Darwin Initiative Main/Post/D+ Project Half Year Report

(due 31st October 2017)

Project reference	DPLUS049
Project title	Maximising long-term survival prospects of Montserrat's endemic species and ecosystem-services
Country(ies)/territory(ies)	Montserrat
Lead organisation	UK Overseas Territories Conservation Forum
Partner(s)	Treweek Environmental Consultants, Montana State University, Montserrat National Trust, Montserrat Department of Environment
Project leader	Dr Mike Pienkowski
Report date and number (e.g., HYR3)	HYR2
Project website/blog/social media etc.	www.ukotcf.org; www.facebook.com/ukotcf twitter: @ukotcf

1. Outline progress over the last 6 months (April – Sept) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up to end September).

Output 1 (integrating environment into physical planning): The main parts of this project, and principal outputs were reported in the 1st annual report. Principal activity since then has involved interactions with the Minister responsible for these areas, who expressed the wish to adopt the recommendations, and with his officials to help them prepare the necessary formal papers. UKOTCF has provided draft text and offered further support as required. The limiting factor here is, of course, the time availability of officials, but the constraints on this are being minimised by project personnel undertaking work where this is possible.

Output 2, Part 1 (establishing biodiversity database system, populating it initially with beetle records collated from those institutions active in the area now or previously, and making existing material available for local use). This half-year saw a major focus on this aspect of the project, as scheduled:

Data capture, digitisation and entry: GBIF-compliant database populated with beetle information complete (total of 13,000 specimen records from 800 species). Work on data-checking continues. http://hol.osu.edu

System: The GUI (Global User Interface) hosting platform and ongoing curation of this system have been arranged at no cost to Montserrat, nor to Darwin Plus. The Montserrat-specific front-end and hub has been developed, and is now being finalised in the light of discussions with potential users (see next point).

Training and tailoring to local needs: Two workshops, plus several individual meetings, have been held to demonstrate the database system and make a final check of local users' needs – suggestions included, amongst others, a simple scientific key to held identify beetles on-island to the non-technical experts. A report by UKOTCF with feedback from those attending was given to MSU to help finalise the system before release, as well as note future possibilities. Participants in the workshop held at the Montserrat National Trust facility, included: 20 potential core-users, including government leaders in data-systems for statistics, GIS, environment & planning databases, NGO personnel, a high school science teacher, and

undergraduate-level students.

Wider outreach: Major progress achieved in local awareness of insects, the exceptional number of endemic species in Montserrat, and their key roles in the ecosystem. A lecture, as well as a question-and-answer session, by the Montana State University team was attended by HE Governor Carriere and about 1% of the territory's population, many of whom were so interested that they asked for readable copies, so that they could study further and show those who had not been able to attend. This is being organised. National radio recorded the entire lecture for repeat the following week. A copy of the lecture on USB is retained by UKOTCF for further use. In addition, an extended live radio chat was undertaken for nearly one hour on one of Montserrat's most popular programmes.

Building further: Several senior students and young professionals expressed interest in taking up insect studies, and MSU, MNT & UKOTCF offered continuing help to them. A small number of students already had a serious interest in insects, and the team will explore ways of supporting this capacity, with the potential of achieving a much needed local entomologist. Stephon Hixon, who is on a Government Youth Programme and is training with the most experienced local guide/fieldworker to be a conservationist, joined the entomologists for much of their time. This gives him another aspect to his knowledge, learning how to put up sampling traps and identifying species, as well as guiding people in difficult terrain that he is familiar with. The possibility of fellowships with MSU or other appropriate institutions is being explored for suitable local students. The database system is being developed as the Montserrat Virtual Museum of Natural History, with the ultimate aim of including many taxa. Further developments of this, both on Montserrat and as a model for elsewhere in the Caribbean UKOTs (including in Anguilla and BVI), will continue beyond the project.

In response to the AR review, the project was behind schedule in so far as data-entry was concerned, but was able to make up time by an intensive period of working from highly qualified MSU personnel used to working with biological/museum collections. Input of data did not impede the development of the portal from the computer programmer, James Beck, and so it is expected to be completed within the budget and time-frame.

Output 2, Part 2 (Increasing local capacity and community involvement in conservation work): The *Adopt a Home for Wildlife* initiative has emerged as the most promising way of addressing invasive plants, especially those for which present techniques make island-wide eradication impracticable. Instead, removal and exclusion of these from managed areas give the best prospect for maintaining wild populations of endemics and other native species. Within its first few months of operation, this initiative has already achieved 9 offers, now at various stages of development, with over 30 persons actively involved. Examples include: Land-owner Tim Orton putting his 4 acres of rare and threatened tropical dry-forest habitat near Garibaldi Hill, south of the Belham River, under management guidance of the initiative, to work with MNT to remove neem and other invasive plants and then, in his words "*do as little as possible to the land so that it can develop as naturally as possible*." Collections of invertebrates here will be analysed by MSU team as this is a habitat on Montserrat for which there has been limited, if any, previous survey. Under the guidance of Montserrat National Trust officers, Dwayne Hixon has removed dense stands of invasive *Casuarina* from the land he manages at Isles Bay. There is a marked improvement of the area in terms of its appearance (see project newsletter 4, page 9) and represents a shift in local thinking from bulldozing an area to start from bare land and bringing in non-native plants for landscaping, to carefully removing the vegetation which has a negative impact on biodiversity, but keeping those that perform an important function, e.g. sea-grape for coastal defence. More examples are reported in the project newsletter *Saving Our Special Nature of Montserrat.* Preparations are well advanced to include more, via the school systems as the new academic year has started. MNT personnel are maintaining a schools' awareness programme involving this and other aspects of conservation, and this is resulting in *Adopt a Home for Wildlife* take-up.

The project's provision of a local Conservation Officer has enabled a successful bid for EU BEST funding of €88,810 (project 1667: *A nursery for endemic and key native species, Montserrat*) to start a native-plants nursery, which is extremely complementary to the main project, including by providing native alternatives to plant, once invasives are removed so the latter do not repopulate. The nursery is already providing plants for *Adopt a Home for Wildlife* projects, as well as for sale for other uses. At one of the project meetings involving DoE, there

was discussion about linking this aspect of the project also with DoE's national [orchard] tree day to offer native trees also; and how native plants, including agave, could be used in conservation projects and offered to the community as a conservation alternative to expensive fencing (which is easily removed by others for use elsewhere).

In response to the AR review, we should emphasise that we are trying to increase the capacity longer term beyond a 'moderate increase in capacity' for MNT, as we are working with the Government of Montserrat (GoM) on the possibility of a departure tax. UKOTCF provided some initial input as well as an opportunity for the Minister of Environment to attend a meeting of UKOT Environment Ministers where he was able to discuss with counterparts in other UKOTs and other UKOT colleagues how this might work in practice to support the work of the Trust longer-term.

Output 3 (Agreeing across stake-holders an environmentally sustainable vision for the future of the south of Montserrat where volcanic activity prevents permanent human presence): The project secured, at no cost, high-quality satellite images from the DigitalGlobe Foundation (which would have cost over US$55,000 at commercial rates). Further specialist volunteer help with analysis has been secured, and linkages with the island's excellent GIS specialist have been made. Some mutual sharing of data and information between the GIS Department, MVO and UKOTCF has begun, which enhances information locally. UKOTCF is able to access the islands Physical Planning Unit and Lands & Survey info at www.landinfo.gov.ms. UKOTCF has been able to share some information on the use of the free-open source Quantum GIS (known popularly as QGIS), which is now being used by many for GIS in preference to expensive commercial programs. Remote sensing analysis had made key progress in time for the third stakeholder workshop on the future of the south of Montserrat, allowing this to add the planned geographic dimension (as well as other input) to the information on opportunities and constraints in the access-restricted areas. These included:

1) Normalized Difference Vegetation Index (or NDVI maps) to assess vegetation, showing similarities between the biodiverse protected area in the north (the Centre Hills) and the area in the south (South Soufriere Hills, especially the area known as Roche's). (Workshop participants, including the Tourism Department, were amazed by these findings; all recognised that scientific groups should study the area in order to find out what exactly is in the south area);

2) Visualized some of the verbal reports of the Forestry Officer, who regularly enters the south, including an area of invasive blackberry in Cork Hill, which appears to be at present contained – but, if not managed, could take over much larger areas (the images were discussed on live radio and led to interest from the Cork Hill Reunion Committee, which is likely to be involved in re-opening this area);

3) Comparison of the heavily eroded areas in the north Silver Hills and areas at risk of erosion in the southern areas (this led to strong feeling that investigation of control of feral animals in the south need to be done; otherwise the south could look like the over-grazed Silver Hills, with consequent further loss of rare dry-forest habitat).

A report of the workshop was circulated to all stakeholders welcoming correction. Messages of note, but no corrections, were received, so the record was confirmed. This is putting the project into its scheduled stage for the development of a strategic vision for the south, as intended. Plans are advanced for the 4th workshop in November, which will focus on the vision for the south.

In response to the AR review, expertise on ecological restoration comes from the Project Officer, a highly qualified agronomist, supported by UKOTCF's wide network of voluntary consultants. The volunteers are providing an enthusiastic local unpaid workforce, working under the guidance of the Project Officer, and with a long-term commitment to, and understanding of, their home areas. The Project Officer also runs the native plant nursery (made possible by the EU BEST grant, obtained as a consequence of this Darwin grant (see above); the >80k euro grant represented an almost doubling of the first-year Darwin grant). This emphasises how Darwin project funds are so important for small non-government bodies in the UKOTs, who can secure further funds for extending work and complementing it. Scoping of endemic species and invasive species was done in the first 4 months, and a plan was made to target certain areas heavily impacted by invasive species, which could be feasibly achieved

within the timeframe. The more formal write-up of the scoping exercise was deferred as priority needed to be given to initiation of the volunteer recruitment. It was easier to fit in work depending on the Project Officer himself in gaps in other work than re-arranging work coordinating many other persons. Much of the most significant stand of *Casuarina* on island was removed/managed as reported in project newsletter 3.

Output 4 (Management and dissemination): Another physical project team meeting held in June, and frequent other communications by Skype (or other means during hurricane-caused internet failings) throughout. Management of project overall maintained satisfactorily including through continued dialogue with the PO. The project uses Trello, a collaboration tool that organises projects into boards to help see what is being worked on, who is working on what, and what stage in the process it has reached. We are finding it useful because of remote working and an aid to monitoring and evaluation throughout the project. This may be another aspect of the project which is transferable to other Darwin Plus projects in the UKOTs and Darwin Initiative projects in the developing world.

4th (extended) issue of project newsletter *Saving Our Special Nature of Montserrat* produced and distributed (www.ukotcf.org/projnewsletters/SOSnatureMNT04.pdf), with further items mentioned too in UKOTCF's widely circulated newsletter *Forum News*, its Wider Caribbean Working Group eBulletin, and many independent web-sites.

Further outreach is noted under Output 2 above. Now a regular feature during UKOTCF's visits to Montserrat, members of the project team again joined Rose Willock for just under an hour of discussion on her Saturday morning show on ZJB Radio on Saturday 24 June 2017 (https://montserratradioecho.wordpress.com/2017/06/24/saturday-june-24-2017-the-cultural-show-with-rose-willock-pre-show-interviews-and-community-diary/ 0:50mins to 1:26). The team present included Dr Mike Ivie (Montana State University), Nicolas Tirard (Montserrat National Trust) and Dr Mike Pienkowski, Catherine Wensink and Dr Nicola Weber (UK Overseas Territories Conservation Forum). Rose suggested that the satellite images should be shared on social media so that all (particularly the youth of Montserrat) could see the wonderful images. UKOTCF posted some of the images, based on those made available courtesy of DigitalGlobe Foundation, as one of the efforts to engage with young people on-island. Over 4,000 people (nearing 80% of the total population of Montserrat) were reached by the post, with comments such as "#home". An interview was again held with the editor of the local newspaper *The Montserrat Reporter*; this has resulted in further dissemination and social media posts from their account.

An article on the project was featured as a guest blog on the website seedball.co.uk. This is private company, based in the UK, which sells seed-balls of wildflowers to encourage pollinators in gardens, nature reserves etc. The blog outlined the project and the information we know – and so much we do not – about Montserrat's endemic invertebrate fauna. The article was tweeted by Seedball, which has around 30,000 followers. It included information on the Darwin fund and Darwin logo.

It has been pleasing that @Darwin_Defra has shared our posts on Twitter as this indicates that they are relevant and the Darwin Initiative is happy to share the information we are putting out.

In response to the AR review, lessons learnt feature particularly piloting work that is already being looked at enviously by some other territories and small-island states in the region (as we know, for example, through cross-territory discussions in UKOTCF's Wider Caribbean Working Group). For example, whilst voluntary conservation work and citizen-science are well established in Europe and North America, they are rare in the region – for cultural and economic reasons arising from well-known historical conditions. *Adopt a Home for Wildlife* was initiated partly as a way of addressing effective conservation of endemic and other native species when it became apparent that island-wide eradication of some invasive plants was impracticable with present technologies but that effective conservation could be achieved practicably by clearing, and maintaining smaller areas free of, invasive plants. The interest in the invertebrate database, and also in QGIS open-access software and the potential of the otherwise impracticably expensive satellite images secured free through the project, are generating some potential for citizen-science (although this was not included in the proposal and it is early days for this). Other interest is being shown too in the online management system the project is using to keep track across dispersed colleagues of activities and how they

are meeting objectives.

Overall, progress has been very satisfactory, with good adjustment to both refining needs assessments and necessary rescheduling.

2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

Up to the start of the final month of the reported period, no problems had been encountered that would have a significant effect on the project budget and/ or timeline. On the ground actions had, at times, been delayed due to heavy workloads and/ or lack of capacity, but no more than would be expected with work in the UKOTs in general.

At the start of September, with the approach of Hurricane Irma, all key materials had to be packed into secure storage and unpacked after. Fortunately, the hurricane turned and Montserrat suffered only Tropical Storm force winds. The project suffered only the loss of about a week due to the packing/unpacking and periods without power or communications. A few days later, Hurricane Maria approached. In addition to the same inconveniences caused by Irma, the eye of Hurricane Maria passed very close to the most occupied (normally sheltered) side of Montserrat, causing severe damage to trees and power poles/lines and causing land-slides. Fortunately, there were no fatalities and, although many houses suffered roof damage, few houses were destroyed. Re-establishing power and internet has been patchy and prolonged, with some communications lacking into October. Essentially, about a month of work-time has been lost.

Project personnel in both Montserrat and UK have attempted to minimise the impacts of this. For example, Montserrat staff addressed some analytical work that did not need computer access while equipment was packed away and outdoor activities not allowed. The team will use part of the planned visit in November to review plans, as this is fortuitously timed to allow some analysis to feed into that. A project newsletter planned for publication in October has been delayed, and may be amalgamated with the following one into a larger issue. (We should note that newsletter 3, published and circulated in July, could have been split into several individual newsletters, as it had more articles than the previous two. However, articles have been particularly forthcoming from those involved in the various aspects of the project, so a decision was made to go with a large issue – inadvertently offsetting the later hurricane-caused delay in the next issue.) The starts of some new sites in the *Adopt a Home for Wildlife* initiative have been delayed, partly because those planning to lead them are involved in community work in support of those who suffered damage to homes and other property. However, all the indications are that these will commence, albeit slightly later than planned. Overall, and subject to review, it is anticipated that impact on the project is likely to be low, with some activities delayed slightly and possibly achieving quantitatively slightly less (within the project period) than envisaged. Even this would be a proportionally very small loss.

See cover letter in respect of 2b below.

2b. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?

Discussed with LTS:	Yes/No
Formal change request submitted:	Yes/No
Received confirmation of change acceptance	Yes/No

3a. Do you currently expect to have any significant (e.g., more than £5,000) underspend in your budget for this year?
Yes ☐ **No** ☒ Estimated underspend: £
3b. If yes, then you need to consider your project budget needs carefully. Please remember that any funds agreed for this financial year are only available to the project in this financial year. If you anticipate a significant underspend because of justifiable changes within the project, please submit a rebudget Change Request as soon as possible. There is no guarantee that Defra will agree a rebudget so please ensure you have enough time to make appropriate changes if necessary.

4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document. Additionally, if you were funded under R23 and asked to provide further information by your first half year report, please attach your response as a separate document.

Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but should also be raised with LTS International through a Change Request.

Please send your **completed report by email** to Eilidh Young at Darwin-Projects@ltsi.co.uk . The report should be between 2-3 pages maximum. **Please state your project reference number in the header of your email message e.g. Subject: 22-035 Darwin Half Year Report**