



Carbon Offset Bio-sequestration Project

At the Daintree Discovery Centre we are passionate about conserving the environment so that people from all over the world can enjoy it, now and in the future.

Everything we do at DDC reinforces the need to preserve this very special World Heritage area. A series of interconnected, elevated walkways protect the forest's fragile root systems. Interpretive displays foster environmental sustainability and the Centre models best practice in water conservation, waste management, recycling and eco-friendly design.

The site was especially chosen for its extraordinary bio-diversity. The Centre was located away from the main road to protect the aesthetic beauty of the area.



Buildings were constructed around trees rather than remove them, wildlife corridors assiduously protected and the natural rainforest canopy left undisturbed.

Protecting this ancient rainforest is also the focus of our Carbon Offset Project. Central to this innovative bio-sequestration program is an ongoing commitment to reduce and neutralize the impact of CO₂ emissions.

At the outset of the project we engaged an independent, accredited carbon offset consultant to audit of both our direct, and indirect green house gas (GHG) emissions.

Kim Forde, of *The Missing Link* then helped us develop strategies to avoid, reduce and finally offset our GHG emissions by bio-sequestration (planting trees to sequester/soak up CO₂) . DDC staff have been actively involved in the project from the outset and are very proud of their achievements.

The Daintree Discovery Centre has increased community awareness by their innovative carbon reduction initiatives, which have gone beyond the traditional 'tree planting' to include support for local community projects, scientific research and the purchase of land under the Daintree Buy-back program. The Centre is helping visitors understand climate change impacts and how to better manage protected areas.

Kim Forde, Carbon Offset Consultant



Revegetation of Degraded Land

In the past, many freehold blocks of land were cleared for residential, agricultural and/or commercial purposes. However, legislation was passed in September 2006 preventing further development North of the Daintree River and many of these properties were secured under the *Daintree Buy-Back Scheme*.

Revegetation and Carbon Offset Project



As part of its bio-sequestration project, the Daintree Discovery Centre is working with members of the Queensland Parks and Wildlife Service in the rehabilitation of degraded blocks. But this is truly a community based project and local school children, members of the Cassowary Care Group and staff from the Discovery Centre are all helping make a valuable contribution.

Conservation Partnerships - Outcomes

In 2008, the Centre signed a Memorandum of Understanding with QPWS to revegetate an 8 hectare block that had been originally cleared. This agreement set a precedent for community relations between government and private enterprise.

The outcome has been a productive working relationship where DERM (Dept Environmental Resource Management) prepare the block by slashing the unwanted growth. This allows DDC staff to go in and eradicate weeds, dig holes and plant rainforest seedlings raised in conjunction with the local Cassowary Care Group Nursery.



The site of the initial QPWS/Daintree Discovery Centre joint venture project is located on the left of the Cape Tribulation Road, just past Alexandra Bay School, heading north.

It is estimated that it will take at least 2 more years to fully complete the revegetation of this block.

Benefits of Bio-sequestration

In addition to the known benefits of bio-sequestration; increased bio-diversity, protection of flora and fauna, habitat recovery, salinity and erosion control, this project has produced an added and unanticipated bonus!

Regular weed control by DDC has allowed other native species to regenerate and staff have reported a proliferation of tree species including Grevilleas, Mallotus and Deplancheas, that were previously suppressed by rampant weed cover.

Rainforest Research

In addition to planting trees to offset CO₂ emissions, DDC is also assisting in long term rainforest research being carried out by James Cook University. Soil samples measuring carbon content have been collected and will be tested by Dr Mike Liddell and his team from JCU's MTSRF project.

As the trees mature the soil will be tested again and analyzed for soil carbon.

The seedlings are measured, and will be measured again in ten years to determine the amount of carbon stored in them since planting.



This is an important project and will hopefully make a valuable contribution to the debate on carbon offset. The intention is to be able to provide scientifically tested data on how effective tree planting in the lowland rainforest is for carbon reduction.

Carbon Neutrality – Continuing the good work!

Based on an independent audit of our carbon footprint, the Daintree Discovery Centre has now exceeded the quota of trees needed to ensure carbon neutrality.

However, the Centre will continue to develop innovative strategies for minimizing its carbon footprint and devote part of every entry fee to its community based, Carbon Offset Project.



The first seedlings planted on the DDC/QPWS block are now well established and subsequent plantings are doing well.

However, additional plantings will continue to be undertaken in conjunction with groups such as *Rainforest Rescue* and the Daintree Cassowary Care Group.

James Cook University Carbon Flux Micro-meteorological Weather Station

A project of international significance

In 2008, the Daintree Discovery Centre announced a \$60,000 sponsorship to further rainforest research. The project is known as the JCU / DDC Ozflux Station.

JCU scientists led by Dr Mike Liddell have begun a long term monitoring program designed to unravel the changing carbon and water balance in the Daintree Rainforest.

The Micromet Weather station is located on top of the Centre's Canopy Tower and measures rainfall, air temp, relative humidity, wind speed & direction and solar radiation.

Weather data is used to help gain a better understanding of why there are changes in the carbon balance and the water/energy balance in the rainforest. Data from the DDC Micromet Weather station will be compared to information collected from a number of similar research stations around the world.



Raw data is transmitted from the equipment on the top of the Tower and can be viewed by visitors on a computer station located in the DDC Interpretive Display Centre.

The Authority commends the Centre for providing what is truly the most innovative interpretive centre in the Wet Tropics. Your Carbon Offset initiative is not only enriching the visitor experience but has helped local residents to be more aware and take greater care in preserving their environment.

Wet Tropics Management Authority