

# Darwin Initiative: Half Year Report

(due 31 October 2013)

<b>Project Ref No</b>	DPLUS010
<b>Project Title</b>	Coral nursery project in Little Cayman: enhancing resilience and natural capacity of coral reefs in the UKOTs
<b>Country(ies)</b>	Cayman Islands
<b>Lead Organisation</b>	Central Caribbean Marine Institute
<b>Collaborator(s)</b>	Cayman Islands Department of the Environment
<b>Project Leader</b>	<i>Carrie Manfrino</i>
<b>Report date and number (eg HYR3)</b>	<i>HYR1</i>
<b>Project website</b>	<a href="http://reefresearch.org/conservation/ccmi-conservation-projects/">http://reefresearch.org/conservation/ccmi-conservation-projects/</a>

## 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).

Output 1.1 (Q1 & Q2) Maintain and upgrade nursery structures and assess the nursery year-round, providing biweekly in-situ monitoring of nursery colonies by our conservation coordinator:

In April 2013, we upgraded the existing pilot nursery by adding two new PVC tree nurseries, each with the capacity to hold 100 fragments of staghorn coral. These tree nurseries received new staghorn colonies resulting from the fragmentation of the existing nursery population in late March and early April, bringing the total number of corals from 58 to 200. To date, no mortality has occurred in the nursery and colonies have exhibited no sign of disease. Due to the consistent healthy growth of the nursery colonies, biweekly visits were replaced by monthly visits. In each visit, CCMI's Conservation Coordinator checks all colonies for signs of disease, predation, or algal overgrowth, and performs routine cleaning and maintenance of the nursery structures.

Output 1.2 (Q2) Develop management best practices including: refining nursery techniques; managing disease outbreak and natural disaster; and reporting protocol:

In June 2013, CCMI hosted the second Coral Nursery Workshop with project partners from the Cayman Islands Department of Environment (CIDOE) and advisors from the University of Miami. Discussions focused on determining the best methods to return nursery colonies to their natural environment, and the next logical steps required to upscale the nursery project. Project advisors led practical underwater sessions aimed to demonstrate the best techniques for colony attachment while conducting a pilot outplanting effort at two sites in Little Cayman. To manage future disease outbreak, the following two-part protocol has been put in place: (1) affected colonies will be moved to a quarantine area at a distance of at least 20 m from both the existing nursery and wild coral colonies, (2) bands of marine epoxy will be placed on affected branches at the disease margin creating a physical barrier to stop the active progression of disease. Alternatively, affected portions of branches may be excised completely from the affected colony and discarded. A proposal to expand the existing nursery is currently awaiting approval by the Cayman Islands cabinet. If approved, this expansion will include a permanent quarantine structure for affected colonies.

A natural disaster protocol has also been put in place. In the event of a serious natural threat such as a severe hurricane, a portion of colonies at the nursery will be moved to a deeper site adjacent to the nursery, which would be less impacted by hurricane wave action. Upon cabinet approval of the nursery expansion, sand anchors will be installed at a depth of about 18 m. In the event of inclement weather, entire tree and line nurseries will be removed from their anchors at the nursery site and towed by boat to the deeper contingency site, where they will be reattached to the sand anchors.

Output 1.3 (Q1 & Q2) Quarterly monitoring and reporting of nursery and wild parent colonies to ensure recovery and 6 month reporting as per DEFRA requirements:  
 Nursery colonies have been monitored regularly as dictated by output 1.1, and any progress or changes promptly reported to project partners from CIDOE and project advisors from the University of Miami. Parent colonies were monitored quarterly for a year beginning immediately after the collection of nursery fragments (September 2012), in order to assess the condition of fragmentation lesions. All parent colonies recovered fully after 4–6 weeks and continued growing normally. Fragmentation lesions were overgrown by new tissue, and in most cases, new branches started growing on the lesion sites. These observations were communicated to all project partners. As of September 2013, quarterly monitoring of wild parents will cease as agreed at the initiation of the project. If any additional collections occur over the course of the project, new parent colonies will be monitored quarterly for a period of one year. Reporting will continue at 6 month intervals as per DEFRA requirements.

**2a. Give details of any notable problems or unexpected developments 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.**

None have occurred over the last 6 months.

**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 expect to have any significant (eg more than £5,000) underspend in your budget for this year?**

Yes  No

**3b. If yes, and you wish to request a carryforward of funds, this should be done as soon as possible through the formal Change Request process.** However, it would help Defra manage Darwin funds more efficiently if you could give an indication now of how much you expect this request might be for.

Estimated carryforward request: £

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

There are no issues we wish to raise relating to any of the above.

**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.**

**Please note: Any planned modifications to your project schedule/workplan or budget should not be discussed in this report but raised with LTS International through a Change Request.**

Please send your **completed report by email** to Eilidh Young at [Darwin-Projects@ltsi.co.uk](mailto:Darwin-Projects@ltsi.co.uk). The report should be between 1-2 pages maximum. **Please state your project reference number in the header of your email message eg Subject: 17-075 Darwin Half Year Report**