclosure site is on a raised hillside and so is not at risk of direct flooding from the river, but the absolute quantity of water cascading down the hillsides posed a real risk to the predator proof fencing around the mountain chicken field site, having filled in buildings and displaced boulders, trees, and vehicles. Fortunately, the landlord was able to assess damages at the site when the team could not access the location. Several days of this intensive flooding posed a potential threat to animal welfare, as the site could not be accessed to conduct nightly feeds and to assess potential damage to the field site or signs of injury in the mountain chicken population. The team ultimately ended up resulting to an ambitious crossing of the shoreline at the new 'delta' and hike to the field site to ensure husbandry requirements were met and any essential maintenance was conducted at the field site. Upon reaching the site we noticed that although the fence held firmly it had been buried in areas by torrents of displaced "quicksand like" ash, these had to be dug out to reduce load on the fence, and to allow for access into the field site. Upon entry all frogs were well, however several trees had fallen during the storms, ponds and nesting sites had been damaged or translocated, and the computer PIT tag monitoring system had suffered ingress of water resulting in faults. All fallen trees were removed, ponds and nesting sites re-established, and the PIT tag monitoring system has been removed and sent for repair, in the meantime has been replaced with a trail camera monitoring system.

Whilst there is nothing we can do to prevent the flooding occurring again, we know the fence holds up well against this kind of event (after being repaired following a budget change agreed by Darwin), and the experience from this event ensures we have a plan to reach the site in future. The frogs would survive for a long time independently, being used to long periods of low food availability in a nature setting, and so we are happy a week of not being able to reach the field site is unlikely to have serious impacts on the animals, though we will try to ensure this does not happen.

More positively, our new relationship with MNT has also been extremely useful this year, in which we are delivering on shared objectives with relative ease. MNT have provided significant in-kind support to the project, from accounting and financial management support to the provision of office and storage space, allowing our team to have their own 'hub' and greatly increasing the feeling of being part of a team. Being fully integrated within your partner organisations is a big recommendation to other projects. It is an excellent way of increasing the likelihood of project success, ensuring you are communicating regularly, driving in the same direction and can help each other when required, especially where skillsets vary.

Where possible, we have tried to engage our project officers in events and meetings in each of the partner organisations, with attendance to training offered to Durrell staff internally, and other work and social events. We believe this push to provide exposure to a bigger story, is essential in maintaining the motivation levels of staff working on a single project. Indeed, this collaborative working and inclusionary approach has been a major strength of the project this

year. Departments across Durrell have contributed to the project in their speciality areas. For example, the outreach workshop was attended by our Learning team, responsible for outreach in Jersey and across our field sites, as well as our Zoo Science Manager who is an expert in nature connectedness. Our training team have also been very engaged in the project, ensuring each of the Project Officers is notified of all available opportunities for training on a relevant topic, and will conduct the training needs assessment in Year 2. Finally, the keepers and vets from across the Mountain Chicken Recovery Programme, have been very engaged with the project this year, with monthly reports bringing the project to life and providing a nice contrast to the challenging year that zoos have faced due to closure and furlough. All of the above has ensured there is a real 'buzz' around the project, and a feeling that we can make the project a real success.

## **8. Actions taken in response to previous reviews (if applicable)**

NA

## **9. Other comments on progress not covered elsewhere**

Whilst ongoing COVID restrictions would not prevent us delivering most of this project, they may reduce the impact in some areas. These include reduced travel limiting the exposure of staff on Montserrat and Dominica to the projects on each island and so limiting knowledge transfer (though we are now using virtual meetings to bridge this gap). The training needs assessment workshop would be much more effective delivered in-person, but we have established back up plans for this. The biggest threat would be the lack of access to international training courses such as Durrell's DESMAN for the Project Officers – as this would reduce the quality of the training they can receive, and so their likelihood of being employed in improved positions in our partner organisations. We believe that it is very likely that at some point during the project, we will be able to provide access to this training.

Please also see section 7 for challenges associated with COVID-19.

## **10. Sustainability and legacy**

We have promoted our work through local channels including ZJB (the main radio station – and main news source in Montserrat), and 664 connection, a website used predominantly by younger Montserratians (one of our main targets for outreach in this project). We have also focused on increasing our social media presence with the project social media sites reaching between 1-10 thousand people per month, and an average of 800 unique engagements per month. Across these platforms we now have nearly 1500 followers. These figures have steadily grown throughout the year (see evidence in Annexes 7-12) culminating in our largest ever figures during March 2021 during our mascot naming competition – which was well received by younger audiences. In addition, since the new Darwin sponsored vehicle has arrived on island (Annex 16 for photos) Darwin has become synonymous with the Mountain Chicken Project and Durrell, thanks to the branding and mountain chicken mascot on the truck the team are regularly stopped by members of the community to give brief progress updates or to discuss memories of the species before their decline.

We have recruited, and begun training, three Montserratian members of staff who have taken over elements of the project, from insect breeding to mountain chicken husbandry and have undertaken general forestry training with DoE (See evidence in Annexes 7-12). In the coming year we will also be identifying and recruiting interns from the local college and high school, as well as media ambassadors, to engage with the project and encourage succession of youth into environmental careers or training opportunities. Leaving a legacy of increased capacity to conserve biodiversity, but also an increased connection with nature across the island are two of the Outputs of this project, and through the initiatives described here, we believe we can already show evidence of achieving this.

Part of our exit strategy for the outreach elements of the project, is to ensure the plan is included within the workplans of the partner institutions beyond the end of the grant. We plan to

review the current 2.5 year outreach engagement strategy at the end of the project, after which both it and the outreach resources purchased through the Darwin grant and bearing Darwin branding will continue to be utilised to promote Montserrat's unique natural heritage throughout the local community.

Aluminium weather resistant nature connection trail signage bearing Darwin logo's and legacy have been ordered for the four primary hiking trails on island (evidence provided in Annex 14). Through this initiative we have also been successful in engaging the Tourism division who plan to work with us in the development of further signage with the same branding across the remain hiking trails on island, nearly doubling our intended coverage and exposure. This additional signage will also bare Darwin's logo and legacy, whilst being supported through a separate EU development grant awarded to Tourism.

The now infamous mountain chicken vehicle and our mascot "Levi" (whose name was selected by social media competition) will remain with full branding at the trust and continue to be utilised for mountain chicken field work and other wildlife conservation initiatives.

Finally, the potential social and ecological legacy of this project is huge. Should our interventions prove successful and contribute to the restoration of this apex predator across the island, we will replace a missing part of the foodweb on island, allowing it to fulfil its role in controlling insect and small vertebrate species which are thought to have increased resulting in increased pesticide use on Dominica (the only other island on which the species is found and underwent a similar decline). The species also once formed the core nightscape sound on the island, and a generation of children who grew up without hearing the species can now hear this in a small pocket of the island which we hope to expand.

## **11. Darwin identity**

We have affixed the Darwin logo to the project vehicle, insect breeding facility sign and on nature connection signage which is currently being deployed on Forest trails. In addition, the logo has been place on the project website, and on all external presentations made by the project (including a Durrell members evening virtual experience). Finally, the Darwin has repeatedly been mentioned as a funder of the project during radio show appearances to ensure the public understand Darwin's role in facilitating not only the project, but its impacts on the island and its biodiversity. In addition, the Director of MNT presented the work of the Trust at the annual UKOTCF conference, with a focus on the mountain chicken project and its funding from the Darwin Plus Initiative. Please see Section 10 for more information.

The Darwin funding continued and hugely expanded a small project which was already present on island (originally also started with previous Darwin funding). The project is now promoted as being a predominantly Darwin funded project, as our other funding comes from private institutions who do not wish to be publicised.

The Darwin Initiative is well recognised on Montserrat having funded the mountain chicken project between 2011-2014, and is on our project vehicles. As the brand of this project has been built through social media and interaction with the public, Darwin has once again become recognised as a facilitator of environmental projects with the community at its core. More information in section 10.

The project has both Twitter and Facebook pages. The latter is mainly used to engage overseas public and Facebook for local engagement. It has been very successful this year with an average of 808 unique engagements per month across our social media platforms, with nearly 1500 followers and between 1000-10000 people 'reached' per month (See Annexes 7-12). We regularly tag Darwin in our posts to ensure Darwin receives recognition for the important funding role it plays in the project. As our Project Officers settle into their roles, we expect them to take over much of this output, and so pass on the ability to drive mass engagement to local staff.

## **12. Impact of COVID-19 on project delivery**

See section 9 for potential impacts of COVID on the continuing delivery of the project.

To date, COVID-19 has impacted our project in several ways. Firstly, preventing international travel both from the UK to Montserrat for international expertise (e.g. for the Training Needs Assessment), and secondly between Montserrat and Dominica for planned knowledge exchange trips between the islands. The Training Needs Assessment has been modified to start with a virtual primer session and a later in-person workshop scheduled for Q2 Y2, which we hope will go ahead, but will modify plans again if not to a full virtual workshop. The inter-island exchange trips have been moved to a virtual forum starting April 2021 and will start in-person when possible (this has been further complicated by the main airline on this route (LIAT) going into administration and so hugely reducing flight capacity). Finally, if travel restrictions continue, it may impact our international training plans, with one of the Project Officers due to attend the Durrell DESMAN residential training course in Q3 2021 – though this can be delayed to Q4 2021 or, with permission from Darwin to Y3, if this does not go ahead as planned.

To safeguard against the potential impact of the international travel restrictions on the welfare of the mountain chickens in the enclosure, we stockpiled the veterinary drugs required to treat chytridiomycosis so that, in the event of an outbreak, we have the necessary treatments that would otherwise be flown to Montserrat with veterinary or animal keeper helpers. We also boosted our postage budget (as more kit had to be couriered rather than placed in luggage) from the outreach budget (which was limited by COVID).

Outreach plans were heavily restricted this year, with the project not being able to carry out schools outreach events, engage face to face with the public at big island events (which were all cancelled) or host students for projects as planned. We increased virtual engagement and social media content, but this does not fully replace face to face outreach. This is especially true for nature connectedness events which require the participants spending time in nature. We believe we can catch up on all outreach deliverables by the end of the project, and will continue to plan for this. We are also investigating smaller outdoor outreach activities to comply with the new 30-person limit in Montserrat.

Finally, the biggest impact on the day to day of the project has been the restrictions including lockdowns, curfews and local travel restrictions between areas of the islands. We worked closely with the Ministry of Health, Ministry of Environment, Police and Governor's Office to minimise the impact of this on the project, especially where it might have impacted animal welfare. Whilst this made things difficult and much more time consuming, we believe we managed this situation well – and adapted to the new conditions presented during each lockdown.

Since the start of the project, we have been very aware of health advice in Montserrat and ensuring it is followed to minimise the risk to our staff and partners. We have followed all advice, minimised contact indoors and adhered to maximum group sizes. Before travel we have ensured all staff are PCR tested and have access to high quality masks to minimise the risk of infection. These masks have also been made available to our project partners when working with us. Our Project Coordinator (and recent replacement), have both received their vaccinations thanks to a rapid rollout in Montserrat. We have also encouraged project partner staff to take these, though there is relatively strong hesitancy among some of the public in Montserrat.

One silver lining has been the increased understanding of disease and infection in the public. This has made communication about the risks to wildlife, such as the mountain chicken, from disease much easier – with understanding of our testing regimes and the potential impact of disease on populations. Our work with nature connection, should also boost people's positive feelings towards nature, and in the global picture of nature exploitation and the resultant risks from zoonotic diseases, this could be very positive on a local scale.

Some of the practices adopted during the pandemic will continue, especially the engagement of external or international experts through virtual platforms. However, some activities are not

possible through virtual mediums, and we are all looking forward to being able to meet face to face both with colleagues and the public to make our project a success.

### 13. Safeguarding

Please tick this box if any safeguarding violations have occurred during this financial year.

If you have ticked the box, please ensure these are reported to [ODA.safeguarding@defra.gov.uk](mailto:ODA.safeguarding@defra.gov.uk) as indicated in the T&Cs.

Durrell has updated our safeguarding policy, whistleblowing policy and Code of Conduct all of which have been provided to our in-country partners.

We have recorded no safeguarding concerns during the project to date. Future concerns will be dealt with in accordance with our policies, and all concerns recorded on a register. Durrell will lead on this where the concern is for, or because of the actions of one of our staff or project staff. Where this is a staff member of one of our partners working on the project, Durrell will provide the safeguarding policy and ask the partner organisation to deliver according to our policy – and provide a written account to add to the register.

### 14. Project expenditure

**Table 1: Project expenditure during the reporting period (1 April 2020 – 31 March 2021)**

Project spend (indicative) in this financial year	2020/21 D+ Grant (£)	2020/21 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				



Overhead Costs
Travel and subsistence
Operating Costs
Capital items
Others (Breakdown in grey)
International postage / luggage
Outreach materials
Molecular diagnostics consumable
Batteries for torches / cameras
Field clothing / footwear
<b>TOTAL</b>



## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2020-2021 – if applicable

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
<p><b>Impact</b></p> <p>Viable mountain chicken populations persist and fulfil their ecological role across Montserrat by 2039. DoE's capacity to enact successful conservation interventions is improved by training a new generation of forestry officers.</p>		<p>Mountain chickens have attempted breeding in the first year of the project, which is excellent news and data are being collected on the impact of our interventions. Training of Montserrat staff to build their capacity to conserve their islands' biodiversity and take available jobs in our partner organisations is progressing well.</p>	
<p><b>Outcome</b> Montserratian conservation capacity is developed enabling the delivery of a 5-year conservation plan for mountain chickens using intensive management strategies and supported by an increased local connectedness with the species.</p>	<p>0.1 Two Mountain Chicken Project Officers are appointed and trained during the project are awarded full-time employment contracts by DoE at the end of the project enabling DoE to deliver mountain chicken conservation efforts independently.</p> <p>0.2 Successful chytridiomycosis mitigation strategies are implemented which result in no chytridiomycosis related mortality of mountain chickens maintained within semi-wild enclosures by the end of Year 2.</p> <p>0.3 Successful management strategies result in at least one successful mountain chicken breeding attempt in semi-wild enclosures in Montserrat by Year 2 Q2 representing the first successful breeding of the species on Montserrat in 10 years.</p> <p>0.4 A five-year management plan to increase the population size and range of mountain chickens on Montserrat is</p>	<p>0.1 Two Officers have been appointed and have started training. We have begun to establish training programmes for them (Annexes 7–12).</p> <p>0.2 Chytridiomycosis mitigation strategies have been implemented successfully to date, with one mortality since the project start, though this animal did not test positive for Bd post-mortem and so is not believed to have died from chytridiomycosis. The relative decomposure of the body at the time of discovery (which occurs in &lt;24 hours in this climate), meant no cause of death was determined.</p> <p>0.3 There have been 37 nests since the project start including two with tadpoles, but none resulted in successful young (as is common in captivity) (Annexes 7-12). This was achieved much earlier than expected.</p>	<p>0.1 Training of the staff will continue, with training plans finalised for the final two members of project staff. Tavis Weekes will take part in the Durrell Endangered Species Recovery (ESR), and Durrell Endangered Species Management courses in the next year. Kaysie Ryan will be offered the opportunity to take part in the ESR course.</p> <p>0.2 Chytridiomycosis mitigation strategy implementation will continue, with data collected on efficacy (including infection and disease status of all animals in the enclosure and potential reservoir species outside). Within the next 12 months, pending natural infection of the frogs, we should have a relatively good idea of whether the frogs successfully utilise hot areas to 'self-treat' infections with the amphibian chytrid fungus. This</p>

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
	<p>agreed by project partners by Year 3 Q2, scoping strategies started, DoE workplans ratified and funding proposals developed.</p> <p>0.5 Public connectedness with mountain chickens and nature is increased compared to baseline levels in students and adults across Montserrat.</p>	<p>0.4 Not applicable – though data collected is ongoing and will inform the strategy.</p> <p>0.5 Baseline surveys of hikers using trails has been undertaken with more extensive surveys to be completed when COVID allows, from which any increase can be measured (Annex 9).</p>	<p>will allow modification of the interventions to increase potential effectiveness.</p> <p>0.3 The focus now moves to increasing the chance of nesting and recruitment success including the removal of potential tadpole predators in the ground lizards within the enclosure. We have also designed new nest boxes to reduce potential flooding events in collaboration with captive managers.</p> <p>0.4 Continue data collected as in 0.2.</p> <p>0.5 More extensive baseline nature connectedness surveys will be undertaken, with a focus on schools when COVID permits. Signage will be deployed and changes will be tracked.</p>
<p><b>Output 1.</b> Enhanced capacity exists within Montserrat DoE to implement effective conservation actions through newly recruited and highly trained Project Officers.</p>	<p>1.1 A training needs assessment identifies the skills gaps and training needs of DOE staff in Year 1 and informs the design of a tailored training programme delivered to staff from Year 1 Q2.</p> <p>1.2 By end of Year 1 Q2 two Mountain Chicken Project Officer roles in MNT are filled by Montserratians.</p> <p>1.3 Mountain Chicken Project Officers demonstrate high level of competency in all required skills described in the</p>	<p>Overall progress: The newly recruited Project Officers have begun receiving training and are already gaining skills which make them more effective conservationists. We are on track to deliver well trained staff for employment by project partners at project end.</p> <p>1.1 No progress on Training Needs Assessment due to the inability to travel and deliver in-person. We agreed with Darwin to hold a virtual primer session at the start of Y2, with an in-person workshop as soon as possible in Y2, when restrictions permit.</p> <p>1.2 Two Mountain Chicken Project Officer Roles are filled (evidence in Annexes 8-9).</p> <p>1.3 We have produced a training scheduled for the first Project Officer, Kaysie Ryan, based on the Durrell / IUCN Conservation Practitioner Competency Register (Annex 6). The second (and now third) Project Officers have not yet completed theirs but will do in the coming weeks. Miss Ryan has begun</p>	

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
	<p>Durrell Conservation Practitioner Competency Framework.</p> <p>1.4 By project-end, Mountain Chicken Project Officers can manage the insect facility, the mountain chicken enclosures, run outreach project activities and are trained in data collection and management.</p> <p>1.5 By project-end, Mountain Chicken Project Officers are trained in wildlife monitoring and forestry skills sufficient to independently carry out DoE's responsibilities.</p> <p>1.6 Annual staff exchanges between DoE / MNT and WildDominique (Mountain Chicken Project Dominica partner), ensures transfer of knowledge and skills in mountain chicken conservation between both islands and increasing staff motivation.</p>	<p>seeking training activities to ensure she gains these skills alongside our Project Coordinator who delivers training where they are able. Evidence provided in Annexes 7-12. This remains a good indicator, though 'good' is relatively subjective and could be made more explicit. Once the second Officer has finished his training schedule, we will aim to set an explicit and more objective target.</p> <p>1.4 The Project Officers have received training in each of these elements (Evidence in Annexes 7-12), but further training is required to ensure they are able to deliver this independently at project end. This indicator remains useful.</p> <p>1.5 There has been less progress in Forestry skills, caused by COVID restrictions in the time the project staff could spend in the company of essential government staff. We hope this will improve in 2021 as restrictions ease. This remains a very useful indicator.</p> <p>1.6 No staff exchanges took place in Y1 due to COVID travel restrictions and virtual meetings were complicated by staff absence in Dominica. This is now resolved, and the first regular virtual meeting is expected in April 2021. This remains a useful indicator, though it is difficult to provide a quantifiable indicator for knowledge exchanged.</p>	
<p>Activity 1.1. Training needs assessment conducted for DoE (co-funded) (remote primer session, then in-person)</p>		<p>Delayed due to not being able to travel to Montserrat (agreed with Darwin). Contact has been established between the Durrell Academy and DoE to being to identify training courses which can be conducted prior to the training needs assessment, based on obvious skills gaps.</p>	<p>This will take place in the next year (assuming travel is permitted) in-person. If this has not been possible by Q2, we will hold this virtually in Q3.</p>
<p>Activity 1.2. Advertise and interview for two Mountain Chicken Project Officers</p>		<p>Completed, advertised for project officers with 15 applications predominantly from Montserrat residents (See Annex 7).</p>	<p>NA</p>



Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
Activity 1.3. Appoint two Mountain Chicken Project Officers		Completed following interviews with five candidates, with a third Officer seconded from MNT following agreement from Darwin due to the reallocation of other unspent funds (Annex 8-9).	NA
Activity 1.4. Develop training schedule for Mountain Chicken Project Officers according to Durrell competency framework and training needs assessment for DoE		Training schedule for first Officer completed against competency framework.	Complete training schedules for second and third Officers.
Activity 1.5. Training of Mountain Chicken Project Officers in Forestry skills and conservation management in-line with mountain chicken project activities		The Officers have been trained in mountain chicken project relevant skills by the Project Coordinator, including handling and health checking the mountain chickens, feeds, skin swabbing to test for the fungal agent Bd, insect husbandry and reservoir species surveys, alongside other formal training (Annexes 7-12).	Continue with training according to developed schedules. Increase training connections with DoE, to ensure breadth of skills required are covered.
Activity 1.6. Monthly reports of activities and training progress by Mountain Chicken Project Officers		Included within project monthly reports (Annexes 7-12).	For Y2, we will ensure these reports are separated and recorded by each Officer, monthly.
Activity 1.7. Mountain Chicken Project Officer attends DESMAN course in Jersey, Channel Islands		Not scheduled for Y1.	Currently booked to attend course in Q3, assuming travel permitted and course runs.
Activity 1.8. Exchange visits between Montserrat and Dominica mountain chicken staff (MCPOs, DoE staff, WildDominique staff)		These have not been possible due to travel restrictions. Virtual meetings were challenging due to the absence of key staff members on Dominica, caused by COVID.	Virtual sessions have now been implemented with the first meeting scheduled for April 2021. Once travel is permitted, the planned schedule will take place.
<b>Output 2.</b> Mountain chicken population established and surviving in a semi-wild managed environment with signs	2.1 Habitat manipulation techniques are trailed for 24 months at enclosure site to determine efficacy in mitigating chytridiomycosis a field setting.	Overall progress: We have maintained all but one of the animals which started in the enclosure. One mortality occurred, though no cause of death was identified, despite them testing negative for the amphibian chytrid fungus. 37 nests were identified in Y1, with two producing tadpoles, though none progressed further (common in captivity). This is very positive and represents	

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
<p>of breeding and carrying capacity of enclosures is increased to 50.</p>	<p>2.2 At least 800 swabs are taken and processed with real-time PCR to determine chytrid fungus infection status of mountain chickens within the enclosure.</p> <p>2.3 No mortality from chytridiomycosis with optimal body condition indexes in mountain chickens one and two years after entering enclosure.</p> <p>2.4 Breeding attempts recorded by end of Year 1 show captive-bred and reintroduced mountain chickens have successfully adapted to their wild environment.</p> <p>2.5 A second enclosure is constructed in forest within the historical range of the mountain chicken on Montserrat by project end, increasing carrying capacity of enclosures to at least 50.</p> <p>2.6 Second mountain chicken cohort released into new enclosure by project end bringing the enclosure population to at least 50.</p> <p>2.7 Knowledge gained from the project is disseminated through a peer-reviewed paper and practitioner focussed literature by project end.</p> <p>2.8 Project outcomes are presented at a conservation conference in Year 3 to maximise the international dissemination of results.</p>	<p>the first known mountain chicken tadpoles in Montserrat since 2009. We will now work to increase the likelihood of breeding success with the aim of increasing the number of animals in Montserrat, whilst collecting more data to determine the efficacy of our interventions.</p> <p>2.1. Manipulation techniques have been trialled for the first nine months of the project and data collected on their efficacy at mitigating chytridiomycosis in a field setting (Annexes 7-12). We require more data before making an assessment. This indicator remains useful.</p> <p>2.2. In total 245 swabs have so far been collected from mountain chickens and processed with real-time PCR. In addition, 360 swabs of a chytrid reservoir species have also been collected and processed to provide information on background infection dynamics with the fungus (Annexes 7-12). This remains a useful indicator.</p> <p>2.3. There has been no mortality thought to have occurred because of chytridiomycosis, with a single mortality during the project, testing negative for the fungus. No cause of death was identified due to the state of decomposition of the animal which occurs rapidly in this climate. Body conditions of all animals bar one reached a maximum in the final health check of this project year (Annexes 7-12). This suggests the animals are doing very well and have adapted well to the enclosure. This remains a useful indicator.</p> <p>2.4. There have been 37 nests in the enclosure with two having tadpoles. This is a great achievement, representing the first fertile nests in Montserrat since at 2009. This has been completed, but to track ongoing progress, successful breeding by the end of the project should be a new indicator.</p> <p>2.5. This is not planned until Y3. The indicator is still valid.</p> <p>2.6. This is not planned until Y3. The indicator is still valid.</p> <p>2.7. This is not planned until Y3. The indicator is still valid.</p> <p>2.8. This is not planned until Y3. The indicator is still valid.</p>	

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
Activity 2.1. Monthly capture, skin swabbing for chytrid fungus DNA and morphometric measurement recording of all mountain chickens in the enclosure (co-funded)		Completed as described. Improved system for couriering samples to the UK for analysis, due to the lack of international travel which would have facilitated this transport.	Continue as planned. Using data from Y1 of the project, make changes to the interventions for Y2 to increase insight into efficacy.
Activity 2.2. Thrice-weekly feeding of all mountain chickens, including visual health check and enclosure integrity check (co-funded)		Completed as described.	Continue as planned.
Activity 2.3. Weekly pond changes within the enclosure		Completed as described.	Investigate potential for mains water installation at the site to facilitate less labour-intensive water changes.
Activity 2.4. Monthly data logger download (including pond use auto-PIT tag reader, camera traps and environmental data loggers) (co-funded)		Completed as described, except auto-PIT tag reader data which were not collected from December 2020 due to flash flooding causing a malfunction in the waterproof unit. Sent for repairs. Camera trap data will be used to fill this data gap as far as possible.	Redeploy auto-pit tag reader once repaired. Continue as planned.
Activity 2.5. Monthly health reports sent to project veterinary and husbandry experts		Completed as described. Feedback on interesting health occurrences including novel parasitism (as expected for naïve animals being released into a novel environment).	Continue as planned.
Activity 2.6. Analyse health and habitat use data to determine success of habitat manipulations		Not scheduled for Y1.	Begin analysis in Q3 Y2, as planned.
Activity 2.7. Report and manuscript production based on data from 2.6		Not scheduled for Y1.	Not scheduled for Y2.
Activity 2.8. Present results of study at an international conservation conference		Not scheduled for Y1.	Not scheduled for Y2.
Activity 2.9. Conduct survey of sites in Montserrat to assess suitability for the construction of a second enclosure		Not scheduled for Y1.	Not scheduled for Y2.
Activity 2.10. Request permission from landowner for construction of second enclosure		Not scheduled for Y1.	Not scheduled for Y2.



Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
Activity 2.11. Oversee construction of second enclosure (co-funded)		Not scheduled for Y1.	Not scheduled for Y2.
Activity 2.12. Build boxes for transport of second release cohort of mountain chickens (co-funded)		Not scheduled for Y1.	Not scheduled for Y2.
Activity 2.13. Transport second cohort of frogs to Montserrat (co-funded)		Not scheduled for Y1.	Not scheduled for Y2.
Activity 2.14. Release second cohort of frogs to the second enclosure (co-funded)		Not scheduled for Y1.	Not scheduled for Y2.
<p><b>Output 3.</b> 5-year conservation management plan for mountain chickens on Montserrat is created based on the results of the trials in the semi-wild enclosure.</p>	<p>3.1 Results from trials in Output 2 are presented during a workshop attended by international programme partners and stakeholders in Year 3 Q2 and a five-year management plan is developed and ratified by Year 3 Q3.</p> <p>3.2 Timescale and implementation plan for scaling up phase agreed by relevant stakeholders by Year 3 Q3.</p> <p>3.3. Potential areas for future expansion of the mitigation strategies identified in the management plan identified by project end.</p> <p>3.4 Funding opportunities have been identified and proposals developed to enable delivery of the actions agreed in the 5-year management plan by project end.</p>	<p>Whilst we are collecting data which will inform this output, this output is not scheduled to being until Y3.</p> <p>3.1. This is not planned until Y3. The indicator is still valid.</p> <p>3.2. This is not planned until Y3. The indicator is still valid.</p> <p>3.3. This is not planned until Y3. The indicator is still valid.</p> <p>3.4. This is not planned until Y3. The indicator is still valid.</p>	
Activity 3.1. Hold workshop with project staff and government and European Zoo partners to discuss results of trials and plans for scaling-up of conservation activities		Not scheduled for Y1.	Not scheduled for Y2.
Activity 3.2. Draft 5-year mountain chicken conservation management plan based on the workshop from 3.1		Not scheduled for Y1.	Not scheduled for Y2.

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
Activity 3.3. Project partners sign MOU to deliver activities in 5-year conservation management plan		Not scheduled for Y1.	Not scheduled for Y2.
Activity 3.4. Develop implementation plan for management plan along with timeline		Not scheduled for Y1.	Not scheduled for Y2.
Activity 3.5. Write report on recommended sites for expansion of the management interventions as part of the 5-year plan		Not scheduled for Y1.	Not scheduled for Y2.
Activity 3.6. Identify suitable funding sources for 5-year conservation management plan activities		Not scheduled for Y1.	Not scheduled for Y2.
Activity 3.7. Develop and submit proposals for the funding sources identified in 3.6.		Not scheduled for Y1.	Not scheduled for Y2.
<p><b>Output 4.</b> Increased public engagement with nature in Montserrat using the mountain chicken as an ambassador through outreach events and schools engagement.</p>	<p>4.1 The public and schools engagement plan is agreed by Durrell, DoE, MNT, and MoEYAS activities are being implemented in each year of the project, starting Year 1 Q3.</p> <p>4.2. At least one outreach activity is undertaken, annually, in every educational institution (five primary schools, one secondary school and one college), covering at least 75% of the 700 students in Montserrat by project end.</p> <p>4.3 A month long internship is facilitated for at least two students per year within the mountain chicken project in collaboration with MoEYAS including mentoring for high school seniors and college enrollees interested in environment careers.</p>	<p>We successfully held our outreach planning workshop with representatives from all local partners and virtual attendance from Durrell staff (Annex 3). This hybrid workshop worked very well and resulted in the outreach planning document being drafted (Summary of strategy Annex 4). Delivery of outreach has been very challenging this year due to COVID restrictions preventing in-person outreach at schools and events. We have, however, had a successful year from a virtual perspective with record engagements with our social media accounts.</p> <p>4.1. The engagement plan has been agreed in principle by all in-country partners, and an MOU on its delivery should be signed in the coming weeks (Annex 4). This was delayed slightly following the workshop due to another COVID lockdown, and delivery of the plan has been limited to date for the same reason. We hope this will improve soon. This indicator remains useful.</p> <p>4.2. No progress has been made on this indicator to date, due to COVID restrictions (including regular school closures). We still expect to be able to deliver on this indicator (which remains useful).</p> <p>4.3. We have not been able to host internships for students this year due to COVID restrictions, but we expect to be able to deliver on this if there are limited further COVID lockdowns. This indicator remains useful.</p> <p>4.4. Mountain chicken day events were held in Montserrat and UK partner institutions were impacted by furlough and so could not commit the resources to generating specific content for this day. This indicator remains useful.</p>	

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
	<p>4.4 Mountain Chicken Day events are held in each year of the project engaging at least 5% of the Montserrat population (approx. 250 people) each year.</p> <p>4.5 Project staff are interviewed on Montserrat's radio station (ZJB) at least three times per year in each project year.</p> <p>4.6 At least 1000 unique engagements with project social media posts in each year of the project.</p> <p>4.7 Nature focussed signage is produced and erected on at least four hiking trails in the Centre Hills protected area by end of the first year of the project.</p> <p>4.8 By project end, at least two national curriculum review workshops have been attended by project staff to promote inclusion of mountain chickens and local environmental issues into national curriculum.</p>	<p>4.5. Project staff have been interviewed by ZJB radio three times this year (see monthly reports – Annexes 7-12). Average audience of these interviews is thought to be 5000 for a peak show, with an additional 2000-5000 when including website replays accessed by diaspora and non-residents. This indicator remains useful. In addition, project staff have featured on 664 connect – a leading local website, with a large viewership of especially younger people in Montserrat, one of our key targets for outreach activities (See Annexes 7-12).</p> <p>4.6. This year there were an average of 808 unique monthly engagements with our social media channels (and website) and 1460 followers across our three social media channels. This remains a useful indicator (Evidence in monthly reports – see Annexes 7-12).</p> <p>4.7. The nature focussed signage has been designed (See Annex 14) and ordered and is waiting to be erected on the four trails. In addition, Montserrat Tourism has agreed to fund signage on the remaining six tourist hiking trails on island (well used by local hikers). This indicator could now be expanded to reflect this expanded target, though we would prefer to wait until discussions have been finalised. Finally, concrete mountain chickens painted by the team and local artists have been placed on trails as an extra activity – which can be searched for and posted on social media to encourage others to join in. This is a new activity with no associated indicator at present.</p> <p>4.8. We have engaged with the Ministry of Education, Youth and Social Affairs to ensure we are able to engage in the curriculum planning sessions when they occur. They have likely be delayed due to COVID, but we expect these to be completed within the project timeframe. This remains a useful indicator and will be made more specific as we gain greater understanding of this process.</p>	
Activity 4.1. Hold workshop between Durrell, DoE, MNT and MoEYAS to agree an outreach strategy for the project in Montserrat covering annual activities and responsibilities		Conducted and attended by all project partners on island and Durrell staff via Zoom (Annex 3).	No further activities required. Though review meetings will be scheduled to monitoring delivery.
Activity 4.2. Draft outreach strategy based on the results of the workshop in 4.1.		Drafted and sent to partners (Summary of strategy in Annex 4).	Complete signing of MOU to deliver strategy with partners and implement all activities.



Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
Activity 4.3. Produce outreach materials to facilitate schools and wider community outreach		The first round of outreach materials have been designed and ordered.	Use for in-person outreach once outreach activities are permitted under COVID regulations.
Activity 4.4. Conduct baseline nature connectedness surveys in schools and in the wider community		Baseline surveys of hikers using trails has been undertaken at a relatively slow rate due to COVID restrictions. Any chance can now be measured against these baselines (See Annex 9).	More extensive baseline nature connectedness surveys will be undertaken, with a focus on schools when COVID permits. Signage will be deployed and changes will be tracked.
Activity 4.5. Conduct outreach sessions in each educational facility in Montserrat in each year of the project		This was not possible due to COVID restrictions throughout the project year. No school visits took place.	Continue as planned once COVID restrictions permit.
Activity 4.6. Host college students within the project for two weeks to provide experience in environmental careers (co-funded)		This was not possible due to COVID restrictions throughout the project year. No college students were hosted.	Continue as planned once COVID restrictions permit.
Activity 4.7. Host college student projects throughout the project		This was not possible due to COVID restrictions throughout the project year. No college student projects were hosted.	Continue as planned once COVID restrictions permit.
Activity 4.8. Conduct outreach activities on international Mountain Chicken Day in collaboration with local and international partners.		Mountain chicken day events were not possible in Montserrat due to COVID and the cancellation of large events. In addition, UK partner institutions were impacted by furlough and so could not commit the resources to generating specific content for this day.	Continue as planned, with events conducted when COVID permits.
Activity 4.9. Conduct interviews on Montserrat National Radio (ZJB) to discuss project progress		Three interviews have been conducted on ZJB to discuss the project, alongside two features on 664 connect, a local website (See Annexes 7-12).	Continue as planned.
Activity 4.10. Post project information and activities on project social media channels		This has been very successful and full data on posts, followers, engagements	Continue as planned with a focus on the Project Officers generating content and running these accounts.

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
		and reach are available in Annexes 7-12.	
Activity 4.11. Design mountain chicken and nature-based signage for use on National Trails		This has been designed by Project Coordinator Luke Jones, Project Officer Kaysie Ryan, and members of the Durrell Learning Team (e.g. in Annex 14).	To be deployed across four hiking trails.
Activity 4.12. Tender production of signs and deploy them on National Trails (co-funded)		The first batch of signs have been ordered (E.g. in Annex 14). Meetings with Tourism Agency revealed a shared objective to improve trail signage. Tourism have agreed to support the expansion of signage deployment to all 10 tourism trails on island.	Deploy signs and expand to more trails with support of Montserrat Tourism Agency.
Activity 4.13. Conduct surveys in an experimental framework to determine efficacy of signage in driving improved attitude towards mountain chickens		Not scheduled for Y1.	Conduct as planned in Y2. Survey design to be conducted in collaboration with the Durrell learning team in Q1/Q2.
Activity 4.14. Conduct end of project nature connectedness surveys in schools and wider community		Not scheduled for Y1.	Not scheduled for Y2.
Activity 4.15. Attend National Curriculum review workshops to aid integration of mountain chickens and nature into curriculum		Did not occur in Y1.	Attend meetings likely to start in Y2 and continue infrequently into Y3.
Activity 4.16. Support DoE and MNT in the production of curriculum resources		Not scheduled for Y1.	Not scheduled for Y2.
Activity 4.17. Review lesson plans with teachers to aid deployment of new National Curriculum elements into teaching		Not scheduled for Y1.	Not scheduled for Y2.

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

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

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<b>Impact:</b> Viable mountain chicken populations persist and fulfil their ecological role across Montserrat by 2039. DoE’s capacity to enact successful conservation interventions is improved by training a new generation forestry officers.			
<p><b>Outcome:</b> Montserratian conservation capacity is developed enabling the delivery of a 5-year conservation plan for mountain chickens using intensive management strategies and supported by an increased local connectedness with the species.</p>	<p>0.1 Two Mountain Chicken Project Officers are appointed and trained during the project are awarded full-time employment contracts by DoE at the end of the project enabling DoE to deliver mountain chicken conservation efforts independently.</p> <p>0.2 Successful chytridiomycosis mitigation strategies are implemented which result in no chytridiomycosis related mortality of mountain chickens maintained within semi-wild enclosures by the end of Year 2.</p> <p>0.3 Successful management strategies result in at least one successful mountain chicken breeding attempt in semi-wild enclosures in Montserrat by the end of Year 2 Q2 representing the first successful breeding of the species in Montserrat in 10 years.</p> <p>0.4 A five-year management plan to increase the population size and range of mountain chickens in Montserrat is agreed by project partners by Year 3 Q3, scoping strategies started, DoE workplans ratified and funding proposals developed.</p>	<p>0.1a Training records maintained by the employees against the competency framework and signed by trainers.</p> <p>0.1b Signed contract of employment between mountain chicken project officers and Government of Montserrat.</p> <p>0.2 Health-reports and swab results submitted to project veterinarians.</p> <p>0.3 Reports, photographs and video evidence of mountain chicken tadpoles in Montserrat.</p> <p>0.4 A five-year management plan is printed and approved by all MCRP partners.</p> <p>0.5.a Nature connectedness surveys using the Nature Connectedness Index over the lifespan of the project.</p> <p>0.5.b Questionnaires of attitudes towards mountain chickens conducted under an experimental framework with groups using signed and unsigned National Trials.</p>	<p>0.1.a Suitable candidates are available on Montserrat and are retained until the project end.</p> <p>0.1.b There are no financial or personnel constraints on DoE that prevent contracting permanent members of staff.</p> <p>0.1.c There is no change in DoE management which results in project officers not being offered permanent roles at the end of the project.</p> <p>0.2 Novel interventions are successful in preventing chytridiomycosis in the population.</p> <p>0.2 No extreme weather events severely damage the enclosure or cause mortality in mountain chickens.</p> <p>0.3 Conditions within the semi-wild enclosures experienced by mountain chickens during Phase one and two do not negatively impact the likelihood of breeding.</p> <p>0.4 Project partners remain engaged in the project long-term.</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>0.5 Public connectedness with mountain chickens and nature is increased compared to baseline levels in students and adults across Montserrat.</p>		<p>0.5 Schools remain willing and able to engage in outreach events.</p> <p>0.6 Key project staff are retained throughout the project ensuring continuity.</p>
<p><b>Output 1</b> Enhanced capacity exists within Montserrat DoE to implement effective conservation actions through newly recruited and highly trained Project Officers.</p>	<p>1.1 A training needs assessment identifies the skills gaps and training needs of DOE staff in a virtual primer session in Year 1 Q3 &amp; an in-person workshop in Year 2 Q2 and informs the design of a tailored training programme delivered to staff from Year 2.</p> <p>1.2 By end of Year 1 Q2 two Mountain Chicken Project Officer roles in MNT are filled by Montserratians.</p> <p>1.3 Mountain Chicken Project Officers demonstrate high level of competency in all required skills described in the Durrell Conservation Practitioner Competency Framework.</p> <p>1.4 By project-end, Mountain Chicken Project Officers can manage the insect facility, the mountain chicken enclosures, run outreach project activities and are trained in data collection and management.</p> <p>1.5 By project-end, Mountain Chicken Project Officers are trained in wildlife monitoring and forestry skills sufficient to independently carry out DoE's responsibilities.</p>	<p>1.1 Training needs assessment reports completed and approved by local partners.</p> <p>1.2 Two part time Mountain Chicken project Officers are employed.</p> <p>1.3.a Training register confirms MCPOs have achieved all competencies outlined in the Durrell Conservation Practitioner Competency Framework.</p> <p>1.4 Training reports produced and post-training evaluation completed.</p> <p>1.5 Compilation of training progress reports by senior forestry staff from DoE demonstrating competency in required forestry skills.</p> <p>1.6.a Report from staff involved in exchange highlights knowledge and skills transferred.</p> <p>1.6.b Questionnaire shows increased motivation levels in staff taking part in exchanges.</p>	<p>1.1 Suitable training providers are identified and available should training needs assessment identify needs beyond existing internal training capacity.</p> <p>1.2 Suitable candidates are identified in Montserrat and agree to be employed by MNT for the duration of the project.</p> <p>1.4 Mountain Chicken Project Officers are retained throughout the project ensuring they receive a full schedule of training.</p> <p>1.6 There are no political or climatic issues that prevent travel between the islands for the duration of the project.</p>



Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>1.6 Annual staff exchanges between DoE / MNT and WildDominique (Mountain Chicken Project Dominica partner), ensures transfer of knowledge and skills in mountain chicken conservation between both islands and increasing staff motivation.</p>		
<p><b>Output 2</b> Mountain chicken population established and surviving in a semi-wild managed environment with signs of breeding and carrying capacity of enclosures is increased to 50.</p>	<p>2.1 Habitat manipulation techniques are trailed for 24 months at enclosure site to determine efficacy in mitigating chytridiomycosis a field setting.</p> <p>2.2 At least 800 swabs are taken and processed with real-time PCR to determine chytrid fungus infection status of mountain chickens within the enclosure.</p> <p>2.3 No mortality from chytridiomycosis with optimal body condition indexes in mountain chickens one and two years after entering enclosure.</p> <p>2.4 Breeding attempts recorded by end of Year 1 show captive-bred and reintroduced mountain chickens have successfully adapted to their wild environment.</p> <p>2.5 A second enclosure is constructed in forest within the historical range of the mountain chicken on Montserrat by project end, increasing carrying capacity of enclosures to at least 50.</p> <p>2.6 Second mountain chicken cohort released into new enclosure by project</p>	<p>2.1 Technical reports and recorded data.</p> <p>2.2 Swab database and reports for partners on infection status.</p> <p>2.3 Annual reports of mountain chicken survival, chytrid infection, treatment regimens and breeding based on monitoring data.</p> <p>2.4 Reports and photographs of mountain chicken paired burrow use and / or foam nests.</p> <p>2.5 Reports and photos on building of second enclosure.</p> <p>2.6 Report on transport of MCs.</p> <p>2.7.a Email confirmation of submission of a manuscript for peer-review, or online availability.</p> <p>2.7.b Article in Froglog or similar practitioner-focussed conservation publication.</p> <p>2.8 Conference programme.</p>	<p>2.1.a No mountain chicken mortality caused by disease within enclosure.</p> <p>2.1.b The live food colony does not suffer a collapse in numbers, restricting project staff to providing wild insects collected on a regular basis.</p> <p>2.2 All 27 mountain chickens survive the duration of the project, ensuring this number of swabs can be taken.</p> <p>2.3 Extreme climatic events such as hurricanes do not damage enclosure or result in mortality of mountain chickens.</p> <p>2.4 Trials within the first enclosure are successful in mitigating chytridiomycosis justifying the construction of a second enclosure.</p> <p>2.5 Appropriate land is secured and agreements with landowners are achieved within project timeframe.</p> <p>2.6.a Sufficient mountain chickens are available in captivity for release and animals survive the transport from Europe to Montserrat.</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>end brining the enclosure population to at least 50.</p> <p>2.7 Knowledge gained from the project is disseminated through a peer-reviewed paper and practitioner focussed literature by project end.</p> <p>2.8 Project outcomes are presented at a conservation conference in Year 3 to maximise the international dissemination of results.</p>		<p>2.6.b No mountain chicken mortality caused by chytridiomycosis within the first enclosure ensuring ethics approval will be awarded for the establishment of the second population.</p> <p>2.6.c Sufficient funding is raised to enable the construction of the second enclosure and the transport of frogs.</p> <p>2.7 Results from the project progress at the expected rate allowing publication by this date.</p> <p>2.8 Presentation is accepted at a suitable conference.</p>
<p><b>Output 3</b> 5-year conservation management plan for mountain chickens on Montserrat is created based on the results of the trials in the semi-wild enclosure.</p>	<p>3.1 Results from trials in Output 2 are presented during a workshop attended by international programme partners and stakeholders in Year 3 Q2 and a five-year management plan is developed and ratified by Year 3 Q3.</p> <p>3.2 Timescale and implementation plan for scaling up phase agreed by relevant stakeholders by Year 3 Q3.</p> <p>3.3. Potential areas for future expansion of the mitigation strategies identified in the management plan identified by project end.</p> <p>3.4 Funding opportunities have been identified and proposals developed to enable delivery of the actions agreed in the 5-year management plan by project end.</p>	<p>3.1 Workshop reports and minutes.</p> <p>3.1.b Plan printed and disseminated to project partners.</p> <p>3.2. MOU on the implementation of the management plan signed by all partners.</p> <p>3.3 Report on sites identified.</p> <p>3.4. Draft proposals and submission confirmations.</p>	<p>3.1 No political or extreme weather problems prevent the hosting of a workshop.</p> <p>3.2 All stakeholders remain engaged in the project and agree with all activities in the management plan.</p> <p>3.4 Suitable funding opportunities remain available or alternative funding sources are identified.</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Output 4</b> Increased public engagement with nature in Montserrat using the mountain chicken as an ambassador through outreach events and schools engagement.</p>	<p>4.1 The public and schools engagement plan is agreed by Durrell, DoE, MNT, and MoEYAS activities are being implemented in each year of the project, starting Year 1 Q3.</p> <p>4.2. At least one outreach activity is undertaken, annually, in every educational institution (five primary schools, one secondary school and one college), covering at least 75% of the 700 students in Montserrat by project end.</p> <p>4.3 A month long internship is facilitated for at least two students per year within the mountain chicken project in collaboration with MoEYAS including mentoring for high school seniors and college enrollees interested in environment careers.</p> <p>4.4 Mountain Chicken Day events are held in each year of the project engaging at least 5% of the Montserrat population (approx. 250 people) each year.</p> <p>4.5 Project staff are interviewed on Montserrat's radio station (ZJB) at least three times per year in each project year.</p> <p>4.6 At least 1000 unique individuals engage with project social media posts in each year of the project.</p>	<p>4.1 Outreach plan has been signed by each of the relevant project partners by end of Year 1 Q3.</p> <p>4.2 Monthly activity reports detailing e.g. number of activities delivered, summary of activity, number of participants, activity leader.</p> <p>4.3 Report submitted by the students involved.</p> <p>4.4 Annual mountain chicken day report.</p> <p>4.5 Monthly activity reports.</p> <p>4.6 Records of social media engagement.</p> <p>4.7 Photographs of signage on hiking trails.</p> <p>4.8.a Meeting reports produced by project staff members in attendance.</p> <p>4.8.b Lesson plans reviewed with staff members of two schools delivering elements of the new curriculum.</p>	<p>4.1 There is no disruption to leadership of one of the relevant partners, which prevents agreement.</p> <p>4.2 Schools want to participate in outreach sessions.</p> <p>4.3 Sufficient students apply for the immersion experience each year.</p> <p>4.4 Outreach activities attract expected audiences through radio exposure and word-of-mouth.</p> <p>4.5 ZJB want interviews about the project at this frequency.</p> <p>4.6 Peaks in project activity do not prevent creation of new material in any given month.</p> <p>4.7 There is no change to the management of Tourism which results in a refusal to allow the erection of signage on national trails.</p> <p>4.8.a National curriculum review goes ahead.</p> <p>4.8.b There is no change to staffing within the MoEYAS which is detrimental to the involvement of project staff in the national curriculum review process.</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>4.7 Nature focussed signage is produced and erected on at least four hiking trails in the Centre Hills protected area by end of the first year of the project.</p> <p>4.8 By project end, at least two national curriculum review workshops have been attended by project staff to promote inclusion of mountain chickens and local environmental issues into national curriculum.</p>		
<p><b>Activities</b> (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <p>1.1 Training needs assessment conducted for DoE (co-funded) (remote primer session, then in-person)</p> <p>1.2 Advertise and interview for two Mountain Chicken Project Officers</p> <p>1.3 Appoint two Mountain Chicken Project Officers</p> <p>1.4 Develop training schedule for Mountain Chicken Project Officers according to Durrell competency framework and training needs assessment for DoE</p> <p>1.5 Training of Mountain Chicken Project Officers in Forestry skills and conservation management in-line with mountain chicken project activities</p> <p>1.6 Monthly reports of activities and training progress by Mountain Chicken Project Officers</p> <p>1.7 Mountain Chicken Project Officer attends DESMAN course in Jersey, Channel Islands</p> <p>1.8 Exchange visits between Montserrat and Dominica mountain chicken staff (MCPOs, DoE staff, WildDominique staff)</p> <p>2.1 Monthly capture, skin swabbing for chytrid fungus DNA and morphometric measurement recording of all mountain chickens in the enclosure (co-funded)</p> <p>2.2 Th-weekly feeding of all mountain chickens, including visual health check and enclosure integrity check (co-funded)</p> <p>2.3 Weekly pond changes within the enclosure</p> <p>2.4 Monthly data logger download (including pond use auto-PIT tag reader, camera traps and environmental data loggers) (co-funded)</p> <p>2.5 Monthly health reports sent to project veterinary and husbandry experts</p> <p>2.6 Analyse health and habitat use data to determine success of habitat manipulations</p> <p>2.7 Report and manuscript production based on data from 2.6</p> <p>2.8 Present results of study at an international conservation conference</p> <p>2.9 Conduct survey of sites on Montserrat to assess suitability for the construction of a second enclosure</p> <p>2.10 Request permission from landowner for construction of second enclosure</p> <p>2.11 Oversee construction of second enclosure (co-funded)</p>			



Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>2.12 Build boxes for transport of second release cohort of mountain chickens (co-funded)</p> <p>2.13 Transport second cohort of frogs to Montserrat (co-funded)</p> <p>2.14 Release second cohort of frogs to the second enclosure (co-funded)</p> <p>3.1 Hold workshop with project staff and government and European Zoo partners to discuss results of trials and plans for scaling-up of conservation activities</p> <p>3.2 Draft 5-year mountain chicken conservation management plan based on the workshop from 3.1</p> <p>3.3 Project partners sign MOU to deliver activities in 5-year conservation management plan</p> <p>3.4 Develop implementation plan for management plan along with timeline</p> <p>3.5 Write report on recommended sites for expansion of the management interventions as part of the 5-year plan</p> <p>3.6 Identify suitable funding sources for 5-year conservation management plan activities</p> <p>3.7 Develop and submit proposals for the funding sources identified in 3.6</p> <p>4.1 Hold workshop between Durrell, DoE, MNT and MoEYAS to agree an outreach strategy for the project on Montserrat covering annual activities and responsibilities (co-funded)</p> <p>4.2 Draft outreach strategy based on the results of the workshop in 4.1</p> <p>4.3 Produce outreach materials to facilitate schools and wider community outreach (co-funded)</p> <p>4.4 Conduct baseline nature connectedness surveys in schools and in the wider community</p> <p>4.5 Conduct outreach sessions in each educational facility in Montserrat in each year of the project</p> <p>4.6 Host college students within the project for two weeks to provide experience in environmental careers (co-funded)</p> <p>4.7 Host college student projects throughout the project</p> <p>4.8 Conduct outreach activities on international Mountain Chicken Day in collaboration with local and international partners</p> <p>4.9 Conduct interviews on Montserrat National Radio (ZJB) to discuss project progress</p> <p>4.10 Post project information and activities on project social media channels</p> <p>4.11 Design mountain chicken and nature-based signage for use on National Trails</p> <p>4.12 Tender production of signs and deploy them on National Trails (co-funded)</p> <p>4.13 Conduct surveys in an experimental framework to determine efficacy of signage in driving improved attitude towards mountain chickens</p> <p>4.14 Conduct end of project nature connectedness surveys in schools and wider community</p> <p>4.15 Attend National Curriculum review workshops to aid integration of mountain chickens and nature into curriculum</p> <p>4.16 Support DoE and MNT in the production of curriculum resources</p> <p>4.17 Review lesson plans with teachers to aid deployment of new National Curriculum elements into teaching</p>			

## Checklist for submission

	Check
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> putting the project number in the Subject line.	
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> about the best way to deliver the report, putting the project number in the Subject line.	Yes
<b>Have you included means of verification?</b> You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Yes
<b>Do you have hard copies of material you need to submit with the report?</b> 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.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	