

Biodiversity Challenge Funds Projects Darwin Initiative, Illegal Wildlife Trade Challenge Fund, and Darwin Plus Half Year Report

Note: If there is any confidential information within the report that you do not wish to be shared on our website, please ensure you clearly highlight this.

Submission Deadline: 31st October 2022

Project reference	<i>DPLUS106</i>
Project title	A Marine Turtle Action Plan for Montserrat
Country(ies)/territory(ies)	Montserrat
Lead partner	Government of Montserrat (GoM) and University of Exeter (UoE)
Partner(s)	Marine Conservation Society (MCS)
Project leader	<i>Dr Nicola Weber</i>
Report date and number (e.g. HYR1)	<i>HYR3</i>
Project website/blog/social media	www.mcsuk.org/ocean-emergency/marine-protected-areas/projects-in-uk-overseas-territories/montserrat and also through <i>@ExeterMarine</i>

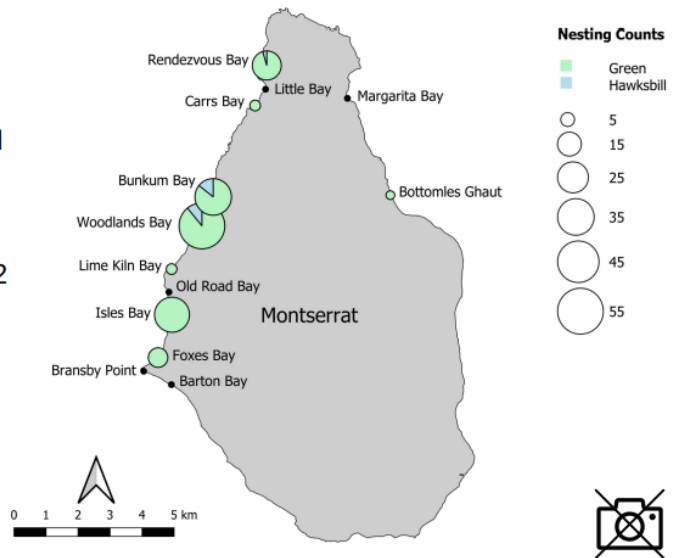
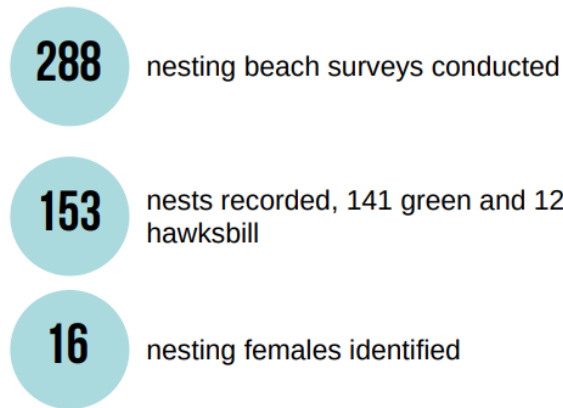
1. Outline progress over the last 6 months (April – Sept) against the agreed project implementation timetable (if your project has started less than 6 months ago, please report on the period since start up to end September).

Reporting period: April 2022 – 30th September 2022

Output 1:

- 1.1: The same Darwin Fellow (DF) and Project Officer (PO) were appointed in Y3 as in Y2, Mr Jack Wiggins and Mr John Jeffers, respectively. Due to the approved Change Request, they were able to be employed for a 6-month period rather than a 3-month period, which allowed their appointments to cover the whole of the nesting season (May – November 2022). Additionally, as detailed in the Change Request, 4 Assistant Youth Trainee Project Officers were employed by the Government of Montserrat for a 4-month period (August – November 2022) rather than the 1 Assistant Project Officer for 3 months (Denari Serrant, Nehemeiah Younge, Sonivae Clarke and Dale Thaxter). This proved effective in terms of carrying out the research and monitoring, and improving the prospects of project legacy by training more young individuals and creating stronger links with the Montserratian community.
- 1.2: The Microsoft Access Turtle Database continues to be used to house all data relating to marine turtle monitoring and research on Montserrat. It is housed on the Government of Montserrat server, with a remote copy held too. The DF provided refresher training in Y3 to all staff in the Fisheries and Ocean Governance Unit as well as full training to the Assistant Project Officers.
- 1.3: Completed in Y1 and Y2.

In 2021, we conducted nesting surveys between July - November

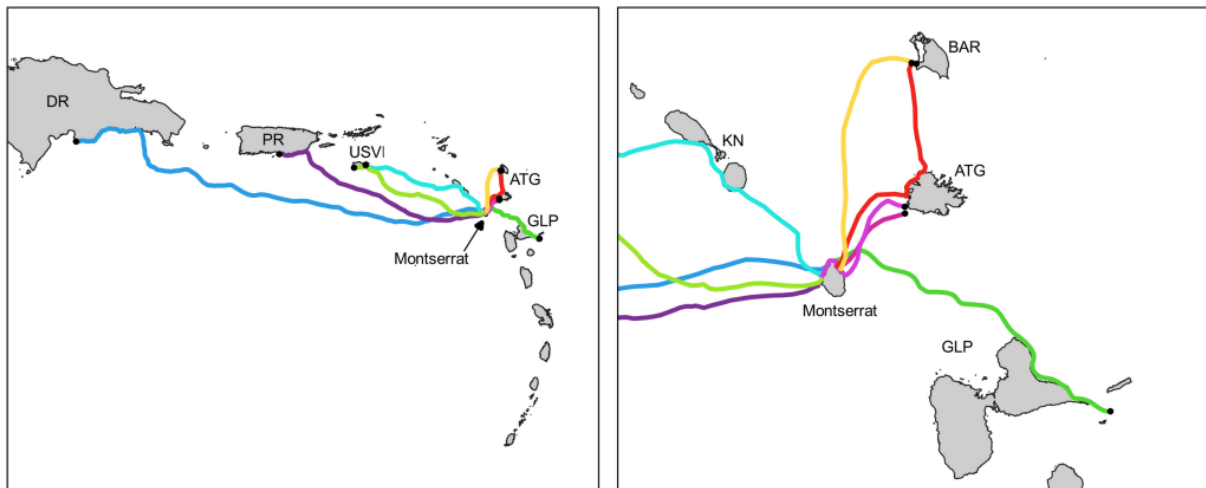


(Figure not yet to be made publicly available as it is being prepared for peer-reviewed journal submission).

- 1.4: A full turtle nesting survey has been carried out in Y3 (due to be completed at the end of November 2022). Day surveys were systematically performed on all accessible beaches around the island ($n = 13$) and night surveys were conducted on more easily accessible beaches ($n = 3$) throughout the turtle nesting season. 6 beaches in the Exclusion Zone were surveyed once for turtle activity from the sea. All data were inputted into the turtle database.
- 1.5: $n = 20$ nests (10 on each beach) were marked out on two key nesting beaches (Woodlands and Rendezvous Bay) and Tinytag loggers placed in the nests to monitor their temperatures. The nests are excavated 65 days after hatching to assess productivity – this began in October and will continue through November 2022. Additionally, $n = 10$ of the 20 nests placed into the ‘hatchery’ also had Tinytag loggers placed into the nests, and all 20 will be excavated to assess productivity. Based on data collected in Y2, the number of nests relocated to the ‘hatchery’ is less than in Y2. All data have been entered into the turtle database. Analysis of the beach and hatchery productivity data will inform management recommendations made in the Turtle Action Plan.
- 1.6: All nesting turtles encountered during nocturnal surveys in Y3 ($n = 18$) were marked by the field team with two metal flipper tags on the trailing edge of the fore flippers, and a passive integrated transponder (PIT) was inserted into the right shoulder muscle of individuals to enable long-term population studies. All data were inputted into the turtle database and an Excel spreadsheet with the data will be sent to Widecast as per their regulations for providing the flipper tags. The 10 turtles fitted with radio-telemetry tags in Y2 have provided valuable insights into inter-nesting habitat and regional migratory connectivity.

TRACKING MONTSERRAT'S SEA TURTLES

9 out of the 10 tagged individuals migrated outside of Montserrat's EEZ



DR - Dominican Republic, PR - Puerto Rico, USVI - U.S Virgin Islands, ATG - Antigua, BAR - Barbuda, GLP - Guadeloupe, KN - St Kitts & Nevis.



(Figure not yet to be made publicly available as it is being prepared for peer-reviewed journal submission).

- 1.7: Three-dimensional photogrammetry drone surveys of 10 beaches were completed by UoE PDRA in June 2022 and resulting files provided for GIS analysis and risk evaluation which are currently being carried out.
- 1.8: The analysis of data collected in 1.5 will inform the recommendations made for this output in the Species Action Plan. Initial results suggest that the mortality of turtle nests related to inundation is high on some key nesting beaches, and that hatching productivity is lower in the hatchery compared to those in-situ. Thus, management recommendations will try to ensure future practices align with international best practice and are consistent with local capacity and management needs.
- 1.9: Refresher training has been provided for 4 GoM staff members, full training for 4 recently appointed GoM staff (the Assistant Youth Trainee Project Officers), and partial training for 3 volunteers that joined the surveys opportunistically.

Output 2:

- 2.1: To be held at the end of the project and the format to be re-evaluated to ensure it meets the needs of all project partners.
- 2.2: The monitoring protocol developed by the project team in Y2 proved to be effective for providing the robust data required to assess Montserrat's turtle nesting population, thus it was replicated in Y3. The data collection sheets from Y2 were also again used in Y3 with minor tweaks. Using the data collected from these full nesting surveys in Y2 and Y3, the Turtle Action Plan will make informed recommendations for partial and full nesting surveys that can be adapted by the GoM team depending on capacity in given years. The current fisheries landing protocols don't facilitate an out-of-season landing record system for legal take harvest of adult turtles, but it is something that will continue to be explored during this project and alongside another current fisheries data management project being carried out independent of this project by JNCC.
- 2.3: With the final nesting season for this project coming to a close, the focus is now on data analysis and interpretation with project partners to develop the first draft of Marine Turtle Action Plan for Montserrat which will be consulted on and adopted in Y3Q4.

Output 3:

- 3.1 – 3.3: Completed in Y2 and detailed in the Y2 Annual Report.
- 3.4: A comprehensive public consultation campaign was carried out in July/ August 2022. This involved 10 screenings of the Community Voice Method (CVM) documentaries (one 30-minute film contextualizing turtle conservation within Montserrat issues, and a shorter 10-minute film focusing on turtle fishery management and habitat conservation). The locations of the main screenings are shown in the promotional flyer below, with additional screenings for the Governor's Office and invitees; the Rotary Club; the Department of Environment, and an additional screening for young adults with Fish N Fins.). The format of each event was tailored depending on the audience. Registers taken show that at least 190 people attended the events.



Generally, the events began with an introduction to the project by the Marine Conservation Society and Fisheries and Ocean Governance Unit, followed by a presentation on the biological aspects and findings of the project by the Darwin Fellow. The CVM documentaries were screened and catering provided. After viewing the films, participants were invited to discuss their views on turtle fishery management and conservation in a structured workshop setting, and present their considered views on flipchart forms. All written responses from the workshops have been collected as well as voice recordings that are being transcribed. Qualitative analysis will be carried out on it all that will inform a recommendations document for proposed changes to the Turtle Act (2002). The documentary is also now due to be uploaded to the internet for the Montserratian diaspora to be able to view and comment on.

- 3.5 – 3.7: To be carried out later in Y3.
- 3.8: Communication between team members remains quite strong with team meetings, part team meetings for specific/ specialised queries and a regularly used Whatsapp group to share information and brief updates quickly and effectively. With some line management changes within the Government of Montserrat in Y3, whole team communications haven't been as regular as in the past, but all organisations remain committed to the successful delivery of the project and its legacy.

Output 4:

- The MCS design team have provided a final draft for the design of the signage boards which project partners are currently providing feedback on. The boards can be printed in Montserrat once this is done and installed before the ending of the project and the start of the next turtle nesting season.

Sea turtles of Montserrat

Four species of sea turtle have been recorded in Montserrat. Green and hawksbill turtles live in local waters and nest on the beaches here each year, while leatherback and loggerhead turtles are occasional visitors.

 <p>Green turtle <i>(Chelonia mydas)</i> Adult size: About 100 cm shell length and 150 kg weight Diet: Mostly sea grass and algae Status: Endangered</p>	 <p>Hawksbill turtle <i>(Eretmochelys imbricata)</i> Adult size: About 80 cm shell length and 60kg weight Diet: Mostly sponges and soft-bodied creatures Status: Critically Endangered</p>
 <p>Leatherback turtle <i>(Dermochelys coriacea)</i> Adult size: About 160 cm shell length and 500 kg weight Diet: Mostly jellyfish Status: Vulnerable</p>	 <p>Loggerhead turtle <i>(Caretta caretta)</i> Adult size: About 100 cm shell length and 120 kg weight Diet: Mostly shellfish and crustaceans Status: Vulnerable</p>

Sea turtle story



Helping Montserrat's sea turtles

Sea turtles are threatened by many human activities including beach development and activity, over-fishing, predators such as dogs, pollution and climate change. You can play your part in giving them a brighter future!

-  **Bring your litter home and keep our beaches beautiful**
-  **Please do not touch the turtles as this causes them stress**
-  **Don't drive on nesting beaches as you can squash turtle nests and the hatchling turtles waiting to emerge**
-  **Bright white lights scare turtles and confuse hatchlings. Use only red torches on the beach and don't use a camera flash.**
-  **Do not approach a turtle on the beach unless you are with an experienced guide**

Thank you for helping Montserrat's sea turtles!

Turtles are protected under the US Endangered Species Act and the UK Wildlife and Countryside Act 1981. It is an offence to intentionally or recklessly take, damage or destroy a turtle or its eggs. During the nesting season, the ground where a turtle lays its eggs is a protected area. A licence is required to dig up the ground to remove a turtle's eggs. A licence is also required to take a turtle's eggs. (2020-2022)






- 4.2: A Turtle Watching Workshop was held in June 2022, run by Professor Brendan Godley from UoE with 16 attendees including key government employees. A workshop report was circulated and it resulted in free of charge turtle tours being offered to the local community as part of Tourism Week in October 2022.
- 4.3: During the Y3 turtle nesting season, the project team ran educational and interactive sessions at 5 summer schools in Montserrat, reaching approximately 100 children aged 3 – 16. They led 11 public ecotourism events (nesting tours, hatching releases, turtle snorkels) and presented Y2 findings to local community groups (Rotary club, National Trust Higher Education Event, Fish n Fins youth group). 3 radio interviews were carried out in addition to the extensive Community Voice Method film campaign as detailed in Output 3. Project team members also contributed to the JNCC-led Montserrat Overseas Territories Biodiversity Strategy Workshop. Additional public dissemination events will occur in Y3Q4 for the Turtle Action Plan and suggested recommendations as to revisions to the Turtle Act (2002).

2. 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.

Line management changes within the Government of Montserrat have meant that additional communications have been needed at times but all organisations remain committed to the successful delivery of the project and its legacy.

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

Discussed with NIRAS-LTS: No

Formal Change Request submitted: No

Received confirmation of change acceptance No

Change request reference if known:

4a. 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: £

4b. 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 re-budget Change Request as soon as possible. There is no guarantee that Defra will agree a re-budget so please ensure you have enough time to make appropriate changes if necessary. Please DO NOT send these in the same email as your report.

5. Are there any other issues you wish to raise relating to the project or to BCF management, monitoring, or financial procedures?

N/A

If you are a new project and you received feedback comments that requested a response (including the submission of your risk register), or if your Annual Report Review asked you to provide a response with your next half year report, please attach your response to this document.

Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also be raised with NIRAS-LTS International through a Change Request. **Please DO NOT send these in the same email.****

Please send your **completed report by email** to BCF-Reports@niras.com. The report should be between 2-3 pages maximum. **Please state your project reference number, followed by the specific fund in the header of your email message e.g. Subject: 29-001 Darwin Initiative Half Year Report**

