



PROJECT REPORTING FORM

● CONTACT

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If you have suggestions for improvement of this form, your feedback would be appreciated:

COUNTRY:

TURK & CAICOS ISLANDS

PROJECT TITLE:

RESCUE AND COLLECTION OF ENDEMIC AND ENDANGERED PLANT SPECIES FOR BIODIVERSITY CONSERVATION (II)

REPORTER: Name, Organization, Contact Details.

(v tick if same as APPLICANT)

Department of Environment and Maritime Affairs (formerly Department of Environment and Coastal Resources), Turks & Caicos Islands Government

PROJECT DESCRIPTION: How did the project go? What were the HIGHLIGHTS and OVER-ACHIEVEMENTS of objectives? What CHALLENGES did you encounter? How were these RESOLVED?

HIGHLIGHTS and OVER-DELIVERY

In 2010, DEMA implemented a project on rescue and collect endemic and endangered plant species. In 2011, DEMA extended this project due to the initial project's success. The priority areas for collection were development sites such as housing complexes, residential sites, road widening areas and disturbed areas. The goal of this project is to rescue endemic and endangered plants that are on the brink of destruction due to earth-moving associated with land developments such as construction of residential houses, business/industrial sites and hotels/resorts. Seeds of plant species that are not suitable for rescue (e.g. balling or cuttings) are collected and seeds are sown in the nursery.

The rescue methods include balling, cuttings, divisions, collection of wildlings and collection of seeds and spores. Rescued plants were raised and nurtured at the Native Plant Biodiversity Conservation Nurseries in North Caicos and in Providenciales. The project has attracted volunteer groups (e.g. TC Environmental Cub and some schools).

At the end of the first project, there were five species endemic to TCI are growing in nurseries. An additional endemic species has been added, so that there are now six TCI endemic species growing in cultivation in the nursery.

At the end of the first project, 18 species and one species variety endemic to the Bahamas Archipelago (including TCI) were under nursery propagation. An additional nine TCI/ Bahamas endemic have been added, making now 27 TCI and Bahamas endemic species in the collection.

Two species endemic to the Caribbean Basin were also in cultivation at the end of the last

project; this has been expanded by an additional 37 species resulting in 39 Caribbean Basin endemic plant species in the collection. Ten native plant species classified as endangered by CITES and/or IUCN were under nursery propagation at the close of the first project; the extension led to the addition of two endangered plant species. The first project safeguarded a total of 40 species in nursery propagation and compiled data for propagation protocols for 39 species. The project extension **protected an additional 49 species**, including three varieties of one endemic species, **for a total of 84 endangered or endemic species protected**. Species-specific propagation methods in nursery were written and will function as propagation protocols for future efforts. These propagation protocols have been shared upon request to the Royal Botanic Gardens, Kew's United Kingdom Overseas Territories Programme.

When the opportunity arose, additional native plants (not necessarily regionally endemic or endangered, but from populations threatened by human activities) were also rescued. Some of these plants, while not threatened across their range, are rare in TCI. This resulted in **approximately 20 additional native plant species** in being grown in the nursery (17 of which are in the chart following).

Plant Biodiversity Conservation Nurseries were quickly overwhelmed with numbers and species of endangered and endemic plants and significant standing-out room has been needed to hold plants. Some of the plants derived from the project were planted in important sites such as the Bight Park Botanical Garden and road sides, while other plants were given to the TC National Museum Botanical and Cultural Garden in Grand Turk, where they are now labeled and publicly exhibited. The Botanical and Cultural Garden is included on several tours marketed to cruise ship passengers arriving on Grand Turk. The garden is also visited by school and youth groups and featured on the list of DEMA's Junior Park Wardens Grand Turk programme's Environmental Volunteer Initiative. This programme brought young people from the Junior Park Warden Programme into light duty environmental volunteering work, including planting native plants in the Botanical and Cultural Garden. Local nurseryman in Grand Turk Conrad Baron has also assisted in the development of the garden by rescuing native plants from areas he has been asked to develop into colour gardens. A number of endemic and endangered plants have thus been saved from destruction. The Botanical and Cultural Garden now features a border of the cacti *Opuntia nashii* and *Pilosocereus royerii*, TCI/ Bahamas endemic and Caribbean endemic respectively, both CITES II endangered.

This project has rescued plant species that are listed as endangered by IUCN and CITES. The loss of biodiversity, and most importantly endemic and endangered plant species, could be prevented if proper rescue operation before land clearings and earth moving operations is done, coupled with appropriate post-rescue/collection care-practices.

This project's outcomes were presented on a poster at the conference "**Celebrating 30 Years of the Flora of the Bahamas: Conservation and Science Challenges**" in Nassau, New Providence on 30 October 2012. This conference marked a new beginning of TCI involvement in the research and conservation of plants in the wider Lucayan Archipelago, the islands TCI shares with The Bahamas. The poster was well-received and resulted in increased opportunities for collaboration on native plant conservation throughout the Archipelago. The poster also attracted an invitation to formally present the project in the first annual Bahamas Natural History conference in March 2013, marking TCI's first such participation in such a forum.

Project work continues in DEMA's nurseries and is popular with visitors and the community. Two developers have been keen to assist with the project by allowing collections on land and one participated by sending 20 labourers to assist. Turks & Caicos Environmental Club members also volunteered time for rescues and collections.

PROBLEMS and RESOLUTION

There were very few problems with this project. The only significant challenge of this project was the extreme difficulty in disbursement of project funds by Turks & Caicos Islands Government under Direct Rule by the United Kingdom. Due to changes in departments, remits, staff, and policies, invoices submitted for the project have gone unpaid and critical equipment for orchid flasking remains unpurchased. This same problem has severely impacted several other TCIG-

managed projects that are externally funded.

OUTPUTS: With reference to the FUNDS APPLICATION form, did your MAIN OUTPUTS achieve their EXPECTED OUTCOMES?

- 1) Continued the collection and/or rescue of 10 endemic and 20 endangered terrestrial species from their natural habitat that are threatened by anthropogenic actions.
- 2) Raised the rescued plants and germinated seedlings in the nursery.
- 3) Refined the species specific propagation protocols.
- 4) Further develop the micro-propagation techniques for orchids.
- 5) Updated the National GIS/Terrestrial Habitat map, indicating the specific location of rescue-sites (population level).
- 6) Grown and raised the rescued plants in the DECR's Plant Biodiversity Conservation Nursery.
- 7) Established a demo plot for rescued plants in two botanical gardens or school compounds.

ACTIVITY	ACTUAL OUTCOME	COMMENTS
1	An additional 49 species of endangered or endemic status on varying levels were rescued from threatened sites and propagated.	Surpassed target of 30 species by 19 additional. Additional native ecologically important plants were grown too.
2	The nurseries now grow over 105 species of plants, including 87 of endangered or endemic status on varying levels. Seedling germination records are kept for propagation data, and shared with partners.	.Nurseries are now well-stocked with native plants for use in projects. Inventories are kept.
3	Germination and propagation data was kept and data collection remains active. Original data has been refined and shared with partners.	Full notes on propagation methods were kept for reference
4	Additional planting on agar was carried out using a refined method including thinner medium, different shapes and volumes of flasks, and different positioning.	All flasking equipment was not purchased due to Interim TCIG management of funds policies; awaiting payment for additional micro-propagation.
5	GIS data was collected for incorporation into THMaps.	Currently DEMA is without a THMap manager but will be working on incorporation of data.
6	Nurseries are full of plants (too full in fact) and some distribution of plants has begun.	Over 105 species grown in nurseries are producing their own new propagation material now.
7	The Turks & Caicos National Museum's new Botanical and Cultural Garden in Grand Turk features habitat-based garden beds for native plants, with special focus on endemic species and those used by people. This site is visited by cruise ship tourists, divers, and local people. Raymond Gardiner High School has adopted the Flamingo Pond Overlook site in North Caicos and is using project plants to beautify the site.	Three exhibit areas now exist. More will be added.

Project plants are planted out in the Bight Children's
Park botanical garden and along public roadsides
adjacent to the park.

INFORMATION: This final section is, in some ways, the most important part of this form. Provision of this information will enable us to pursue further funding and support for conservation projects in the Overseas Territories.

I ATTACH the following, by way of INFORMATION:

(Please v tick appropriate boxes, and attached necessary information as necessary)

- Brief QUOTATIONS from the Project Manager / individuals involved with this project, which may be used freely by JNCC to promote and publicized the conservation achievements of this project through suitable media:**

This project has been one of TCI's most successful environmental projects to date, far exceeding original expectations and continuing as an active programme in public sector native plant research and conservation. B N Manco

TCI imports nearly all of its commercially-available plants, including those of native species, from Florida. This project demonstrates the ease with which native plants can be grown from local stock, collected from threatened habitats, produced with minimal infrastructural input. It will introduce into the landscaping trade a number of new species previously unutilized, expanding the potential for native plant gardening with a the added appeal of a wide selection of plants. B N Manco

(more please)

- PHOTOGRAPHS or VIDEO CLIPS and full details of associated photo-credits, which may be used freely by JNCC and other OTs, to promote and publicized the conservation achievements of this project through suitable media.**

- A scanned copy and / or web-address of any NEWS ITEMS, PUBLISHED ARTICLES arising from this project.**
Green Pages, Winter 2012 proof

- A copy of any EDUCATIONAL MATERIALS, books, brochures, pamphlets or posters, arising from this project.**
Poster presented at Bahama Flora Symposium

- Details of any WEBSITE or WEBLINKS arising from this project.**

- Details of any COLLABORATION or PARTNERSHIP, local or international, which contributed to the success of this project.**
Royal botanic Gardens, Kew: In partnership on the Caicos Pine Recovery Project, RBG Kew has also been instrumental in sharing propagation data and training

with project staff. The project results have also been shared with Kew for use in their propagation facilities.

Sunshine Nursery has donated pots and been key in patiently awaiting payments delayed by TCIG Interim Government policies and inefficiency; supplying necessary consumables and tools on credit to date.



Details of any other unexpected benefits arising from this project, such as CONSERVATION AWARDS, PUBLIC SUPPORT, VOLUNTEER PARTICIPATION or SPONSORSHIP.

In-kind support from Amanyara Resort and development team for Airport FBO: Team allowed collection of plants on development site, provided volunteers and labourers for rescue work, and also provided the first commercial use of rescued plants (at Amanyara Resort).

Volunteer support from Turks & Caicos Environmental Club was instrumental in the plant rescues, particularly in knowledge of plant collection techniques and transport of rescued plants to nursery facilities.