Cairns Smart Green Economy

CASE STUDY: BIODIVERSITY AND CARBON MARKETS

Russell River Catchment and Seascape Sustainability Plan

Jaragun EcoServices

For generations, Traditional Owners have cared for wetlands surrounding the Russell River. Today, that legacy continues through Jaragun's Russell River Catchment and Seascape Sustainability Plan, an exemplar of values-based stewardship.

RESTORING COUNTRY, CULTURE, AND CLIMATE RESILIENCE

Jaragun's Russell River Catchment and Seascape Sustainability Plan is leading the way in how wetlands are managed and restored. Developed in partnership with Traditional Owners, ecologists, scientists and government, this 70-hectare project is not just a wetland, it's a working model for whole-of-system thinking.

Decades of land clearing, soil degradation and sediment runoff from agriculture have weakened this catchment's ability to support the Great Barrier Reef. Now, Jaragun is applying both traditional ecological knowledge and scientific modelling to repair the system from the ground up. Restoring natural water flows, improving biodiversity, and reducing nutrient loads to the reef in a bid to help protect the region's unique ecosystem.

Recognised under the Reef 2050 Wetlands Strategy, the project is proving that when you restore Country, you revitalise community, culture, and climate resilience.

"As part of implementing the Reef 2050 Wetlands Strategy, Jaragun has developed the Russell River Catchment and Seascape Sustainability Plan. The objectives include improving and rehabilitating the landscape, alongside enhancing economic, social, and cultural outcomes for the catchment's people."

Liz Owen
Jaragun EcoServices

HOW IT WORKS

Jaragun's approach is grounded in the principle that environmental problems require whole-of-system solutions:

Walking the land together: Traditional Owners and scientists co-design the plan, blending ancestral knowledge of the land with drone LiDAR, water flow models and ecological assessments.

Rebuilding wetland function: Earthworks reshape the landscape to slow floodwaters, trap sediments, and break down nutrients before they reach the reef.

Site-specific solutions: Actions are tailored to local conditions, restoring flow regimes, vegetation corridors, and habitats for key species.

Long-term stewardship: With a plan spanning 2020–2035, the project integrates continuous data collection and scenario testing to adapt over time.

The project links upstream and downstream benefits because what happens in the cane fields, forests and creeks around the Russell River catchment affects the seagrass, coral, and fisheries of the Great Barrier Reef.

WHY IT MATTERS

The Russell River Catchment and Seascape Sustainability Plan proves that environmental repair can create lasting economic and cultural value.

Environmental repair: Wetland rehabilitation improves water quality and re-establishes lost ecosystems vital to biodiversity and reef protection.

Cultural empowerment: Jaragun employs Traditional Owners in planning and fieldwork, keeping families on Country while revitalising cultural knowledge.

Job creation: With 15 direct and 17 indirect jobs, the project injects over $3.78 million into the local economy.

Scalable model: The success of this catchment-scale pilot is being recognised by government and researchers as a blueprint for other degraded wetlands.

By integrating Indigenous-led management with science, Jaragun is creating a compelling model of what smart green projects look like on the ground.

"Our ancestors tell us that the water and land are sick. Our role here is to carry out their legacy to heal the Country, particularly in the face of climate change. Every Jaragun project contributes to one outcome and that's the clear water that's going to run to the reef."

Dennis Ah-Kee,
Jaragun EcoServices

70ha
Of wetland under rehabilitation

$3.78M
Contributed to the local economy

15
Full-time jobs created

17
Indirect jobs created

2035
Project timeline guided by Reef 2050 targets

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ON-COUNTRY IN ACTION

Restoring Aquatic Ecosystems

A Nature Repair Market feasibility study is assessing how river and wetland habitats can be revived. This includes reinstating oysters and native fish species to clean water, support biodiversity, and enhance blue and teal carbon outcomes. These restored aquatic systems also create opportunities for tourism and fisheries.

Tackling Soil Degradation

Much of the catchment's former wetlands have been cleared for agriculture, exposing naturally acidic peat soils. Jaragun is working with partners to improve lime application, reduce aluminium toxicity, and minimise fertiliser runoff, helping both farmers and reef health.

Supporting Pollinators and Vegetation Connectivity

The project aims to support critical pollinators, including bats, birds, and insects, by restoring and linking remnant vegetation. In turn, the pollinators will play a crucial role in helping to re-establish or migrate key vegetation such as epiphyte communities, further inland.

Planting itself is a science: each quadrant is tailored to species-specific habitat needs, creating lasting connectivity across the landscape.

Disclaimer: This case study showcases an innovative approach in Cairns' Smart Green Economy. While this project is not owned by Cairns Regional Council, and the presentation of this case study does not imply Council endorsement, it is our aim to highlight some of the exciting initiatives in our region and inspire positive change within our community.

SUPPORT THIS PROJECT

The Russell River Catchment and Seascape Sustainability Plan offers a leading example of how Indigenous-led, science-backed projects can protect our reef and restore our wetlands.

To learn more about Jaragun and the Russell River Catchment Sustainability Plan, visit **jaragun.com.au**

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